INDEX

1. Company profile
2. Trade License
3. TDS
4. SDS
5. Method of satement
6. Country of origin
7. Test Report
8. Acoustic report
9. ISO Certificate
10. Quality report
11. Approvals
12. Draft warranty

WÜRTH

WÜRTH GULF SUBMITTAL

JOINT FOAM FIRE-RESISTANT PLUS

Art. No. 0893 303 402

Exova Warringtonfire Warrington Certified

1-Company Profile



Introduction
Würth is the world market leader in the trade of connection materials.
Our core business, the Würth line, a versatile product range for craft, industry and construction comprises of over 100.000 different products ranging from screws, drywall equipment, screw accessories, and structural anchors to hand and power tools, chemical technical products and personal protective equipment.

Quality
True to our motto "quality beats price" Würth is positioned at the very top of the quality spectrum. We do not compromise and only offer top-notch quality when it comes to our products, but moreover also to our services.

Würth a strong brand

We want to inspire our customers all over the world with identical quality and a true brand promise. This means we support our customers actively in a solution orientated manner. By doing so, you as our customer can concentrate on what matters most to you, your business. We are working with passion to optimize our products and services constantly

Würth 1K Pur Mounting Foam B1

PU assembly foams have become high-tech products. Depending on the choice of type and when applied correctly they are efficient and effective in insulating or in case of fire rated foams protecting your daily home or work environment.
The information contained in the following submittal has been carefully arranged to obtain your kind approval to your construction project. If any additional details or information is needed you can contact your friendly and trained Würth sales consultant.
In the meantime we remain,

With kindest regards,

WURTH
P.O.Box: 17036
Jebel Ali
Dubai - U.A.E.

Jeroen Nijland
Product Department Manager
Würth Gulf FZE

Würth Gulf

Is part of The Würth Group. We are the supplier of Fasteners, Automotive Chemicals, Hand Tools & Electrical Supplies also Construction, Assembly Items, Sealants, Power Tools & Safety Solutions.
Established in 2000, Würth Gulf FZE is one of the leading suppliers in the Middle-East. Existing industrial companies and developing organizations t .ex(vt "(ux"x (yff' – (üx(fit ff ..x.xw(ffx.xv ª" "4fl t .:. (t "w("uxt t u.x(ffxff ?vx(üt (ffffffi"" " – " ffi °ü(üx(j ffü(uff "w6



OUR VISION

Becoming the number 1 in the eyes of
" ffv ffi" – xffffir ffi üx(uxffi(t "w(– " ffi(fl t .:. xw(ffii .xffi xt – 6

OUR MISSION

We love selling.
We inspire our customers.

OUR PRINCIPLES

¡ x(ffxfl xffi(t "w(fiff' – " x(t vü ?x x – x" ff6
The greater the success, the more freedom and liberty.
We are optimistic, dynamic and have powers of self-assertion.
¡ x(fit ffffff" "t x...(zü (y" ff(ffi vvxffff6
We consistently pursue everything that has proven
to be successful, and we try out new things.
We strive for perfection in every area of our activities.
We assume responsibility for our actions, work in mutual
respect and appreciation, are straightforward and
predictable in everything we do.
The term we consider most important in dealing with each other is
"Thank You".

WE SERVE THE FOLLOWING MARKET SECTOR:

- Auto Workshops
- Construction Companies
- Industrial Companies
- Metal and Fabrication
- Maintenance and Repair Shops
- Oil and Gas Sector
- All other Manufacturing sectors.

OUR PRODUCT RANGE

- Automotive/Cargo Accessories and Spare Parts
- Chemical Technical Products
- Concrete Anchors and Fixings
- Construction Accessories
- Electrical
- Fasteners/Fittings
- Fire Protection Systems
- Hand and Power Tools
- Lubricants and Degreasers
- Master ® Power Tools
- Material Processing
- Orsy® Assortments and Workshop
- Sanitary
- Sealants and Adhesives
- Service and Systems



Over 3 million customers

Worldwide, there are over 400 Würth companies in more than 80 countries and more than 70,000 employees on its payroll. This guarantee

To each customer Würth allocates our Sales Consultant, who is strongly focused on the individual needs of the client. We have adopted this every customer with every article at any time in any place. We therefore have developed modular systems and logistics tailored to the individual needs of the customers. In October 2009, we won the German Logistics Award for this concept.

Our philosophy

We owe it to Prof. Reinhold Würth that the Würth Group has a clear business orientation: It is marked by a strong brand policy, future- culture. Bettina Würth, Prof. Reinhold Würth's daughter and Chairwoman of the Advisory Board together with the members of the Central

WÜRTH

WÜRTH GULF SUBMITTAL

JOINT FOAM FIRE-RESISTANT PLUS

2-TRADE LICENSES



حكومة دبي
GOVERNMENT OF DUBAI

DUBAI
للاقتصاد والسياحة
Economy and Tourism

رخصة تجارية
Commercial License

License Details / تفاصيل الرخصة

License No.	572033	رقم الرخصة	
Company Name	WURTH GULF (L L C)	اسم الشركة	وورث جلف (شركة ذات مسئولية محدودة)
Business Name	WURTH GULF (L L C)	الاسم التجاري	وورث جلف (ش ذ م م)
License Category	Dep. of Economic Development	فئة الرخصة	دائرة التنمية الاقتصادية
Legal Type	Limited Liability Company - Single Owner(LLC - SO)	الشكل القانونى	شركة ذات مسؤولية محدودة - الشخص الواحد (ذ.م.م)
Expiry Date	05/08/2026	تاريخ الإنتهاء	Issue Date 06/08/2005 تاريخ الإصدار
D&B D-U-N-S ® N	561529749	الرقم العالمى	Main License No. 572033 رقم الرخصة الام
Register No.	1778252	رقم السجل التجارى	DCCI No. 99967 عضوية الغرفة

License Members / الاطراف

رقم الشخص/No.	الإسم / Name	الجنسية / Nationality	الصفة / Role	الحصص / Share
1162256	وورث جلف م م ح WURTH GULF FZE	United Arab Emirates / الامارات	Shares Owner / مالك حصص	100.00%
1070435	جيان لوس مارسيل تيسمار JEAN LUC MARCEL THESMAR	فرنسا / France	Manager / مدير	
1162255	موكانى توفيق احمد موكانى اقبال احمد MOOKANE THAUFEEQUE AHMED MOOKANE IQBAL AHMED	الهند / India	Manager / مدير	

License Activities / أنشطة الرخصة

النشاط	الحالة	Status	Activity
تجارة المواد المقاومة والمانعة لإنتشار الحريق	فعال	Active	Fire Resistant & Retardant Materials Trading
تجارة عامة	فعال	Active	General Trading

Print Date 07/08/2025 20:09 تاريخ الطباعة

Receipt No. رقم الإيصال

الإمـــارات
THE EMIRATES

يمكنك الآن تجديد رخصتك التجارية من خلال الرسائل النصية القصيرة، أرسل رقم الرخصة إلى 6969 (دو/ اتصالات) للحصول على اذن الدفع.

Now you can renew your trade license by sending a text message (SMS). Send your trade license number to 6969 (Du/ Etisalat) to receive payment voucher.

Get FREE access to Zoho One for the first year
احصل على زوهو ون مجاناً للسنة الاولى
Zoho.com/det

وثيقة إلكترونية معتمدة وصادرة بدون توقيع من دائرة الاقتصاد والسياحة في دبي .لمراجعة صحة البيانات الواردة في الرخصة يرجي مسح رمزالاستجابة السريعة

This is a certified e-document issued without signature by the department of Economy and Tourism .Kindly scan the QR Code to verify the certificate

العنوان / Address

صندوق بريد	17036	P.O. Box	
رقم القطعة	613-767	Parcel ID	
البريد الإلكتروني	mohamed.elsadig@wurth.ae	Email	

محل 02 ملك علي احمد خلفان - بردبي - راس الخور الصناعية الثانية

تليفون	971-4-8834229	Phone No	
فاكس	971-4-8834303	Fax No	
هاتف متحرك	971-50-7098917	Mobile No	

الملاحظات / Remarks

نقل الموقع بتاريخ 5/5/2015

رقم الإيصال Receipt No.

تاريخ الطباعة 20:09 07/08/2025 Print Date

Get FREE access to Zoho One for the first year
احصل على زوهو ون مجاناً للسنة الاولى
Zoho.com/det

يمكنك الآن تجديد رخصتك التجارية من خلال الرسائل النصية القصيرة، أرسل رقم الرخصة إلى 6969 (دو/ اتصالات) للحصول على اذن الدفع.

Now you can renew your trade license by sending a text message (SMS). Send your trade license number to 6969 (Du/ Etisalat) to receive payment voucher.

الإمارات THE EMIRATES

وثيقة إلكترونية معتمدة وصادرة بدون توقيع من دائرة الاقتصاد والسياحة في دبي .لمراجعة صحة البيانات الواردة في الرخصة يرجي مسح رمزالاستجابة السريعة
This is a certified e-document issued without signature by the department of Economy and Tourism .Kindly scan the QR Code to verify the certificate

حكومة دبي
GOVERNMENT OF DUBAI

دبي للاقتصاد والسياحة
Economy and Tourism

شهادة شهر قيد شركة فى السجل التجارى
Commercial Register

تفاصيل القيد / Register Details

رقم القيد	1778252	Register No.	
الاسم التجاري	وورث جلف (شركة ذات مسئولية محدودة)		
الشكل القانونى	شركة ذات مسؤولية محدودة - الشخص الواحد (ذ.م.م.)		
تاريخ الإصدار	03/08/2005	Reg. Date	
الرقم العالمي	561529749		

Main Lice. Nr	572033	رقم الرخصة الأم	
Business Name	WURTH GULF (L L C)		
Legal Type	Limited Liability Company - Single Owner(LLC - SO)		
Expiry Date	05/08/2026	تاريخ الإنتهاء	
D&B D-U-N-S ® No.			

تفاصيل راس المال / Capital Details

الإسمى	300,000.00	Nominated	
المدفوع	300,000	Paid	
عدد الأسهم	300	No. of Shares	
العملة	درهم إماراتي	Currency	UAE Dirhams

عنوان الرخصة / License Address

عنوان السجل التجاري / Commerce Address

محل 02 ملك علي احمد خلفان - بردبي - راس الخور الصناعية الثانية

أنشطة السجل / Register Activities

تجارة المواد المقاومة والمانعة لإنتشار الحريق	Fire Resistant & Retardant Materials Trading
تجارة عامة	General Trading

Print Date	07/08/2025	20:09	تاريخ الطباعة	Receipt No.	رقم الإيصال

الإمارات
THE EMIRATES

يمكنك الآن تجديد رخصتك التجارية من خلال الرسائل النصية القصيرة، أرسل رقم الرخصة إلى 6969 (دو/ اتصالات) للحصول على اذن الدفع.

Now you can renew your trade license by sending a text message (SMS). Send your trade license number to 6969 (Du/ Etisalat) to receive payment voucher.

Get FREE access to Zoho One for the first year
احصل على زوهو ون مجاناً للسنة الاولى
Zoho.com/det

وثيقة إلكترونية معتمدة وصادرة بدون توقيع من دائرة الاقتصاد والسياحة في دبي .لمراجعة صحة البيانات الواردة في الرخصة يرجي مسح رمزالاستجابة السريعة

This is a certified e-document issued without signature by the department of Economy and Tourism .Kindly scan the QR Code to verify the certificate

الفروع / Branches

رقم الرخصة License No	الاسم التجارى Business Name
961444	وورث جلف (ش ذ م م) (فرع) WURTH GULF (L L C) (BRANCH)
1007865	وورث جلف (ش ذ م م) (فرع) WURTH GULF (L L C) (BRANCH)
1218999	وورث جلف (ش ذ م م) (فرع) WURTH GULF (L L C) (BRANCH)

يمكنك الآن تجديد رخصتك التجارية من خلال الرسائل النصية القصيرة، أرسل رقم الرخصة إلى 6969 (دو/ اتصالات) للحصول على اذن الدفع.

Now you can renew your trade license by sending a text message (SMS). Send your trade license number to 6969 (Du/ Etisalat) to receive payment voucher.

Get FREE access to Zoho One for the first year
احصل على زوهو ون مجاناً للسنة الاولى
Zoho.com/det

الإمارات THE EMIRATES

وثيقة إلكترونية معتمدة وصادرة بدون توقيع من دائرة الاقتصاد والسياحة في دبي .لمراجعة صحة البيانات الواردة في الرخصة يرجي مسح رمزالاستجابة السريعة

This is a certified e-document issued without signature by the department of Economy and Tourism .Kindly scan the QR Code to verify the certificate

Receipt الرصيد

Receipt Date	**07/08/2025**	**تاريخ الإيصال**	**Receipt No**	**16705333**	**رقم الإيصال**
Business Name	WURTH GULF (L L C)			ورث جلف)ش ذ م م(	**اسم الشخص**
Procedure	Renew License,Modify Location			Renew License,Modify Location	**نوع الاجراء**
P.V.Nr.	**24404931**	**رقم إذن الدفع**	**License Nr.**	**572033**	**رقم الرخصه**
Payment Mode	eGovernment Online Payment			eGovernment Online Payment	**كيفية الدفع**
Amount in Words	Twenty One Thousand Eight Hundred and Fifteen Dirhams			واحد وعشرون الفا وثمانمئة وخمسة عشر درهما	**القيمة بالحروف**

Print Date 07/08/2025 20:09 **تاريخ الطباعة** **Receipt No.** **رقم الإيصال**

الإمارات
THE EMIRATES

يمكنك الآن تجديد رخصتك التجارية من خلال الرسائل النصية القصيرة، أرسل رقم الرخصة إلى 6969 (دو/ اتصالات) للحصول على اذن الدفع.

Now you can renew your trade license by sending a text message (SMS). Send your trade license number to 6969 (Du/ Etisalat) to receive payment voucher.

Get **FREE** access to Zoho One for the first year
احصل على زوهو ون **مجاناً** للسنة الاولى
Zoho.com/det

وثيقة إلكترونية معتمدة وصادرة بدون توقيع من دائرة الاقتصاد والسياحة في دبي .لمراجعة صحة البيانات الواردة في الرخصة يرجي مسح رمزالاستجابة السريعة

This is a certified e-document issued without signature by the department of Economy and Tourism .Kindly scan the QR Code to verify the certificate

حكومة دبي
GOVERNMENT OF DUBAI

دبي
للاقتصاد والسياحة
Economy and Tourism

عزيزي التاجر،،

يرجى اخذ التعليمات التالية بعين الاعتبار:

1. عدم القيام بتغيير موقع الترخيص والانتقال الى موقع اخر دون الحصول على موافقة الدائرة.

2. ضرورة ان يكون الاسم التجاري المدون على اللافتة مطابق للاسم المدون بالرخصة مع ضرورة كتابته بحجم واحد.

الحرص على أن تكون اللافتة باللغتين العربية والانجليزية و بالشكل التالي:

- يكتب الاسم التجاري باللغة العربية في يمين اللافتة وباللغة الإنجليزية تجاه اليسار.

- يكتب الاسم التجاري باللغة العربية بنفس حجم الاسم المكتوب باللغة الانجليزية

- يكتب الاسم التجاري باللغة العربية أعلى الاسم المكتوب باللغة الانجليزية

3. الحرص على استخراج تصريح للافتات الاضافيه والعلامات التجارية على اللافتة.

4. عدم تظليل الواجهة أكثر من 50%

5. عدم العمل لساعات اضافية بعد الساعة 12:00 بعد منتصف الليل الا بعد استخراج تصريح.

6. عدم اجراء التنزيلات او التصفيات او العروض الخاصه بدون تصريح.

7. عدم اجراء اي تعديل او تغيير بيانات الترخيص الا بعد الرجوع للدائرة.

8. الالتزام بكتابة الاسعار على السلع والبضائع.

9. طباعة ووضع بطاقة حماية المستهلك (كن على حق واعرف حقوقك كمستهلك) في مكان بارز من موقع الدائرة www.consumerrights.ae

10. للمستهلك الحق في الحصول على فاتورة الشراء.

11. الاعلان عن سياسة البيع للمستهلك عبر وسيلة اعلان مناسبة شاملة (لعملية الاسترجاع او الاستبدال او الاصلاح للسلع)

12. عدم الترويج عن منتج عن طريق المندوبين، أو الاتصال أو غير ذلك وعدم البيع بطريقة المناداه

13. استخراج تصريح لمستودعات التخزين الخاصة بالمنشأة المرخصة أو تصريح للمكاتب الإضافية أو الاكشاك.

14. يجب على المطاعم وضع قائمه الطعام باللغتين العربيه والانجليزيه.

15. يجب وضع واعتماد قائمة الاسعار الخاصة بالصالونات الرجالية والنسائية ووضعها في مكان بارز.

16. يجب ان تكون الاسعار المعلنه مشمولة القيمة المضافه 5%

17. يجب عرض الفاتورة بشكل تفصيلي موضحا فيها القيمه الاجماليه للسلع والخدمات وقيمة الضريبه المضافه.

18. عدم القيام بالترويج او البيع او العرض لأية بضائع مقلدة أو مغشوشة.

Dear Merchants,

Kindly take the following instruction into high consideration:

1. It is not allowed to change the location registered in the license to move to another address unless DET approval is obtained.
2. The business name on the signboard must conform to the name mentioned in t license and typed in one size.

The business name must be in both Arabic and English as follows:

- The business name in Arabic must be placed on the right hand side of the signboard whereas the English text on the left hand side.
- The Arabic text must be in same size of the English equivalent
- The Arabic business name must be placed above the English equivalent.

3. A commercial permit must be issued for additional signboards and for placing trademarks on the signboard.
4. Text must not occupy more than 50% of the signboard.
5. Shops operating hours must not exceed 12:00 am unless a permit is issued.
6. Discounts, sales or special offers must not be announces unless a permit is issu
7. It is not allowed to apply any amendments or change the license details unless approved by DET.
8. Prices must be placed on products and goods.
9. The Consumer Protection Card (Be Right and Know Your Consumer Rights) mu be typed and placed visibly above the DET website www.consumerrights.ae
10. Consumers have the right to receive a purchase receipt.
11. Announce the sale policy to consumer through suitable applicable channels (t clarify procedures for goods replacement, repair and refund).
12. It is not allowed to promote products through agents, telephone calls, or othe ways or yelling.
13. Permits must be issued for warehouses of licensed business or additional offi or kiosks.
14. Restaurants must place a menu in both Arabic and English languages.
15. Place an approved price list for services provided by ladies and gentlemen salons at a visible area.
16. The displayed price list should be inclusive of 5% VAT
17. Invoices must clearly reflect the total amount of the purchased goods, service and VAT.
18. Avoid promoting or selling or displaying any counterfeited goods.
19. To protect trade marks, it must be registered by the Ministry of Economy.
20. The Department of Economy & Tourism in Dubai has the right to suspend or

رقم الإيصال **Receipt No.** **تاريخ الطباعة** 20:09 07/08/2025 **Print Date**

الإمارات
THE EMIRATES

يمكنك الآن تجديد رخصتك التجارية من خلال الرسائل النصية القصيرة، أرسل رقم الرخصة إلى 6969 (دو/ اتصالات) للحصول على اذن الدفع.

Now you can renew your trade license by sending a text message (SMS). Send your trade license number to 6969 (Du/ Etisalat) to receive payment voucher.

Get **FREE** access to Zoho One for the first year
احصل على زوهو ون **مجاناً** للسنة الاولى
Zoho.com/det

وثيقة إلكترونية معتمدة وصادرة بدون توقيع من دائرة الاقتصاد والسياحة في دبي .لمراجعة صحة البيانات الواردة في الرخصة يرجى مسح رمز الاستجابة السريعة
This is a certified e-document issued without signature by the department of Economy and Tourism .Kindly scan the QR Code to verify the certificate

شهادة تسجيل العضوية
Membership Certificate

License no.	572033	572033	رقم الرخصة
Membership no.	99967	99967	رقم العضوية
Registration no.	1778252	1778252	رقم السجل التجاري
Business Name	WURTH GULF (L L C)	وورث جلف (ش ذ م م)	الاسم التجاري
Legal Status	Limited Liability Company - Sing	شركة ذات مسؤولية محدودة - الشخص	الشكل القانوني
Activity	Fire Resistant & Retardant Materials Trading General Trading	تجارة المواد المقاومة والمانعة لإنتشار الحريق تجارة عامة	نوع النشاط
Member Since	06/08/2005	06/08/2005	تاريخ الإنتساب
Date of Issue	06/08/2005	06/08/2005	تاريخ الإصدار
Expiry Date	05/08/2026	05/08/2026	تاريخ الإنتهاء

Remarks

This certificate shall be invalid incase of any alteration without chamber's authorization

For online verification of this Certificate, please visit our website http://www.dubaichamber.ae/verify

الملاحظات

تعتبر هذه الشهادة لاغية في حال أي كشط أو تعديل عليها دون اعتماد ذلك من الغرفة

للتأكد من صحة بيانات الشهادة يرجى الرجوع إلى موقع الغرفة http://www.dubaichamber.ae/verify

غرفة تجارة وصناعة دبي
Dubai Chamber of Commerce & Industry

P.O. Box 1457 - Dubai, U.A.E. | Tel (Within UAE) 800 CHAMBER (800 2426237) | Tel (Outside UAE) (+971) 4 2280000 هاتف
Fax (+971) 4 2211646 فاكس | customercare@dubaichamber.ae | www.dubaichamber.ae

WÜRTH GULF SUBMITTAL

JOINT FOAM FIRE-RESISTANT PLUS

Art. No. 0893 303 402(

3-TDS



JOINT FOAM FIRE-RESISTANT PLUS



Va(F F J F
r ((h (CACF

T 8 8AJ L D(DADE AC(
Contents: 750ml P.Qty: 1/12

s T mmd b oj i (((((
((8
o ((((6(6(
6(6(6((((
((8
n ((GB (((FA (0 (
DA (

o (W	
Volume	40-45L (free foamed)
Specific gravity	22 - 26 kg/m³
Application temperature	min. +5°C (surface), to 45°C
	20 - 25°C (can)
Tack free time: 18°C/60% RH	5 - 10 in
Cutting time: ø=3 cm, 18°C/60% RH	1.5 - 5 hours, depending on temp. and humidity
Temperature resistance	-40°C to +90°C
Dimensional stability	max. -1%
Water absorption: DIN 53428	max. 1 vol. %
Compression strength: DIN 53421	0,04 - 0,05 Pa
Tensile strength: DIN 53455	0,07 - 0,08 Pa
Elongation at break: DIN 53455	15 - 20%
Thermal conductivity: DIN 52612	0,029 W/(m K) at 20°C
Flammability class: DIN 4102, part1 BS 476, part 20	B1
VOC	*VOC in Aerosol Can 170.7g/l *Non detected in freshly applied foam < 0.1 g/l
Color	Pink
TVOC , Emissions	Class A+ , AgBB-scheme Compliant

k

Joint Foam Fire Resistance plus – fire resistance Hand held foam, has good heat, sound insulation and out5 standing adhesion on most of building materials such as Wood, Concrete, Metal , Aluminum, Bricks, UPVC but not polyethylene, silicon and Teflon.

a

- High yield, approximately 40L.
- High thermal and acoustic insulation.
- Cellular structure: closed cells.
- High extrusion ability
- Building material class B1 (DIN 4102).
- Resistance up to 4 hours according to EN13501and BS 476 part 20.
- Resists against ageing, temperature, many chem- ical agents, does not resist against UV-radiation.
- HCFC and CFC
- Acoustics feature , tested ISO 140-3 (1997) - ISO 717-1

h (

Fire, thermal and acoustical insulation, filling of cavi5 ties and sealing of building joints, hardly flammable if applied on solid and mineral based materials, or bet5 ween metallic materials, fixing and mounting of (fire-pro5 of doors and windows ,safes,...) or wherever a great fire resistance is needed.

n

- Use before end of written expiry date on aerosol can, store in cool and dry conditions, can must be vertical position.
- Shelflife is 12 month if stored between 10°C - 20°C, higher storage temperature shorten the product shelf life.

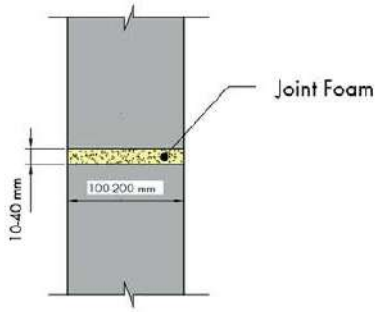
k

The surface must be clean, dry, stable and free of dust. Any possible residue from, for example, oil, grease, rust should be removed. Dry and porous surfaces should be moi5 stened with water. The op- timal application and can temperature is 25°C, higher temperatures could make foam dispens- ing difficult to control due to the pressurized can. Mount the application nozzle then shake the can well for approximately 20 times, position the can in vertical upside down position, press the valve to start releasing the foam, since the foam is going to expand 2 -3 times, it Is preferable to fill the gap partially, in case you have big gaps "more than 50 mm" it is advisable to apply the foam in lay- ers. Apply the second layer after the curing of first one. Since the foam is moisture curing , it is recom- mended to spray or moisturise the fresh foam with water to speed up the curing time and increase the hardness. Cured foam can be cut and shaped by a sharp knife only. Fresh and non-cured foam can be cleaned and removed with Würth PU foam cleaner Art 0892 160

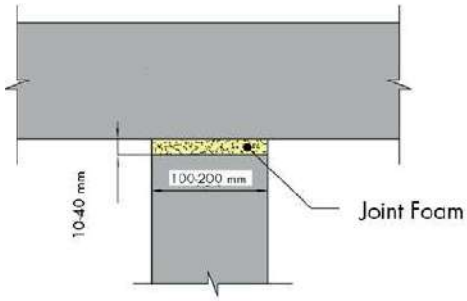
T 8B U 9h 9V (2 ((3(s ((

T 8B8B g (e (n (

f xt .:"z(t zt °"ffi(ffi u ffffff xff("y(v""vffx x4–t fff"ff 4ffixx.4t ...–° –4fi... ""w4ffl'y(""w4(S t fi ffffff "z°"z(yff'–(98– –("(=8(– –(°ü(ü"ff°""t .(t "w(xff?t .(t fifi.?vt °""ff(t .:."z(t ..(t "w("fi("y(t ..4(



f xv °""t .(. ?x (°"(t ..4(i xff?vt .(t "w(T "ff°""t .(.



g"fi("y(i t ..(. (T "ff°""t .(Mfifi.?vt °""(

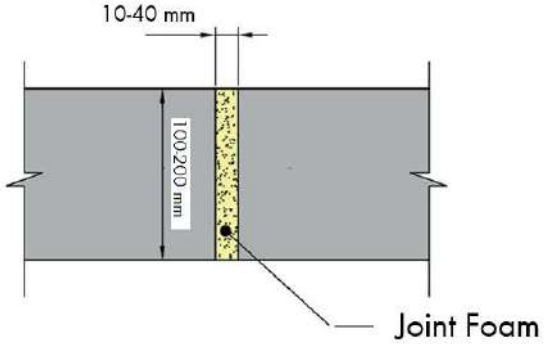
T 8B8B8B

n (	e (s (2h 3(	a (W (2 3(	s ((	d (2 3(	d (2 3(
O°""vffx x5D°""vffx x(	98(	988(	988(	E8(	E8(
f xx.(. (M..–° –(	98(	988(	988(	<8(	<8(
c... ""w((f"y ""w(	98(	988(	988(	E8(	E8(
O°""vffx x5D°""vffx x(	=8(	: 88(	: 88(	E8(	E8(
f xx.(. (M..–° –(	=8(	: 88(	: 88(	<8(	<8(
c... ""w((f"y ""w(	=8(	: 88(	: 88(	9: 8(	9: 8(

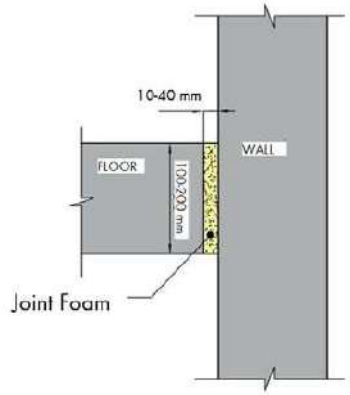
T 8C V (2 ((3(a ((

T 8C8B g (e (n (

f xt .:"z(t zt °"ffi(ffi u ffffff xff("y(v""vffx x4–t fff"ff 4ffixx.4t ...–° –4fi... ""w4ffl'y(""w4(S t fi ffffff "z°"z(yff'–(98– –("(=8(– –6(



f xv °""t .(. ?x (°"(y:.:"ff6(



f xv °""t .(. ?x (°"(y:.:"ff6(

T 8B8C8B

n (	e (s (2h 3(	a (W (2 3(	n ((	d (2 3(	d (2 3(
O°""vffx x5D°""vffx x(	98(	988(	988(	E8(	E8(
f xx.(. (M..–° –(	98(	988(	988(	<8(	<8(
c... ""w((f"y ""w(	98(	988(	988(	E8(	E8(
O°""vffx x5D°""vffx x(	=8(	: 88(	: 88(	E8(	E8(
f xx.(. (M..–° –(	=8(	: 88(	: 88(	<8(	<8(
c... ""w((f"y ""w(	=8(	: 88(	: 88(	9: 8(	9: 8(

WÜRTH GULF SUBMITTAL

JOINT FOAM FIRE-RESISTANT PLUS

4-MSDS



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

0893 303402 - JOINT FOAM FIRE-RESISTANT PLUS-750ML-B1

Version 1.0 Revision Date 26.08.2013 Print Date 17.12.2013 AE / EN

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Commercial Product Name	:	JOINT FOAM FIRE-RESISTANT PLUS-750ML-B1
Product code	:	0893 303402
MSDS-Identcode	:	10045209

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture	:	Sealant

1.3 Details of the supplier of the safety data sheet

Company	:	Wurth Gulf Fze POBox 17036 Dubai Utd.Arab Emir. E-mail address: wurthglf@emirates.net.ae
Telephone	:	+9714 8834229
Telefax	:	+9714 8834303
Responsible/issuing person	:	E-mail address: prodsafe@wuerth.com

1.4 Emergency telephone number

Emergency telephone Advisory office in case of poisoning
+9714 8834229

Telephone number of the company in case of emergencies
+97150 5646023

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (67/548/EEC, 1999/45/EC)

Extremely flammable	R12: Extremely flammable.
Harmful	R20: Harmful by inhalation.
	R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Carcinogenic Category 3	R40: Limited evidence of a carcinogenic effect.
Sensitising	R42/43: May cause sensitisation by inhalation and skin contact.
Irritant	R36/37/38: Irritating to eyes, respiratory system and skin.

Dangerous for the environment	R53: May cause long-term adverse effects in the aquatic environment. R64: May cause harm to breastfed babies.

2.2 Label elements

Labelling according to EC Directives: 1999/45/EC

Hazard symbols :



Extremely flammable



Harmful

R-phrase(s) :	R12	Extremely flammable.
	R20	Harmful by inhalation.
	R36/37/38	Irritating to eyes, respiratory system and skin.
	R40	Limited evidence of a carcinogenic effect.
	R42/43	May cause sensitisation by inhalation and skin contact.
	R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
	R53	May cause long-term adverse effects in the aquatic environment.
	R64	May cause harm to breastfed babies.
S-phrase(s) :	S23	Do not breathe spray.
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S33	Take precautionary measures against static discharges.
	S36/37	Wear suitable protective clothing and gloves.
	S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
	S51	Use only in well-ventilated areas.

Hazardous components which must be listed on the label:
Diphenylmethanediisocyanate, isomeres and homologues

Special labelling of certain mixtures : Contains isocyanates. See information supplied by the manufacturer.
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C.
Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material.
Keep away from sources of ignition - No smoking.
Keep out of the reach of children.

2.3 Other hazards

no data available

3. Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (1272/2008/EC)	Concentration [%]
Diphenylmethanediiso-cyanate, isomeres and homologues	9016-87-9	Xn; R20-R48/20 Xi; R36/37/38 Carc.Cat.3; R40 R42/43	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 STOT RE 2; H373	>= 45 - < 50
Tris(2-chloro-1-methylethyl) phosphate	13674-84-5 237-158-7	R52/53	Aquatic Chronic 3; H412	>= 12,5 - < 15
alkanes, C14-17, chloro	85535-85-9 287-477-0	R64 R66 N; R50-R53	Lact. H362 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 3 - < 5
Halogenated polyether polyol molecular mass 468 g	86675-46-9	Xn; R22	Acute Tox. 4; H302	>= 2 - < 3
WEL substance :				
dimethyl ether	115-10-6 204-065-8	F+; R12	Flam. Gas 1; H220 Press. Gas H280	>= 7 - < 10

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1 Description of first aid measures

General advice : Symptoms of poisoning may appear several hours later. Call a doctor immediately if allergic signs, particularly in the respiratory tract, are observed. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). First aider needs to protect himself. Move out of dangerous area. Never give

anything by mouth to an unconscious person. Take off contaminated clothing and shoes immediately.

If inhaled	:	If breathed in, move person into fresh air. Call a physician immediately. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
In case of skin contact	:	Call a physician immediately. In case of contact, immediately flush skin with soap and plenty of water. Do NOT use solvents or thinners. Wash off with polyethylene glycol and afterwards with plenty of water.
In case of eye contact	:	Protect unharmed eye. If easy to do, remove contact lens, if worn. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
If swallowed	:	If swallowed, seek medical advice immediately and show this container or label. If swallowed, DO NOT induce vomiting. If a person vomits when lying on his back, place him in the recovery position.

4.2 Most important symptoms and effects, both acute and delayed

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Foam, Carbon dioxide (CO2), Sand, Dry powder
Unsuitable extinguishing media	:	Water

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Do not use a solid water stream as it may scatter and spread fire. Hazardous decomposition products may be formed under fire conditions (see section 10). Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. In the event of fire and/or explosion do not breathe fumes.

Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Refer to protective measures listed in sections 7 and 8. Use personal protective equipment. Remove all sources of ignition. Avoid contact with skin and eyes. Ensure adequate ventilation, especially in confined areas. Immediately evacuate personnel to safe areas. Avoid inhalation of vapour or mist. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. Avoid release to the environment. Refer to special instructions/ Safety data sheets.

6.3 Methods and materials for containment and cleaning up

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations. Do not flush with water. Clean contaminated surface thoroughly.

6.4 Reference to other sections

see chapter: 7, 8, 11, 12 and 13

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8. Limit the stocks at work place. Use with local exhaust ventilation. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid contact with skin and eyes. Do not spray on a naked flame or any incandescent material. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Take precautionary measures against static discharges. Handle with care. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Keep away from heat and sources of ignition. Do not smoke. No sparking tools should be used. Electrical equipment should be protected to the appropriate standard.
Dust explosion class	:	not applicable

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Store in a place accessible by authorized persons only. Store in original container. BEWARE: Aerosol is pressurized. Keep away from heat. Keep away from direct sunlight. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in a well-ventilated place. Do not keep the container sealed. Please observe the storage instructions for aerosols!
Advice on common storage	:	Incompatible with acids. Incompatible with oxidizing agents. Incompatible with bases. Keep away from food, drink and animal feedingstuffs. Never allow product to get in contact with water during storage. Do not store together with oxidizing and self-igniting products.
Other data	:	No decomposition if stored and applied as directed.

7.3 Specific end use(s)

no data available

8. Exposure controls/personal protection

8.1 Control parameters

Components	CAS-No.	Control parameters	Basis	Update
dimethyl ether	115-10-6	TWA: 1.920 mg/m3, 1.000 ppm	2000/39/EC	2000-06-16

Other information on limit values: see chapter 16

8.2 Exposure controls

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Respirator with filter type A

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Hand protection

Material	:	Polyethylene
Glove thickness	:	0,025 mm
Breakthrough time:	:	> 30 min

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.

Eye protection : Tightly fitting safety goggles

Skin and body protection : Flame retardant antistatic protective clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
General industrial hygiene practice.
Do not inhale aerosol.
Avoid contact with skin, eyes and clothing.
When using do not eat, drink or smoke.
Wash hands before breaks and at the end of workday.
Follow the skin protection plan.
Wash contaminated clothing before re-use.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
Avoid release to the environment. Refer to special instructions/ Safety data sheets.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	aerosol
Propellant	:	dimethyl ether, isobutane
Colour	:	no data available
Odour	:	characteristic
Odour Threshold	:	no data available
Flash point	:	-21 °C Solvent mixture
Ignition temperature	:	199 °C
Thermal decomposition	:	no data available
Lower explosion limit	:	no data available
Upper explosion limit	:	no data available
Explosive properties	:	no data available
Flammability	:	no data available
Oxidizing properties	:	no data available
Auto-ignition temperature	:	not auto-flammable
Burning number	:	no data available
Molecular Weight	:	no data available
pH	:	no data available
Vapour pressure	:	no data available
Density	:	22 - 26 kg/m3
Bulk density	:	no data available
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	no data available
Solubility in other solvents	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Flow time	:	no data available
Impact Sensitivity	:	no data available
Relative vapour density	:	no data available
Surface tension	:	no data available
Evaporation rate	:	no data available
Minimum ignition energy	:	no data available
Acid number	:	no data available
Refraction index	:	no data available
Miscibility in water	:	no data available
Solvent separation test	:	no data available

9.2 Other information

None known.

10. Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Stability : No decomposition if stored and applied as directed.
Vapours may form explosive mixtures with air. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure. Reacts violently with water. Mixture reacts slowly with water resulting in evolution of CO2.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents, Acids, Bases
Water

10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon monoxide, nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid)

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity:

no data available

Acute inhalation toxicity:

Diphenylmethanediisocyanate, isomeres and homologues	:	LC50 : > 10 - 20 mg/l Test atmosphere: vapour Exposure time: 4 h
dimethyl ether	:	LC50 rat: 164000 ppm Test atmosphere: gas Exposure time: 4 h

Acute dermal toxicity:

no data available

Acute toxicity (other routes of administration):

no data available

Skin corrosion/irritation

Diphenylmethanediisocyanate, isomeres and homologues	:	Severe skin irritation
alkanes, C14-17, chloro	:	Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Diphenylmethanediisocyanate, isomeres and homologues	:	irritating

Respiratory or skin sensitisation

Sensitisation	:	May cause sensitisation by inhalation and skin contact.

Germ cell mutagenicity

Genotoxicity in vitro:

no data available

Genotoxicity in vivo:

no data available

Carcinogenicity

Remarks Diphenylmethanediisocyanate, isomeres and homologues	:	Carcinogenicity: Suspected human carcinogens

Reproductive toxicity

alkanes, C14-17, chloro	:	Note: Effects on or via lactation

Teratogenicity

no data available

STOT - single exposure

Diphenylmethanediisocyanate, isomeres and homologues	:	May cause respiratory irritation.

STOT - repeated exposure

Diphenylmethanediisocyanate, isomeres and homologues	:	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Aspiration toxicity

no data available

Neurological effects

no data available

Toxicology Assessment

Toxicology, Metabolism, Distribution

no data available

Acute effects

no data available

Further information	:	Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates.

12. Ecological information

12.1 Toxicity

Toxicity to fish

dimethyl ether	:	LC50 (Poecilia reticulata (guppy)): >= 4,1 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	(Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Note: Data from similar compositions
Toxicity to algae	:	(Desmodesmus subspicatus (green algae)): > 100 mg/l Note: Data from similar compositions

Ecotoxicology Assessment

Acute aquatic toxicity

Tris(2-chloro-1-methylethyl) phosphate	:	Harmful to aquatic life.

alkanes, C14-17, chloro	:	Very toxic to aquatic life.
Chronic aquatic toxicity		
Tris(2-chloro-1-methylethyl) phosphate	:	Harmful to aquatic life with long lasting effects.
alkanes, C14-17, chloro	:	Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

Additional ecological information	:	The product should not be allowed to enter drains, water courses or the soil.

13. Disposal considerations

13.1 Waste treatment methods

Advice on disposal and packaging	:	Disposal: In accordance with local and national regulations. Waste codes should be assigned by the user based on the application for which the product was used.

The following Waste Codes are only suggestions:

Waste Code (EWC)	:	Waste Key (unused product): 150110, packaging containing residues of or contaminated by dangerous substances Waste key (used product): 150110, packaging containing residues of or contaminated by dangerous substances
Disposal of uncleaned packaging	:	Waste key (uncleaned packaging): 150110, packaging containing residues of or contaminated by dangerous substances

Note: Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not burn, or use a cutting torch on, the empty drum. Please ensure aerosol cans are sprayed completely empty (including propellant) Containers that have not been emptied in compliance with regulations are regarded as hazardous waste. Dispose of as unused product.

14. Transport information

ADR

UN number	:	1950
Description of the goods	:	AEROSOLS
Class	:	2
Packing group	:	--
Classification Code	:	5F
Labels	:	2.1
Limited quantity	:	LQ2
Tunnel restriction code	:	(D)
Environmentally hazardous	:	no

RID

UN number	:	1950
Description of the goods	:	AEROSOLS
Class	:	2
Packing group	:	--
Classification Code	:	5F
Hazard identification No	:	23
Labels	:	2.1
Limited quantity	:	LQ2
Environmentally hazardous	:	no

IATA

UN number	:	1950
Description of the goods	:	Aerosols, flammable
Class	:	2.1
Packing group	:	--
Labels	:	2.1
Packing instruction (cargo aircraft)	:	203
Environmentally hazardous	:	no
Packing instruction (passenger aircraft)	:	203
Packing instruction (LQ)	:	Y203

IMDG

UN number	:	1950
Description of the goods	:	AEROSOLS

Class	:	2.1
Packing group	:	--
Labels	:	2.1
EmSNumber 1	:	F-D
EmS Number 2	:	S-U
Marine pollutant	:	no

Special precautions for user
see chapter: 6, 7 and 8

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

VOC : Directive 1999/13/EC
16,2 %
VOC content less water: 170,7 g/l

Directive (96/82/EC)	:	Update: 2003 Extremely flammable	Quantity 1 10 t	Quantity 2 50 t

National legislation

Other regulations : Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.

Take note of Dir 94/33/EC on the protection of young people at work.

Further information : Ensure a continuous supply of fresh air during and after operation.
Persons who suffer from allergies or who have a chronic disposition to respiratory illness must not be required to work with this material.
Reserved for industrial and professional use.

15.2 Chemical Safety Assessment

no data available

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R12	Extremely flammable.
R20	Harmful by inhalation.
R22	Harmful if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.
R40	Limited evidence of a carcinogenic effect.
R42/43	May cause sensitisation by inhalation and skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R50	Very toxic to aquatic organisms.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53	May cause long-term adverse effects in the aquatic environment.
R64	May cause harm to breastfed babies.
R66	Repeated exposure may cause skin dryness or cracking.

Full text of H-Statements referred to under sections 2 and 3.

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H362	May cause harm to breast-fed children.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Other information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Prepared by : SAP Business Compliance Services GmbH
Birlenbacher Str. 19
D-57078 Siegen
Germany
Telephone: +49-(0)271-88072-0

Ref.: WIAG00005111

WÜRTH GULF SUBMITTAL

JOINT FOAM FIRE-RESISTANT PLUS

Art. No. 0893 303 402

5 - Method of satetment



RL 20183043626
Date: April 17, 2018

Method Statement for the application of Würth Fire Classified PU Foam B1 Art. 0893 303402

1) Clean the surfaces, remove dust, grease, oil, rust
2) Porous Surfaces should be moisturized with water
3) Do not apply in direct sunlight, surface temperature of the substrate should be between 5 to 45 degrees Celsius
4) Screw the application nozzle onto the can
5) Shake the can well for at least 20 times
6) Start releasing the foam vertically from the bottom upwards.
7) Hold the can upside down. The trigger should be down and the bottom of the can facing up.
8) Similar for horizontal gaps, hold the can facing with the bottom up to the ceiling
9) The foam has a high expansion of about 3 times the applied layer so preferably fill the gap partially
10) In case of bigger gaps than 50 mm apply multiple layers
11) In case of bigger gaps than 50 mm apply first layer let it expand and cure, apply second layer after first layer is cured
12) To speed up the curing time spray the foam with a water mist, the foam is moisture curing spraying with water increases the hardness also
13) After the foam has cured, excessive cured and hardened foam can be cut off with a sharp knife, curing time depending on humidity between 1,5 to 5 hours to be fully cured



We trust to have been of service with this confirmation and remain,

With kindest regards,

WURTH
P.O.Box: 17036
Jebel Ali
Dubai - U.A.E.
WURTH GULF FZE

Jeroen Nijland
Product Department Manager

Wurth Gulf FZE-Plot # S61303, Jebel Ali South 6 ,Dubai ,U.A.E - P.O.Box: 17036
T: +9714 8809991, 04 8834229(old), F: +971 4 8809255, 04 8834303(old), E: wurthglf@emirates.net.ae - www.wurth.ae

WÜRTH GULF SUBMITTAL

JOINT FOAM FIRE-RESISTANT PLUS

Art. No. 0893 303 402

6 - Country of origin



Certificate No.: 2015011398

Date: November 15, 2023

Dubai,

Declaration of Country of Origin

TO WHOM IT MAY CONCERN

We herewith declare under our sole responsibility that:

Würth PU Foam Class B2 – Fire Classified – item no. 0893 303402

And

Würth PU Foam Class B1 – Fire Rated – item.no. 0893 303402

are manufactured exclusively in our factories in Europe under supervision of our Würth Quality Control laboratories and the country of origin is Slovenia

We trust to have been of service with this declaration and remain
With kindest regards,

WURTH P.O.Box: 17036 Jebel Ali Dubai - U.A.E. WURTH GULF FZE

Jeroen Nijland
Product Department Manager
Würth Gulf FZE

WÜRTH GULF SUBMITTAL

JOINT FOAM FIRE-RESISTANT PLUS

Art. No. 0893 303 402

7 - CERTIFICATE & TEST REPORT



Certificate No.: **202050118261**
Date: November 29, 2020

NON HAZARDOUS SUBSTANCES DECLARATION

Dear Valued Customer,

We as Wurth Gulf hereby confirm that our Joint Foam Fire Resistant Plus Art. No. 0893 303402 product formulation is free from the substances listed below:

1. Chlorine Containing and Aromatic Hydrocarbons:
Methylene chloride (dichloromethane); 1,1,1-Trichloroethane; Benzene; Toluene (methylbenzene); Ethylbenzene; Vinyl chloride (chloroethylene); Naphthalene; 1,2-Dichlorobenzene; Triclosan

2. Phthalate Esters
Di(2-ethylhexyl)phthalate; Butyl benzyl phthalate; Di-n-butyl phthalate; Di-n-octyl phthalate; Diethyl phthalate; Dimethyl phthalate

3. Aldehyde and Ketone Derivatives
Formaldehyde and formaldehyde donors; Methyl ethyl ketone; Methyl isobutyl ketone; Acrolein; Acrylonitrile; Isophorone

4. The following metals
Antimony; Cadmium; Barium; Lead (medical shielding excluded); Mercury; Hexavalent chromium Triphenyl tin; Tributyl tin

5. Alkylphenol Ethoxylates (APEs)
Nonylphenol ethoxylate; Octylphenol ethoxylate

6. Ozone depleting substances
CFCs; HBFCs; HCFCs; Halons; Methyl chloroform; Carbon tetrachloride; Methyl bromide

Moreover; the product is tested in eco-Institute GmbH for TVOC and bears the following low emissions marks:

- The German DIBt (2010) and AgBB (2012)
- The French emission class A+

We trust to have been of service with this clarification and remain,

With kindest regards,

Tamer Assaf
Product Department
Wurth Gulf FZE

وورث جلف م.م.ح
WÜRTH GULF FZE
P.O.Box: 17036
Product Department

Wurth Gulf FZE-Plot # S61303, Jebel Ali South 6 ,Dubai ,U.A.E - P.O.Box:17036
T: +9714 8809991, 04 8834229(old), **F: +971 4 8809255,** 04 8834303(old), **E: wurthglf@emirates.net.ae - www.wurth.ae**

UNITED ARAB EMIRATES
MINISTRY OF INTERIOR
DIRECTORATE GEN. OF DUBAI CIVIL DEFENSE
PREVENTIVE SAFETY DEPT.
COMPANIES APPROVAL SECT.

الإمارات العربية المتحدة
وزارة الداخلية
الإدارة العامة للدفاع المدني - دبي
إدارة السلامة الوقائية
قسم إعتماد الشركات

Agent Products Distributor ترخيص موزع لوكيل

رقم الترخيص License Number	LRTNA0000212241-2021
عدد التراخيص Number of Licenses	1– 1

اسم الشركة Name of Company	وورث جلف (ش ذ م م)	رقم الترخيص License Number	572033	رقم السجل Registration Number	75554
اسم صاحب الترخيص Owner of the License	سيف سلطان عبدالرحمن سيف الشامسى	الجنسية Nationality	الامارات العربية المتحدة		
اطراف الرخصة Partner in the License	ويرث انترناشيونال ليمتد	الجنسية Nationality	سويسرا		
رقم الهاتف Office Phone Number	971-4-8834229	رقم الفاكس Fax Number	971-4-8834303	ص.ب. P.O. Box	17036
عنوان الشركة Company Address	معرض رقم -31-32 ملك بنك دبي الاسلامي بردبي - القوز الصناعية الرابعة				
الموقع / البريد الإلكتروني Email of the Company	mohamed.elsadig@wurth.ae				
تأسست بتاريخ Company Registered Date	2005/08/06 م	تاريخ الإصدار License Issued	2021/06/20 م	تاريخ الانتهاء License Expired	2025/06/16 م
عدد المعدات والأجهزة المعتمدة Total number of Products approved	3				

تم اصدار الترخيص استناداً إلى القرار الوزاري رقم (213) لسنة 2017، في شان تنظيم خدمات الدفاع المدني
The license was issued pursuant to Ministerial Decree No. (213) for the year 2017 pertaining the regulation of civil defense services

يعتمد / عن مدير الإدارة العامة للدفاع المدني – دبي
Signature of Directorate of Civil Defense - Dubai

Tel : 04 - 2611111
Fax : 04 - 2612449
P.O. Box 11377, Dubai
United Arab Emirates
www.dcd.gov.ae

للطوارئ
EMERGENCY
997

الرؤية :
أن تكون دولة الإمارات العربية المتحدة من أفضل دول العالم في تحقيق الأمن والسلامة.

Vision :
To have the United Arab Emirates as one of the best countries in the world in achieving safety and security.

UNITED ARAB EMIRATES
MINISTRY OF INTERIOR
DIRECTORATE GEN. OF DUBAI CIVIL DEFENSE
PREVENTIVE SAFETY DEPT.
COMPANIES APPROVAL SECT.

الإمارات العربية المتحدة
وزارة الداخلية
الإدارة العامة للدفاع المدني - دبي
إدارة السلامة الوقائية
قسم إعتماد الشركات

رقم الترخيص License Number	LRTNA0000212241-2021	عدد التراخيص Number of Licenses	1 – 1	اسم الشركة Name of Company	وورث جلف (ش ذ م م)
اسم وكيل Name of Agent	مؤسسة الاعتماد للمواد الهندسية	تاريخ الانتهاء License Expired	2025/06/16 م		

م	اسم المعدة Type of Products	الاسم التجاري Brand Name	رقم شهادة السلامة Certification Number	اسم المختبر الصادر للشهادة Name of Certification Body	بلد الصنع Place of origin
1	عازل اكريليك مقاوم للحريق -WÜRTH FIRE RESISTANT ACRYLIC 0893303007/8/9 Firestop Sealant – Linear Joints AND Service Penetrations Classification in accordance with EN 13501-2 EN 1366-4: 2006 - Fire resistance tests for service installations. Linear joint seals EN 1366-4: 2006 +A1: 2010 - Fire resistance tests for service installations. Linear joint seals EN 1366-3: 2009 - Fire resistance tests for service installations. Penetration seals	WURTH	ENCG.R39450 UL-EU-01072	UL International (UK) Ltd	UNITED KINGDOM
2	رغوة البولي يوريثان لمليء الوصلات المقاومة للحريق WÜRTH JOINT FOAM FIRE RESISTANT PLUS 0893303402 Firestop Sealant – Linear Joints Linear Joints Fire stop Classification in accordance with EN 13501-2 Up to 120 EI – Substrates as Mild steel, Aluminium, Timber, softwood, Plywood, Autoclaved aerated concrete	WURTH	CF5585 Certifire	Exova (UK) Limited trading as Warrington Certification	SLOVENIA
3	سيليكون مانع للتسريب مقاوم للظروف الجوية ومقاوم للحريق Weather Sealant W-FR 0893303016 Firestop Sealant – Linear Joints The test specimens were rigid wall and floor constructions made of aerated concrete blocks with a thickness of 250 mm including a recess of 960 mm (length) Up to EI 120-H-X-F-W5... W14 (Backed with PE ROD Up to EI 240-H-X-F-W15... W24 (Backed with Mineral Wool) Up to EI 120-H-X-F-W5... W14 (Entire Depth Sealant)	WURTH	MPA-BS_Certificate_Wuerth_Z-077	iBMB MPA Braunschweig - Germany	GERMANY

ملاحظة :
1. يجب ابلاغ الإدارة العامة للدفاع المدني - دبي في حالة تغيير أو تعديل في البيانات المتعلقة في الترخيص الصادر من قبل الإدارة.
2. يجب على الشركة المعتمدة لدى إدارة الدفاع المدني-دبي ابراز الترخيص الساري المفعول الخاص بالمعدات المعتمدة والصادر من قبل الإدارة للمتعامل، وعلى الشركة تحمل المسؤولية عند انتهاء الترخيص او اغلاق الشركة.

Note:
1. Any changes to the product / manufacturer / location or specification the Dubai Civil Defense - GHQ must be notified
2. Manufacturers shall produce a valid approval of products whenever requested. Company shall be responsible if license expires or company closed.

يعتمد / عن مدير الإدارة العامة للدفاع المدني – دبي
Signature of Directorate of Civil Defense - Dubai

Tel : 04 - 2611111
Fax : 04 - 2612449
P.O. Box 11377, Dubai
United Arab Emirates
www.dcd.gov.ae

للطوارئ
EMERGENCY
997

الرؤية :
أن تكون دولة الإمارات العربية المتحدة من أفضل دول العالم في تحقيق الأمن والسلامة.

Vision :
To have the United Arab Emirates as one of the best countries in the world in achieving safety and security.

United Arab Emirates
Ministry of interior
Civil Defense G.H.Q
Fire intentional Lab & House
Of Expertise & Training Center
Approval Committee

دولة الامارات العربية المتحدة
وزارة الداخلية
القيادة العامة للدفاع المدني
لجنة اعتماد المختبرات العالمية
وبيوت الخبرة ومعاهد التدريب

Date 09/06/2020

CERTIFICATE OF COMPLIANCE

This certificate of compliance validates the following			
TEST REPORT NUMBER 'Assessment Reports' are not acceptable	WF364023A – Issue 4 WF364023B – Issue3	**CERTIFICATE NUMBER**	CF5585
DATE OF ISSUE	30th May 2020	**DATE OF ISSUE**	27/10/2017
DATE OF EXPIRY	29th May 2025	**DATE OF EXPIRY**	15/04/2025
Manufacturer details			
NAME OF FACTORY/ MANUFACTURER	Wurth Gulf FZE	**NAME OF THE BRAND**	WÜRTH
FACTORY ADDRESS / REGION (STREET / TOWN / CITY / COUNTRY)	Srpenica 1 5224 srpenica Slovenia	**MODEL / NO**	WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402
WEBSITE	http://www.wurth.ae	**LOGO ON THE PRODUCT**	WÜRTH
TEL	WÜRTH (Tel: +971 4 8809991)	**EMAIL**	Nijland@wurth.ae

certifire

Product Details From Test Report

DESCRIPTION OF THE PRODUCT
(TECHNICAL DETAILS FROM TEST REPORT, SUCH AS ACTUAL FIRE RATINGS/DIMENSIONS/THICKNESS/ SENSITIVITY ETC)

WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402
is a modified hardly flammable one-component polyurethane foam hardening by air humidity.
It adheres to most building materials like wood, concrete, brick, metal, aluminium, but not to polyethylene, silicone and PTFE.
It is used in building industry for sealing, filling, insulating, fixing and mounting (electric installations, fire-proof doors, safes ...) especially in cases where greater resistance to fire is needed.

TECHNICAL DATA

Volume:	FEICA OCF TM 1003	42-47 l (free foamed) (750 ml)
Specific density:	FEICA OCF TM 1019	18-22 kg/m³
Application temperature:		min. +5°C (surface), 20-25°C (can)
Tack free time:	FEICA OCF TM 1014	5-10 min.
Cutting time:	FEICA OCF TM 1005	20-25 min.
Hardening time:		1.5-5 hours, depending on temperature and humidity
Temperature resistance:		from -40°C to +90°C
Dimensional stability:	FEICA OCF TM 1004	max. ± 5%

Water absorption:	DIN 53428	max. 1 vol. %
Compression strength:	FEICA OCF TM 1011	0.04-0.05 MPa
Tensile strength:	FEICA OCF TM 1018	0.12-0.14 MPa
Elongation at break:	FEICA OCF TM 1018	15-20%
Thermal conductivity:	DIN 52612	0.036 W/(m K) at 20°C
Flammability class:	DIN 4102-1	B1
	EN 13501-2	EI 240
	BS 476, part 20	

TEST STANDARD
(SUCH AS ASTM/BS EN/ DN ETC)

- BS 476: Part 20: 1987 - Fire tests on building materials and structures, Part 20: Methods for determination of the fire resistance of elements of construction (general principles) BS476:1987
- EN 1366-4: 2006 + A1 2010 - Fire resistance tests for service installations – Linear joint seals.

certifire

TEST DESCRIPTION	A fire resistance test which utilised the general principles of BS 476: Part 20: 1987, in conjunction with additional guidelines adopted from EN 1366-4: 2006 + A1 2010, has been conducted to assess the ability of eight different floor and wall mounted specimens of linear joint sealing system to reinstate the integrity and insulation performance (as defined in BS 476: Part 20: 1987) of simulated floor and wall constructions where adjacent structures abut. If the performance of each specimen was assessed against the performance requirements for integrity and insulation (maximum temperature rise) specified in BS 476: Part 20: 1987. The instrumentation and measuring equipment provided was in accordance with BS 476: Part 20: 1987 and the draft European document, where appropriate.
SPECIFICATION OF TEST SPECIMEN	For the purpose of the test the specimens were referenced A to C for the wall mounted seals and D to F for the floor mounted seals. Masonry wall and floor assemblies, each 200 mm thick, were provided with three gaps. Each gap was nominally 40 mm wide by 900 mm long and incorporated different substrates to each of the gap faces. A & F were faced with steel and aluminium, B & E were faced with aerated concrete and C & D were faced with plywood and softwood. Each of the gaps was filled for the full depth of the construction with an expanding Polyurethane foam material referenced '. WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402' **Test Specimens** **1. Gap Seal** Material: Polyurethane foam Overall Size of Sealant (width x depth): 10 mm x 100 mm **2. Gap Facing (specimen 'A' and 'F')** Material: Mild steel Thickness: 5 mm Overall size: 100 mm wide x 900 mm long Fixing method to concrete: 5 no. 62 mm long x 4 mm (No.8) diameter countersunk head steel screws into plastic plugs **3. Gap Facing (specimen 'A' and 'F')** Material: Aluminium Thickness: 3 mm Overall size: 100 mm wide x 900 mm long Fixing method to concrete: 5 no. 62 mm long x 4 mm (No.8) diameter countersunk head steel screws into plastic plugs.

4. Gap Facing (specimen 'C' and 'D')

Material:	Timber, softwood
Overall section size:	45 mm thick x 100 mm wide x 900 mm long
Fixing method to concrete:	5 no. 80 mm long x 3.5 mm (No.6) diameter countersunk head steel screws into plastic plugs

5. Gap Facing (specimen 'C' and 'D')

Material:	Plywood
Thickness:	18 mm
Overall section size:	100 mm wide x 900 mm long
Fixing method to concrete:	5 no. 80 mm long x 3.5 mm (No.6) diameter countersunk head steel screws into plastic plugs

6. Concrete Wall

Material:	Autoclaved aerated concrete lintels
Density:	670 kg/m^3
Overall section size:	100 mm x 150 mm

7. Concrete Floor

Material:	Autoclaved aerated concrete lintels
Density:	670 kg/m^3
Overall section size:	100 mm x 150 mm

Test Specimens

1. Gap Seal

Material:	Polyurethane foam
Overall Size of Sealant (width x depth):	40 mm x 200 mm

2. Gap Facing (specimen 'A' and 'F')

Material:	Mild steel
Thickness:	5 mm
Overall size:	200 mm wide x 900 mm long
Fixing method to concrete:	5 no. 62 mm long x 4 mm (No.8) diameter countersunk head steel screws into plastic plugs

3. Gap Facing (specimen 'A' and 'F')

Material:	Aluminium
Thickness:	3 mm
Overall size:	200 mm wide x 900 mm long
Fixing method to concrete:	5 no. 62 mm long x 4 mm (No.8) diameter countersunk head steel screws into plastic plugs.

4. Gap Facing (specimen 'C' and 'D')

Material:	Timber, softwood
Overall section size:	45 mm thick x 200 mm wide x 900 mm long
Fixing method to concrete:	5 no. 80 mm long x 3.5 mm (No.6) diameter countersunk head steel screws into plastic plugs

certifire

5. Gap Facing (specimen 'C' and 'D')

Material:	Plywood
Thickness:	18 mm
Overall section size:	200 mm wide x 900 mm long
Fixing method to concrete:	5 no. 80 mm long x 3.5 mm (No.6) diameter countersunk head steel screws into plastic plugs

6. Concrete Wall

Material:	Autoclaved aerated concrete lintels
Density:	670 kg/m^3
Overall section size:	200 mm x 150 mm

7. Concrete Floor

Material:	Autoclaved aerated concrete lintels
Density:	670 kg/m^3
Overall section size:	200 mm x 150 mm

TEST RESULT
(SUCH AS PASSED CRITERIA___/ COMPLIED TO___/ DURATION___/OBSERVATION___/ETC)

If the performance of the specimens were assessed against the integrity and insulation (maximum temperature rise only) performance criteria of BS 476: Part 20: 1987. The results obtained could be expressed as follows:

Specimen Reference	Integrity Minutes	Insulation Minutes
A	31	31
B	108	108
C	92	92
D	117	117
E	111	111
F	31	31

The test was discontinued after a period of 121 minutes.

Specimen Reference	Integrity Minutes	Insulation Minutes
A	28	28
B	91	91
C	196	196
D	127	127
E	115	115
F	29	29

The test was discontinued after a period of 197 minutes.

certifire

PRODUCT APPLICATION GUIDELINE (END USE)
(CLEARLY STATE THE END USE WITH SPECIFIC APPLICATION, SUCH AS EXACT FIRE RATING/TO BE INSTALLED IN___/TO BE INSTALLED AT____/TO BE CONNECTED WITH____/TO BE INSTALLED WITH___ ETC ALONG WITH ANY WARNINGS SUCH AS NOT TO BE USED IN___/NOT TO BE INSTALLED AT___/ NOT TO BE INSTALLED WITH___ETC.

WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402
linear joint sealing systems for the fire protection of movement joints within walls and floors

Blockwork/Masonry/Concrete (aerated or normal) Wall Installations					
Product Name		**WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402**			
Max. Joint Width mm	**Min. Foam Depth mm**	**Substrates**	**Minimum Thickness of Wall mm**	**Integrity (mins)**	**Insulation (mins)**
10	100	Concrete -	100	90	90
10	100	Steel -	100	30	30
10	100	Plywood -	100	90	90
10	200	Concrete -	200	90	90
10	200	Steel -	200	30	30
10	200	Plywood -	200	120	120
Application Technique		The foam is gunned into the required depth.			
Resistance to Smoke:		Not evaluated by this approval	**Weather Capability:**		Not evaluated by this approval
Acoustic Rating:		Not evaluated by this approval	**Movement Capability:**		Not evaluated by this approval

This shows the thickness and width for WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402 linear joint sealing systems required to provide fire resistance periods generally in accordance with BS476 Part 20: 1987 of up to 120 minutes.

Application Document Reference	Document Title	Contents
Product Data Sheet (OWGC 03 0008)	Wurth Joint Foam Fire-Resistant plus. ART. 0893303402	Product properties, usage properties. Description and data, including Application Temperature, Tack free time, cutting time Hardening Time, Temperature Resistance, Dimensional Stability, Water Absorption, Compression Strength, Tensile Strength, Elongation at break, Thermal conductivity and Flammability.
Safety Data Sheets (V1.0 26/08/2013)	Wurth Joint Foam Fire-Resistant plus. ART. 0893330402	Hazards, H and P Statements. Specific usage safety instructions, etc. Storage

certifire

Laboratory and Certification body details			
NAME OF CERTIFICATION BODY	Exova (UK) Limited trading as Warringtonfire Testing and Certification	**NAME OF TEST FACILITY**	Exova (UK) Limited trading as Warringtonfire Testing and Certification
CERTIFICATION BODY ADDRESS / REGION (STREET / TOWN / CITY / COUNTRY)	Holmesfield Road Warrington WA1 2DS United Kingdom	**TEST FACILITY ADDRESS / REGION** (STREET / TOWN / CITY / COUNTRY)	Holmesfield Road Warrington WA1 2DS United Kingdom
WEBSITE	www.warringtoncertification.com	**WEBSITE**	www.warringtoncertification.com
TEL	+44 (0) 1925 655116	**TEL**	+44 (0)1925 655116
EMAIL	info@exova.com	**EMAIL**	info@exova.com
ACCREDITED BY (NAME OF ACCREDITATION BODY WHICH ISSUED ACCREDITATION TO THE CERTIFICATION BODY, ALONG WITH WEBSITE)	UKAS (United Kingdom Accreditation Services)	**ACCREDITED BY** (NAME OF ACCREDITATION BODY WHICH ISSUED ACCREDITATION TO THE LABORATORY, ALONG WITH WEBSITE)	UKAS (United Kingdom Accreditation Services)
AS PER (STANDARD TO WHICH THE CERTIFICATION BODY IS ACCREDITED TO)	BS EN ISO/IEC 17065:2012	**AS PER** (STANDARD TO WHICH YOUR ORGANIZATION IS ACCREDITED TO)	ISO/IEC 17025:2005
VALIDITY (EXPIRY DATE OF CERTIFICATION BODY ACCREDITATION)	Initial Accreditation Granted: 01st August 1999 Current Certificate Issued: 1st December 2018	**VALIDITY** (EXPIRY DATE OF LABORATORY ACCREDITATION)	Current Certification Issued: 03rd April 2020
REFERENCE NUMBER: (CERTIFICATION BODY ACCREDITATION REFERENCE NUMBER TO VERIFY ON THE ACCREDITOR'S WEBSITE)	UKAS Certification Body No. 0087 Notified Certification Body No. 1121	**REFERENCE NUMBER:** (THE LABORATORY ACCREDITATION REFERENCE NUMBER TO VERIFY ON THE ACCREDITOR'S WEBSITE)	Notified Body No. 249
CERTIFICATION MARK			

(ENDORSEMENT) TO BE SIGNED BY MANUFACTURER			
NAME OF MANUFACTURER'S SIGNATORY	Jeroen Nijland	SIGNATURE	
EMAIL / TEL	Nijland@WURTH.ae WÜRTH (Tel: +971 4 8809991)	FACTORY OFFICIAL SEAL	وورث جلف م.ع.ح WÜRTH P.O.Box: 17036 Jebel Ali Dubai - U.A.E. 2
NOTES: I Undertake that all data and information provided are genuine and accurate			

(ENDORSEMENT) TO BE SIGNED BY CERTIFICATION BODY			
NAME OF CERTIFICATION BODY SIGNATORY	Paul Duggan Certification Manager	SIGNATURE	
EMAIL / TEL	ewcl@warringtonfire.com +44 (0) 1925 655116	CERTIFICATION BODY OFFICIAL SEAL	certifire
NOTES: I Undertake that all data and information provided are genuine and accurate			

ATTACHMENTS:

- **COPY OF 'CERTIFICATE OF COMPLIANCE' ISSUED BY CERTIFICATION BODY (OLD OR NEW)**

certifire

CERTIFICATE OF APPROVAL
No CF 5585

This is to certify that, in accordance with
TS00 General Requirements for Certification of Fire Protection Products
The undermentioned products of

WÜRTH GULF FZE

P.O Box: 17036 Jebel Ali South 6,
Dubai, U.A.E

Tel: +971 4 8809991

Have been assessed against the requirements of the Technical Schedule(s) denoted below and are approved for use subject to the conditions appended hereto:

CERTIFIED PRODUCT	TECHNICAL SCHEDULE
WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART.0893 303 402	**TS40 Linear Joint Sealing Systems**

Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited

Paul Duggan
Certification Manager

Issued:	27th October 2017
Reissued:	2nd June 2020
Valid to:	15th April 2025

This certificate is the property of Warringtonfire Testing and Certification Limited
Registered in England and Wales
Registered Office: 10 Lower Grosvenor Place, London, United Kingdom, SW1W 0EN. Company Registration No: 11371436

CERTIFICATE No CF 5585
WÜRTH GULF FZE

WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402

1. This approval relates to the use of WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402 linear joint sealing systems for the fire protection of movement joints within walls and floors. The detailed scope is given in the Approval Matrix included in this Certificate. This shows the thickness and width for WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402 linear joint sealing systems required to provide fire resistance periods generally in accordance with BS476 Part 20: 1987 of up to 120 minutes.

2. This certification is provided to the client for their own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.

3. The product is approved on the basis of:

   i) Initial type testing
   ii) Audit testing at the frequency specified in TS40
   iii) A design appraisal against TS40
   iv) Inspection and surveillance of factory production control

4. The block/masonry/concrete walls shall be at least 200mm thick and have at least the same fire rating as that required for the penetration seal.

5. Block/masonry and concrete gap faces will be within the density range of 450 to 2300kg/m^3, and gap faces will be free from loose or flaking material. Aluminium, Steel, softwood and plywood substrates are also included within the scope of certification.

6. The approval relates to ongoing production. Product and/or its immediate packaging is 0 0 0 0 0 0 0 0 0 0 0 0 name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.

   Further information regarding the details contained in this data sheet may be obtained from WÜRTH (Tel: +971 4 8809991)

   Further information regarding the CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel: 01925 646777).

Signed
S/016

Issued: 27th October 2017
Reissued: 2nd June 2020
Valid to: 15th April 2025

This certificate is the property of Warringtonfire Testing and Certification Limited
Registered in England and Wales
Registered Office: 10 Lower Grosvenor Place, London, United Kingdom, SW1W 0EN. Company Registration No: 11371436

CERTIFICATE No CF 5585
WÜRTH GULF FZE

WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402 - Approval Matrix

Blockwork/Masonry/Concrete (aerated or normal) Wall Installations					
Product Name		**WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402**			
Max. Joint Width mm	**Min. Foam Depth mm**	**Substrates**	**Minimum Thickness of Wall mm**	**Integrity (mins)**	**Insulation (mins)**
10	100	Concrete - Concrete	100	90	90
10	100	Steel - Aluminium	100	30	30
10	100	Plywood - Softwood	100	90	90
40	200	Concrete - Concrete	200	90	90
40	200	Steel - Aluminium	200	30	30
40	200	Plywood - Softwood	200	120	120
Application Technique		The foam is gunned in to the required depth.			
Resistance to Smoke:		Not evaluated by this approval	**Weather Capability:**	Not evaluated by this approval	
Acoustic Rating:		Not evaluated by this approval	**Movement Capability:**	Not evaluated by this approval	

Signed
S/016

Issued: 27th October 2017
Reissued: 2nd June 2020
Valid to: 15th April 2025

This certificate is the property of Warringtonfire Testing and Certification Limited
Registered in England and Wales
Registered Office: 10 Lower Grosvenor Place, London, United Kingdom, SW1W 0EN. Company Registration No: 11371436

CERTIFICATE No CF 5585
WÜRTH GULF FZE

WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402 - Approval Matrix

Concrete (aerated or normal) Floor Installations					
Product Name		**WÜRTH JOINT FOAM FIRE-RESISTANT PLUS ART. 0893 303 402**			
Max. Joint Width mm	**Min. Foam Depth mm**	**Substrates**	**Minimum Thickness of Wall mm**	**Integrity (mins)**	**Insulation (mins)**
10	100	Concrete - Concrete	100	90	90
10	100	Steel - Aluminium	100	30	30
10	100	Plywood - Softwood	100	90	90
40	200	Concrete - Concrete	200	90	90
40	200	Steel - Aluminium	200	30	30
40	200	Plywood - Softwood	200	120	120
Application Technique		The foam is gunned in to the required depth.			
Resistance to Smoke:		Not evaluated by this approval	**Weather Capability:**	Not evaluated by this approval	
Acoustic Rating:		Not evaluated by this approval	**Movement Capability:**	Not evaluated by this approval	

Issued: 27th October 2017

Signed

S/016

Reissued: 2nd June 2020

Valid to: 15th April 2025

This certificate is the property of Warringtonfire Testing and Certification Limited
Registered in England and Wales
Registered Office: 10 Lower Grosvenor Place, London, United Kingdom, SW1W 0EN. Company Registration No: 11371436

WÜRTH GULF SUBMITTAL

JOINT FOAM FIRE-RESISTANT PLUS

Art. No. 0893 303 402

TEST REPORT



Al Futtaim Exova LLC
Dubai Investments Park
P.O. Box 34924,Dubai
United Arab Emirates

T: +971 (0)4 8851001
F: +971 (0)4 8854004
E: me.dxbnorlims@exova.com
W: www.exova.com

Analytical Report

Job Ref. No. : 24191
Report No : 33393
Date Reported : 18/11/2015

Client: Wurth Gulf Freezone

P.O. Box: 17036
Dubai, United Arab Emirates

Attn: Jeroen Nijland
Project ID: N/A
Project Name: N/A
Project Location: N/A
Tel. No: +971 (0)4 8834229

Approved by:

Saji SK
Asst. Laboratory Manager–Chemistry & Microbiology

The content of this report is governed by our standard terms and conditions and may not be reproduced other than in full. Where our involvement consists exclusively of testing samples, the results relate only to the samples tested.

Sample Details

Job Ref. No.: 24191
Sample Matrix: Industrial Products
Sampling Location: Not Given
Sampled By : Not Given
Sample Description: B1 / Foam Sealant

Sample ID: 24191-1
Date Received: 04/11/2015
Sampling Date: Not Given
Sampling Time : Not Given

Test Results

Test Name	Units	Result	Method Limit of Detection
VOC			
Volatile Organic Compounds	g/L	<0.01	0.01

Method of Analysis

Method Name	Reference
Volatile Organic Compounds [In-house - GC FID]-DXB	In-house [GC FID]

Comments:

- Tested By : SAU
- Date Tested: 17/11/2015 to 18/11/2015
-
- VOC content of cured extruded material is calculated in g/L, based on the density data supplied by the client.
- Please note that if the sample has to be diluted due to the matrix, the reported Limit of Detection (LOD) value will increase from the method LOD.

Exova Warringtonfire
Holmesfield Road
Warrington
WA1 2DS
United Kingdom

T : +44 (0) 1925 655 116
F : +44 (0) 1925 655 419
E : warrington@exova.com
W: www.exova.com

Testing. Advising. Assuring.

Title:

Fire resistance test utilising the general Principles of BS 476: Part 20: 1987 on three specimens of floor mounted and three specimens of wall mounted linear gap seals

WF Report No:

330590A

Prepared for:

Würth International AG

Aspermontstrasse 1

CH- 7000 Chur, Switzerland

Date:

23rd July 2013

This report is additional to that issued as WF Test Report No. 154617, dated 28th June 2006. The original report remains valid and is not replaced by this additional test report.

Notified Body No:

0833

UKAS TESTING
0249

Summary

Objective

A fire resistance test has been conducted to assess the ability of six specimens of a linear gap sealing system, to reinstate the integrity and insulation performance of simulated floor and wall constructions where adjacent structures abut. The performances of the specimens were assessed, with respect to the integrity and insulation (maximum temperature rise only) performance criteria, as defined in BS 476: Part 20: 1987.

Sponsor

Würth International AG Aspermontstrasse 1, CH- 7000 Chur, Switzerland.

Summary of the Tested Specimens

For the purpose of the test the specimens were referenced A to C for the wall mounted seals and D to F for the floor mounted seals.

Masonry wall and and floor assemblies, each 100 mm thick, were provided with three gaps. Each gap was nominally 10 mm wide by 900 mm long and incorporated different substrates to each of the gap faces. A & F were faced with steel and aluminium, B & E were faced with aerated concrete and C & D were faced with plywood and softwood.

Each of the gaps was filled for the full depth of the construction with an expanding Polyurethane foam material referenced 'Würth fire protection joint foam – B1 – PU'.

Test Results

If the performance of the specimens were assessed against the integrity and insulation (maximum temperature rise only) performance criteria of BS 476: Part 20: 1987. The results obtained could be expressed as follows:

Specimen Reference	Integrity Minutes	Insulation Minutes
A	31	31
B	108	108
C	92	92
D	117	117
E	111	111
F	31	31

The test was discontinued after a period of 121 minutes.

Date of Test

26th May 2006

This report may only be reproduced in full. Extracts or abridgements of reports shall not be published without permission of Exova Warringtonfire.

Signatories



PP

Responsible Officer
S. Whatham*
Technical Officer



Approved
A. Kearns*
Technical Manager

* For and on behalf of Exova Warringtonfire.

Report Issued

Date : 23rd July 2013

This copy has been produced from a .pdf format electronic file that has been provided by Exova Warringtonfire to the sponsor of the report and must only be reproduced in full. Extracts or abridgements of reports must not be published without permission of Exova Warringtonfire. The pdf copy supplied is the sole authentic version of this document. All pdf versions of this report bear authentic signatures of the responsible Exova Warringtonfire staff.

CONTENTS **PAGE NO.**

SUMMARY 2
SIGNATORIES 3
TEST PROCEDURE 5
INSTRUMENTATION 6
TEST SPECIMEN 7
SCHEDULE OF COMPONENTS 9
TEST OBSERVATIONS 10
TEST PHOTOGRAPHS 12
TEMPERATURE DATA 18
PERFORMANCE CRITERIA AND TEST RESULTS 26
ONGOING IMPLICATIONS 26
CONCLUSIONS 27

Test Procedure

Introduction

Walls and floors often incorporate gaps to accommodate expansion, contraction or other movement of the structure. The fire resistance of such elements is only as good as their weakest point and it is, therefore, important that any gaps or apertures are adequately sealed, such that weaknesses are not created at these positions.

There is not, as yet, any specified British Standard fire test method for evaluating gap seals which are designed to act as an effective barrier to the penetration of fire and to reinstate the necessary fire resistance performance of the separating element. However, the fire resistance of walls and floors is determined by tests utilising the general principles given in BS 476: Part 20: 1987, and it would appear appropriate to use the principles of that Standard to evaluate the performance of gap sealing systems. Some additional guidelines were adopted from the draft European document referenced prEN 1366-4, relating to the testing of these types of sealing systems. This report should be read in conjunction with the above mentioned documents.

Fire Test Study Group/EGOLF

Certain aspects of some fire test specifications are open to different interpretations. The Fire Test Study Group and EGOLF have identified a number of such areas and have agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test they have been followed.

Instruction To Test

The test was conducted on the 26th May 2006 at the request of the original sponsor of the test.

Test Specimen Construction

A comprehensive description of the test construction is given in the Schedule of Components. The description is based on a detailed survey of the specimens and information supplied by the sponsor of the test.

Installation

The floor and wall constructions were supplied by Exova Warringtonfire. The gap sealing systems were provided and installed by a representative of the test sponsor on the day of test.

Sampling

Exova Warringtonfire was not involved in any sampling or selection procedure of the sealing system components.

Instrumentation

General

The instrumentation and measuring equipment provided was in accordance with BS 476: Part 20: 1987 and the draft European document, where appropriate.

Furnace

The furnace was controlled so that its mean temperature complied with the requirements of BS 476: Part 20: 1987, Clause 3.1, using four mineral insulated thermocouples distributed over a plane 100 mm from the surface of the wall construction.

Thermocouple Allocation

Thermocouples were provided to monitor the unexposed surface of the specimens and the output of all instrumentation was recorded at no less than one minute intervals as follows:

The locations and reference numbers of the various unexposed surface thermocouples are shown in Figure 1.

Roving Thermocouple

A roving thermocouple was available to measure temperatures on the unexposed surface of the specimens at any position which might appear to be hotter than the temperatures indicated by the fixed thermocouples.

Integrity Criteria

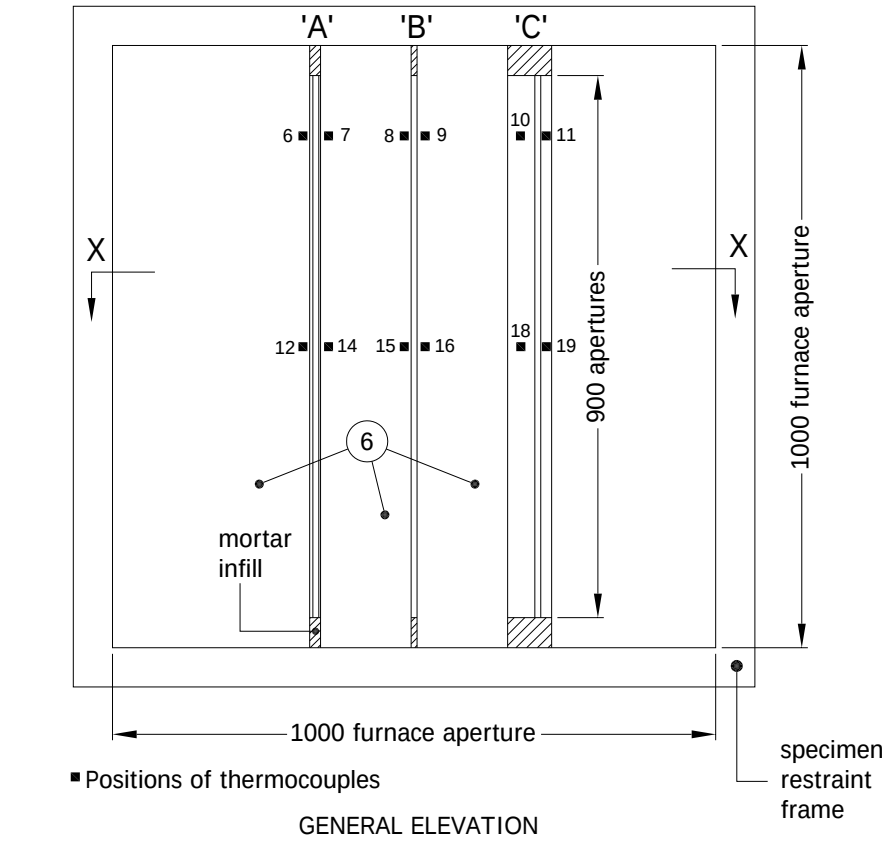
Cotton pads and gap gauges were available to evaluate the integrity of the specimens.

Furnace Pressure

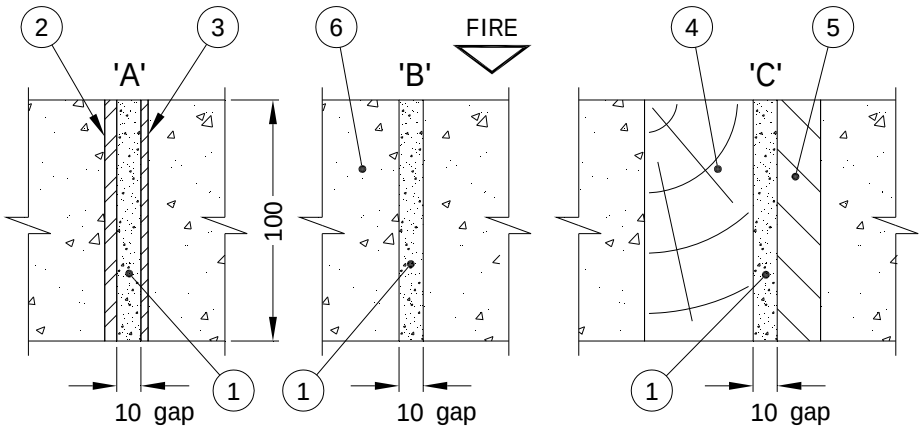
After the first five minutes of testing, the furnace pressure was controlled to maintain a slightly positive pressure relative to the pressure of the laboratory. The furnace atmospheric pressure was measured and controlled such that, at a point 100 mm below the soffit of the floor assembly, the differential pressure was calculated to be between 18 Pa and 20 Pa.

Test Specimens

Figure 1- General Elevation of Wall Specimens and Unexposed Face Thermocouples



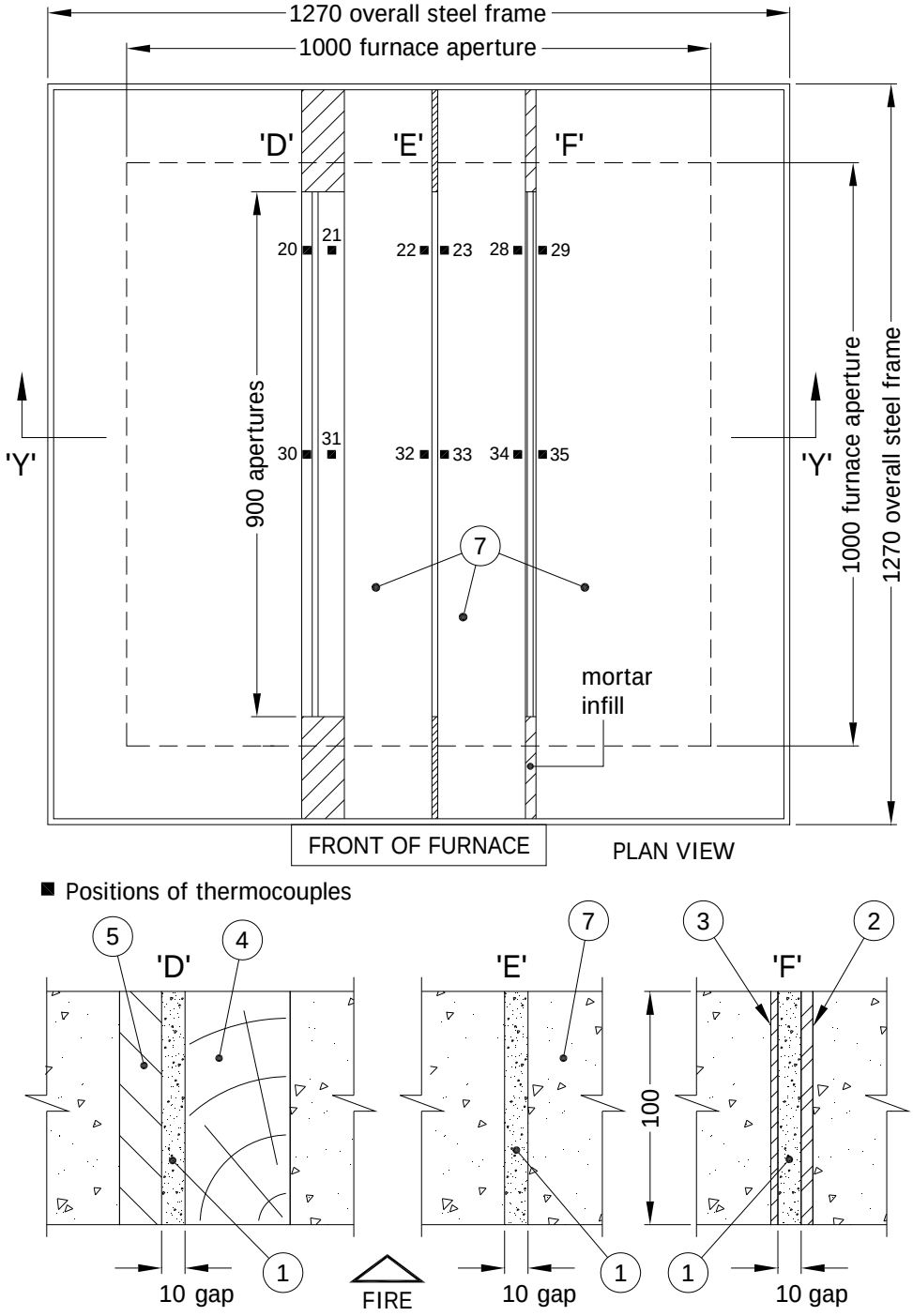
GENERAL ELEVATION



TYPICAL SECTION X-X THROUGH SPECIMENS

Do not scale. All dimensions are in mm

Figure 2 – General Plan of Floor Specimens and Unexposed Face Thermocouples



TYPICAL SECTION Y-Y THROUGH SPECIMENS

Do not scale. All dimensions are in mm

Schedule of Components

(Refer to Figures 1 & 2)
(All values are nominal unless stated otherwise)
(All other details are as stated by the sponsor)

Item		Description
1. Gap Seal		
Manufacturer	:	Würth International AG
Reference	:	Würth fire protection joint foam – B1 – PU
Material	:	Polyurethane foam
Overall Size of Sealant (width x depth)	:	10 mm x 100 mm
Application method	:	Direct from canister supplied
2. Gap Facing (specimen 'A' and 'F')		
Material	:	Mild steel
Thickness	:	5 mm
Overall size	:	100 mm wide x 900 mm long
Fixing method to concrete	:	5 no. 62 mm long x 4 mm (No.8) diameter countersunk head steel screws into plastic plugs.
3. Gap Facing (specimen 'A' and 'F')		
Material	:	Aluminium
Thickness	:	3 mm
Overall size	:	100 mm wide x 900 mm long
Fixing method to concrete	:	5 no. 62 mm long x 4 mm (No.8) diameter countersunk head steel screws into plastic plugs.
4. Gap Facing (specimen 'C' and 'D')		
Material	:	Timber, softwood
Overall section size	:	45 mm thick x 100 mm wide x 900 mm long
Fixing method to concrete	:	5 no. 80 mm long x 3.5 mm (No.6) diameter countersunk head steel screws into plastic plugs
5. Gap Facing (specimen 'C' and 'D')		
Material	:	Plywood
Thickness	:	18 mm
Overall section size	:	100 mm wide x 900 mm long
Fixing method to concrete	:	5 no. 80 mm long x 3.5 mm (No.6) diameter countersunk head steel screws into plastic plugs
6. Concrete Wall		
Material	:	Autoclaved aerated concrete lintels
Density	:	670 kg/m^3
Overall section size	:	100 mm x 150 mm
7. Concrete Floor		
Material	:	Autoclaved aerated concrete lintels
Density	:	670 kg/m^3
Overall section size	:	100 mm x 150 mm

Test Observations

Time		All observations are from the unexposed face unless noted otherwise.
mins	secs	The ambient air temperature in the vicinity of the test construction was 15°C at the start of the test with a maximum variation of 1°C during the test.
00	00	**The test commences.**
10	00	Smoke issues from timber (softwood) on gap C at top and bottom between mortar and timber.
12	00	Timber has ignited and is charring on both specimens gaps C & D.
31	00	Gaps A & F - aluminium metal has twisted creating through gap, a cotton wool pad is applied and ignites. **Integrity failure is deemed to have occurred.** Pink fire stopping material has turned black in appearance. Gap A has one area where gap is visible, approximately 200mm below top thermocouple approximately 100mm long. Gap F has three areas where gaps are visible, approximately 200mm from either end and at centre all approximately 100mm long.
40	00	Gap is forming at centre of gap A in same manner as at 31 minutes.
55	00	The majority of aluminium has melted away from specimen F, no material remains in central area of gap.
60	00	A fourth gap has appeared at the top of gap A.
65	00	Smoke release from gap D, same as mentioned at 10 minutes on specimen C.
80	00	Smoke release increasing from gaps C and D at areas already mentioned.
90	00	Top left edge of softwood in gap C is beginning to char, above thermocouple 10.
91	00	Aluminium is melting in gap A below centre.
92	00	A cotton wool pad is applied to top left hand corner of gap C and ignites. **Integrity failure is deemed to have occurred.**
100	00	Glowing is visible between chipboard and concrete on gap C.
101	00	Burn though approximately 250mm up on gap B. A cotton wool pad is applied but did not ignite.
104	00	Gap increasing between softwood and concrete on gap C. Softwood is charring across whole width.

Time		
mins	**secs**	
106	**00**	Burn through increasing on gap B. A cotton wool pad is reapplied but did not ignite.
108	**00**	A cotton wool pad is reapplied to gap B and ignites. **Integrity failure is deemed to have occurred.**
110	**00**	There is a 10mm gap between specimens and concrete on gap C at top edge.
111	**00**	Burn through on gap E adjacent to centre thermocouple. A cotton wool pad is applied and ignites. **Integrity failure is deemed to have occurred.**
112	**00**	Sustained flaming on softwood on gap C below gap between concrete.
117	**00**	Glowing at front right hand corner of gap A. A cotton wool pad is applied and ignites. **Integrity failure is deemed to have occurred.**
121	**00**	**The test is discontinued.**

Test Photographs

The exposed face of the wall construction prior to testing



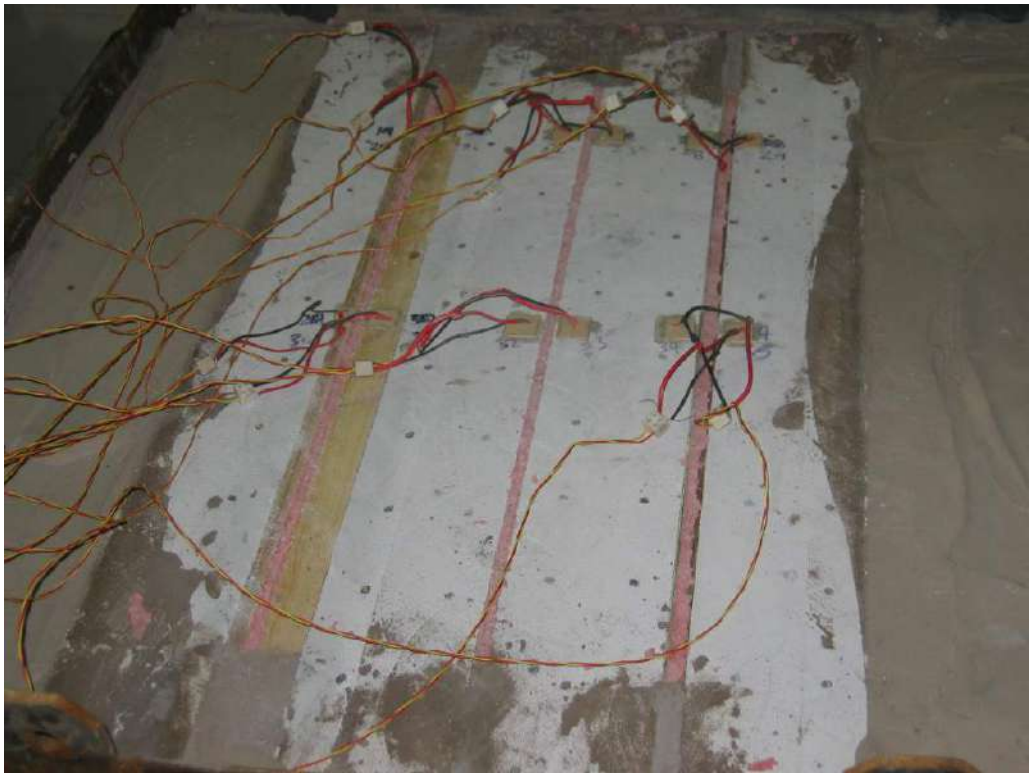
The exposed face of the floor construction during the test



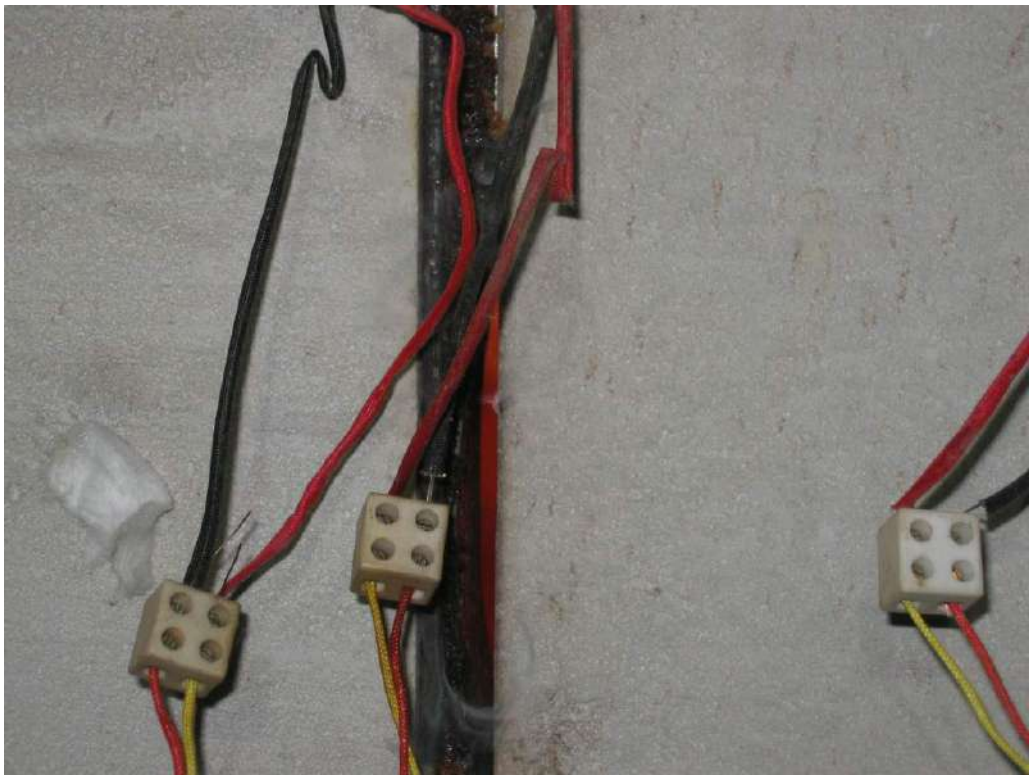
The unexposed face of the wall construction prior to testing



The unexposed face of the floor construction during the test



Integrity failure of specimen A after a duration of 31 minutes



Integrity failure of specimen F after a duration of 31 minutes



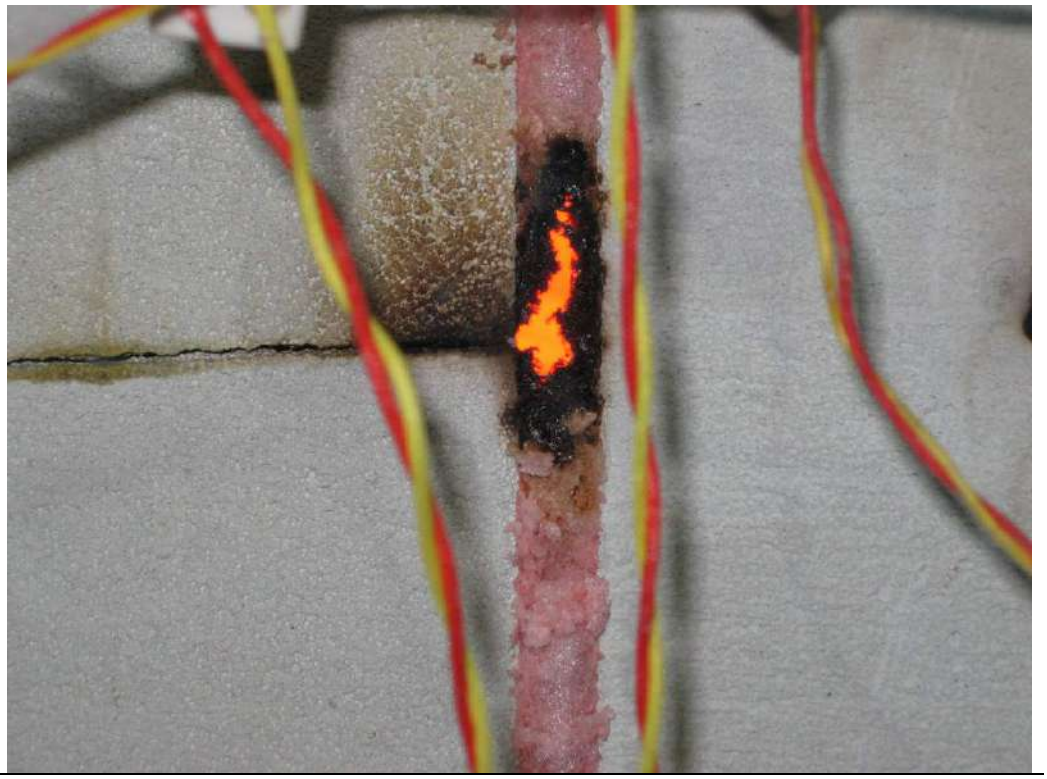
The unexposed face of the wall construction after a duration of 60 minutes



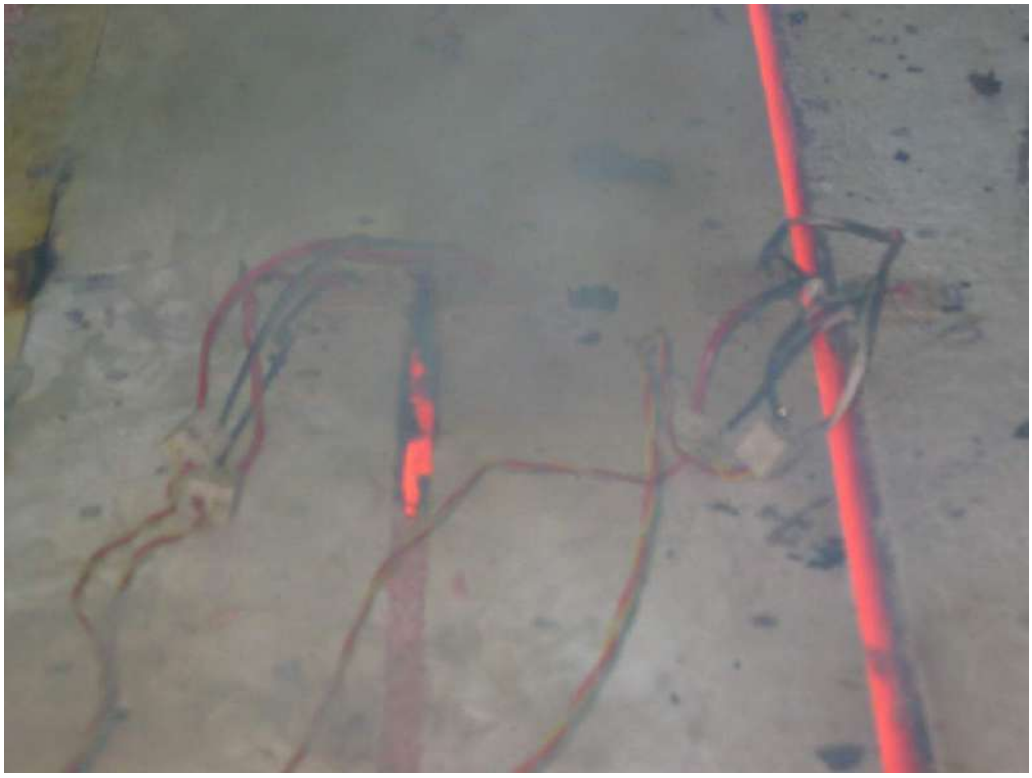
The unexposed face of the floor construction after a duration of 60 minutes



Integrity failure of specimen B after a duration of 108 minutes



Integrity failure of specimen E after a duration of 111 minutes



Integrity failure of specimen D after a duration of 117 minutes



Temperature Data

Mean Furnace Temperature, Together With The Temperature/Time Relationship Specified In The Standard

Time Minutes	Specified Furnace Temperature Deg. C	Actual Furnace Temperature Deg. C
0	20	19
5	576	612
10	678	682
15	739	737
20	781	770
25	815	812
30	842	841
35	865	855
40	885	871
45	902	907
50	918	921
55	932	940
60	945	953
65	957	961
70	968	965
75	979	978
80	988	989
85	997	1002
90	1006	1010
95	1014	1018
100	1022	1033
105	1029	1031
110	1036	1042
115	1043	1045
120	1049	1046
121	1050	1048

Individual Temperatures Recorded Adjacent To The Unexposed Surface Of Seal A

Time Minutes	T/C Number 6 Deg. C	T/C Number 7 Deg. C	T/C Number 12 Deg. C	T/C Number 14 Deg. C
0	17	17	15	17
5	17	17	16	18
10	19	20	19	20
15	24	25	24	27
20	36	34	33	36
25	50	50	44	55
30	68	63	69	71
35	83	71	84	79
40	92	74	90	83
45	95	80	94	86
50	97	85	98	95
55	100	94	103	100
60	103	106	114	110
65	111	117	130	123
70	120	123	146	135
75	131	136	159	147
80	144	150	173	159
85	150	170	184	167
90	170	193	192	172
95	189	207	201	178
100	205	220	211	193
105	218	228	230	218
110	230	234	248	233
115	240	240	256	246
120	250	253	266	254
121	251	253	268	253

Individual Temperatures Recorded Adjacent To The Unexposed Surface Of Seal B

Time Minutes	T/C Number 8 Deg. C	T/C Number 9 Deg. C	T/C Number 15 Deg. C	T/C Number 16 Deg. C
0	18	18	18	19
5	18	18	18	19
10	18	18	18	19
15	18	18	18	18
20	18	18	18	18
25	19	19	18	19
30	21	21	20	22
35	26	27	25	28
40	32	38	33	41
45	40	51	43	57
50	49	63	52	69
55	56	71	59	73
60	61	75	63	76
65	64	76	66	77
70	67	78	69	78
75	68	78	70	78
80	70	78	72	79
85	72	79	73	80
90	75	80	74	81
95	77	81	76	83
100	79	82	78	85
105	81	82	80	86
110	82	83	83	87
115	84	85	89	87
120	88	88	90	90
121	87	88	90	90

Individual Temperatures Recorded Adjacent To The Unexposed Surface Of Seal C

Time Minutes	T/C Number 10 Deg. C	T/C Number 11 Deg. C	T/C Number 18 Deg. C	T/C Number 19 Deg. C
0	18	18	19	19
5	19	18	19	19
10	18	18	19	19
15	18	18	19	19
20	18	18	19	19
25	19	19	19	20
30	19	20	19	21
35	21	23	20	23
40	23	29	21	28
45	27	37	22	34
50	31	45	25	40
55	35	52	28	46
60	39	60	32	52
65	42	65	34	57
70	45	69	37	59
75	48	72	40	62
80	51	75	43	64
85	55	77	45	66
90	58	78	47	68
95	63	81	50	71
100	68	83	53	72
105	71	86	57	73
110	76	87	59	74
115	82	87	61	77
120	87	88	65	79
121	87	88	65	79

Individual Temperatures Recorded Adjacent To The Unexposed Surface Of Seal D

Time Minutes	T/C Number 20 Deg. C	T/C Number 21 Deg. C	T/C Number 30 Deg. C	T/C Number 31 Deg. C
0	19	19	18	19
5	19	19	18	19
10	18	19	18	19
15	18	19	18	19
20	19	19	18	19
25	19	19	19	20
30	21	20	21	20
35	23	20	25	20
40	28	21	32	22
45	34	22	39	24
50	41	25	47	27
55	48	28	55	33
60	54	31	61	38
65	60	35	66	44
70	65	38	70	47
75	70	43	73	50
80	72	46	75	52
85	74	49	77	55
90	75	52	79	58
95	75	54	82	59
100	76	56	84	61
105	77	57	86	64
110	80	59	87	69
115	82	61	87	74
120	83	62	89	82
121	84	62	90	83

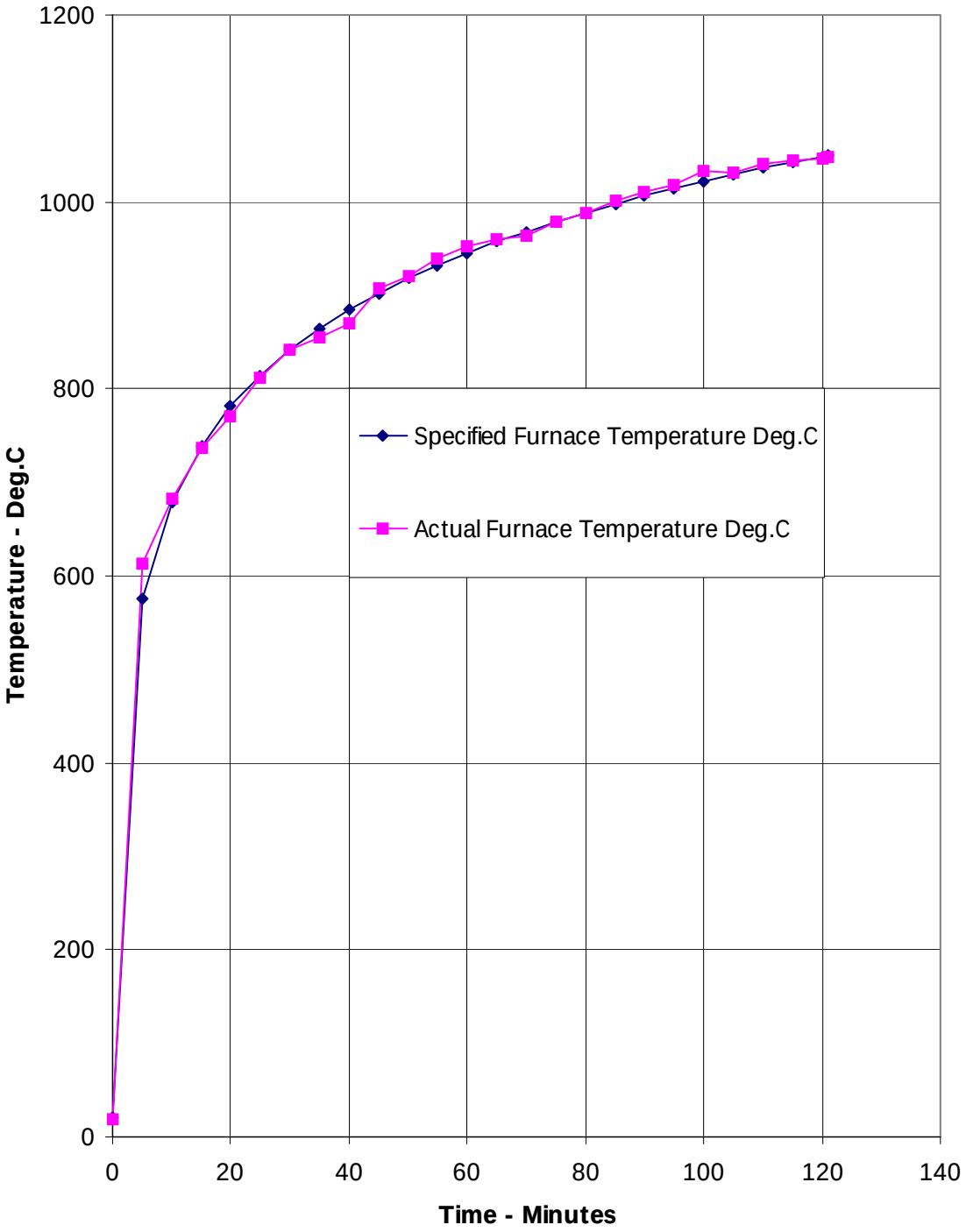
Individual Temperatures Recorded Adjacent To The Unexposed Surface Of Seal E

Time Minutes	T/C Number 22 Deg. C	T/C Number 23 Deg. C	T/C Number 32 Deg. C	T/C Number 33 Deg. C
0	19	19	19	19
5	19	19	19	19
10	19	19	18	19
15	19	18	18	19
20	19	19	18	19
25	20	20	19	20
30	22	23	22	22
35	27	29	26	26
40	32	35	33	33
45	41	46	42	41
50	50	56	52	50
55	58	64	60	58
60	64	70	66	65
65	69	75	71	70
70	71	78	74	74
75	74	81	77	76
80	76	84	78	77
85	77	85	79	79
90	78	87	80	80
95	79	88	82	80
100	81	89	83	81
105	82	89	84	82
110	83	89	86	83
115	84	90	89	88
120	85	90	100	109
121	85	90	100	113

Individual Temperatures Recorded Adjacent To The Unexposed Surface Of Seal F

Time Minutes	T/C Number 28 Deg. C	T/C Number 29 Deg. C	T/C Number 34 Deg. C	T/C Number 35 Deg. C
0	19	18	19	18
5	20	18	20	18
10	25	19	24	19
15	31	23	30	22
20	40	29	41	29
25	55	41	56	39
30	72	70	71	61
35	82	82	81	77
40	90	87	94	87
45	98	92	105	95
50	107	97	130	100
55	129	100	150	103
60	146	104	161	106
65	164	115	173	117
70	180	138	169	131
75	194	164	166	146
80	215	185	170	156
85	231	204	173	168
90	243	219	179	179
95	254	232	183	188
100	263	244	191	196
105	272	255	198	204
110	280	263	205	214
115	288	272	214	223
120	294	281	226	234
121	296	282	232	236

Graph Showing Mean Furnace Temperature, Together With The Temperature / Time Relationship Specified In The Standard



Performance Criteria and Test Results

Integrity

It is required that there is no collapse of the specimen, no sustained flaming on the unexposed surface and no loss of impermeability. These requirements were satisfied for the periods given in the table below.

Insulation

The mean and maximum temperature rise allowable on the unexposed face of the specimen by BS 476: Part 20: 1987 are 140°C and 180°C respectively, however, due to the reduced size of the specimens only the maximum temperature rise criterion was utilised. These requirements were satisfied for the periods given in the table below.

Specimen Reference	Integrity Minutes	Insulation Minutes
A	31	31
B	108	108
C	92	92
D	117	117
E	111	111
F	31	31

Ongoing Implications

Limitations

The results relate only to the behaviour of the specimens of the element of construction under the particular conditions of test. They are not intended to be the sole criteria for assessing the potential fire performance of the element in use, nor do they reflect the actual behaviour in fires.

The results may not be applicable to situations where the joint widths, orientations and supporting construction vary from those tested.

As no movement was induced into the specimens during the test there can be no evaluation of the performance of the seals where movement is induced in a building under actual fire conditions.

This test report is additional to that issued as WF Test Report No. 154617, dated 28th June 2006. The original test report remains valid and is not replaced by this additional test report. The product which was the subject of the test has not been retested and this additional report does not involve any technical change or technical review of the original test report. Details of the original product name and sponsor of the test are documented by Exova Warringtonfire and are maintained in confidential company records.

Review

This report covers a test which was conducted to a procedure which is not the subject of any British Standard specification, but the test utilised the general principles of fire resistance testing given in BS 476: Part 20: 1987 and prEN 1366-4: 2005. Since fire tests are the subject of a continuing Standardisation process, and because existing standards are the subject of review and possible amendment and new interpretations, it is recommended that the report be referred back to the test laboratory after a period of two years to ensure that the methodology adopted and the results obtained remain valid in the light of the situation prevailing at that time.

Conclusions

Evaluation against objective

A fire resistance test which utilised the general principles of BS 476: Part 20: 1987, in conjunction with additional guidelines adopted from prEN 1366-4: 2001, has been conducted to assess the ability of six different floor and wall mounted specimens of linear joint sealing system to reinstate the integrity and insulation performance (as defined in BS 476: Part 20: 1987) of simulated floor and wall constructions where adjacent structures abut.

If the performance of each specimen was assessed against the performance requirements for integrity and insulation (maximum temperature rise) specified in BS 476: Part 20: 1987, the results obtained could be expressed as follows:

Test Results

If the performance of the specimens were assessed against the integrity and insulation (maximum temperature rise only) performance criteria of BS 476: Part 20: 1987. The results obtained could be expressed as follows:

Specimen Reference	Integrity Minutes	Insulation Minutes
A	31	31
B	108	108
C	92	92
D	117	117
E	111	111
F	31	31

The test was discontinued after a period of 121 minutes.

Exova Warringtonfire
Holmesfield Road
Warrington
WA1 2DS
United Kingdom

T : +44 (0) 1925 655 116
F : +44 (0) 1925 655 419
E : warrington@exova.com
W: www.exova.com

Testing. Advising. Assuring.

Title:

Fire resistance test utilising the general principles of BS 476: Part 20: 1987 on three specimens of floor mounted and three specimens of wall mounted linear gap seals

WF Report No:

330590B

Prepared for:

Würth International AG

Aspermontstrasse 1

CH- 7000 Chur, Switzerland

Date:

23rd July 2013

This report is additional to that issued as WF Test Report No. 154618, dated 28th June 2006. The original report remains valid and is not replaced by this additional test report.

Notified Body No:

0833

0249

Summary

Objective

A fire resistance test has been conducted to assess the ability of six specimens of a linear gap sealing system, to reinstate the integrity and insulation performance of simulated floor and wall constructions where adjacent structures abut. The performances of the specimens were assessed, with respect to the integrity and insulation (maximum temperature rise only) performance criteria, as defined in BS 476: Part 20: 1987.

Sponsor

Würth International AG Aspermontstrasse 1, CH- 7000 Chur, Switzerland.

Summary of the Tested Specimens

For the purpose of the test the specimens were referenced A to C for the wall mounted seals and D to F for the floor mounted seals.

Masonry wall and floor assemblies, each 200 mm thick, were provided with three gaps. Each gap was nominally 40 mm wide by 900 mm long and incorporated different substrates to each of the gap faces. A & F were faced with steel and aluminium, B & E were faced with aerated concrete and C & D were faced with plywood and softwood.

Each of the gaps was filled for the full depth of the construction with an expanding Polyurethane foam material referenced 'Würth fire protection joint foam – B1 – PU'.

Test Results

If the performance of the specimens were assessed against the integrity and insulation (maximum temperature rise only) performance criteria of BS 476: Part 20: 1987. The results obtained could be expressed as follows:

Specimen Reference	Integrity Minutes	Insulation Minutes
A	28	28
B	91	91
C	196	196
D	127	127
E	115	115
F	29	29

The test was discontinued after a period of 197 minutes.

Date of Test

27th May 2006

This report may only be reproduced in full. Extracts or abridgements of reports shall not be published without permission of Exova Warringtonfire.

Signatories



PP

Responsible Officer
S. Whatham*
Technical Officer



Approved
A. Kearns*
Technical Manager

* For and on behalf of Exova Warringtonfire.

Report Issued

Date : 23rd July 2013

This copy has been produced from a .pdf format electronic file that has been provided by Exova Warringtonfire to the sponsor of the report and must only be reproduced in full. Extracts or abridgements of reports must not be published without permission of Exova Warringtonfire. The pdf copy supplied is the sole authentic version of this document. All pdf versions of this report bear authentic signatures of the responsible Exova Warringtonfire staff.

CONTENTS **PAGE NO.**

SUMMARY **2**
SIGNATORIES **3**
TEST PROCEDURE **5**
INSTRUMENTATION **6**
TEST SPECIMEN **7**
SCHEDULE OF COMPONENTS **9**
TEST OBSERVATIONS **10**
TEST PHOTOGRAPHS **12**
TEMPERATURE DATA **17**
PERFORMANCE CRITERIA AND TEST RESULTS **25**
ONGOING IMPLICATIONS **25**
CONCLUSIONS **26**

Test Procedure

Introduction

Walls and floors often incorporate gaps to accommodate expansion, contraction or other movement of the structure. The fire resistance of such elements is only as good as their weakest point and it is, therefore, important that any gaps or apertures are adequately sealed, such that weaknesses are not created at these positions.

There is not, as yet, any specified British Standard fire test method for evaluating gap seals which are designed to act as an effective barrier to the penetration of fire and to reinstate the necessary fire resistance performance of the separating element. However, the fire resistance of walls and floors is determined by tests utilising the general principles given in BS 476: Part 20: 1987, and it would appear appropriate to use the principles of that Standard to evaluate the performance of gap sealing systems. Some additional guidelines were adopted from the draft European document referenced prEN 1366-4, relating to the testing of these types of sealing systems. This report should be read in conjunction with the above mentioned documents.

Fire Test Study Group / EGOLF

Certain aspects of some fire test specifications are open to different interpretations. The Fire Test Study Group and EGOLF have identified a number of such areas and have agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test they have been followed.

Instruction To Test

The test was conducted on the 27th May 2006 at the request of the original sponsor of the test.

Test Specimen Construction

A comprehensive description of the test construction is given in the Schedule of Components. The description is based on a detailed survey of the specimens and information supplied by the sponsor of the test.

Installation

The floor and wall constructions were supplied by Exova Warringtonfire. The gap sealing systems were provided and installed by a representative of the test sponsor on the day of test.

Sampling

Exova Warringtonfire was not involved in any sampling or selection procedure of the sealing system components.

Instrumentation

General

The instrumentation and measuring equipment provided was in accordance with BS 476: Part 20: 1987 and the draft European document, where appropriate.

Furnace

The furnace was controlled so that its mean temperature complied with the requirements of BS 476: Part 20: 1987, Clause 3.1, using four mineral insulated thermocouples distributed over a plane 100 mm from the surface of the wall construction.

Thermocouple Allocation

Thermocouples were provided to monitor the unexposed surface of the specimens and the output of all instrumentation was recorded at no less than one minute intervals as follows:

The locations and reference numbers of the various unexposed surface thermocouples are shown in Figure 1.

Roving Thermocouple

A roving thermocouple was available to measure temperatures on the unexposed surface of the specimens at any position which might appear to be hotter than the temperatures indicated by the fixed thermocouples.

Integrity Criteria

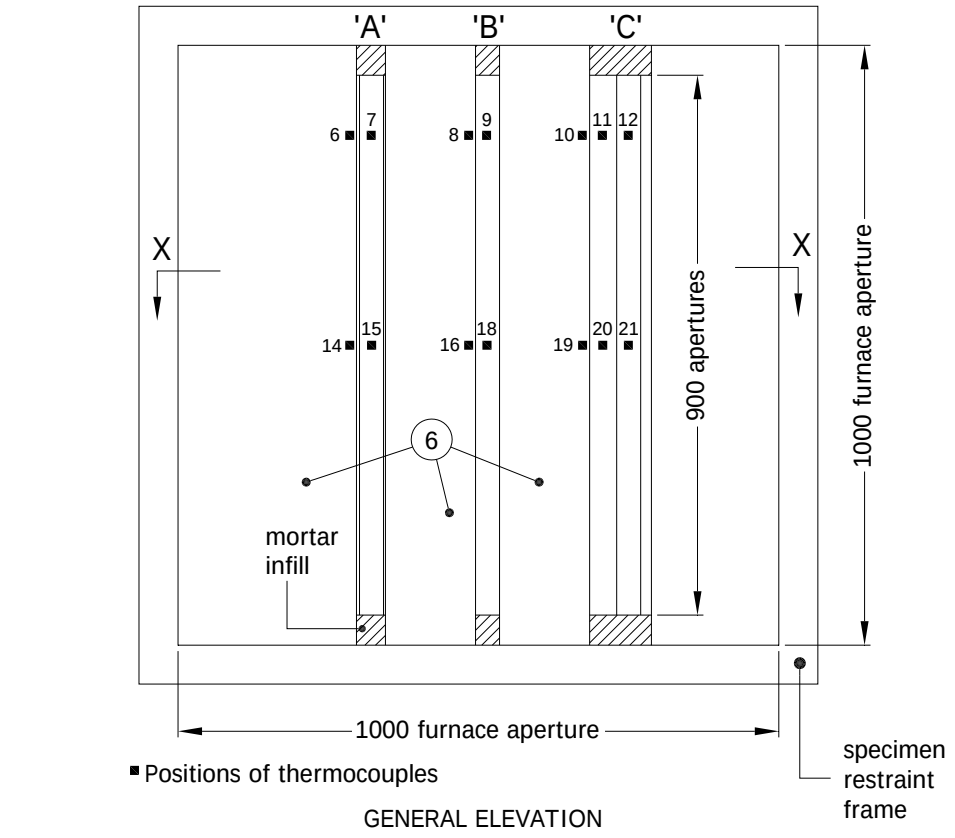
Cotton pads and gap gauges were available to evaluate the integrity of the specimens.

Furnace Pressure

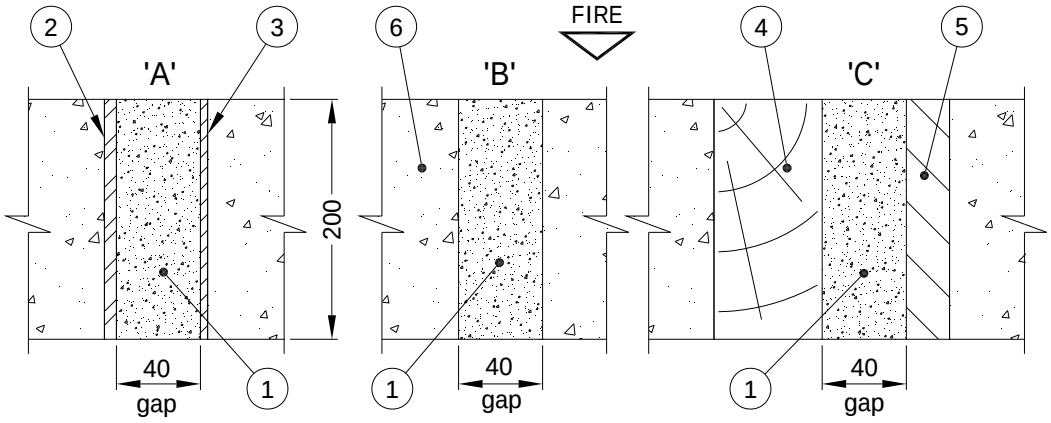
After the first five minutes of testing, the furnace pressure was controlled to maintain a slightly positive pressure relative to the pressure of the laboratory. The furnace atmospheric pressure was measured and controlled such that, at a point 100 mm below the soffit of the floor assembly, the differential pressure was calculated to be between 18 Pa and 20 Pa.

Test Specimens

Figure 1- General Elevation of Wall Specimens and Unexposed Face Thermocouples



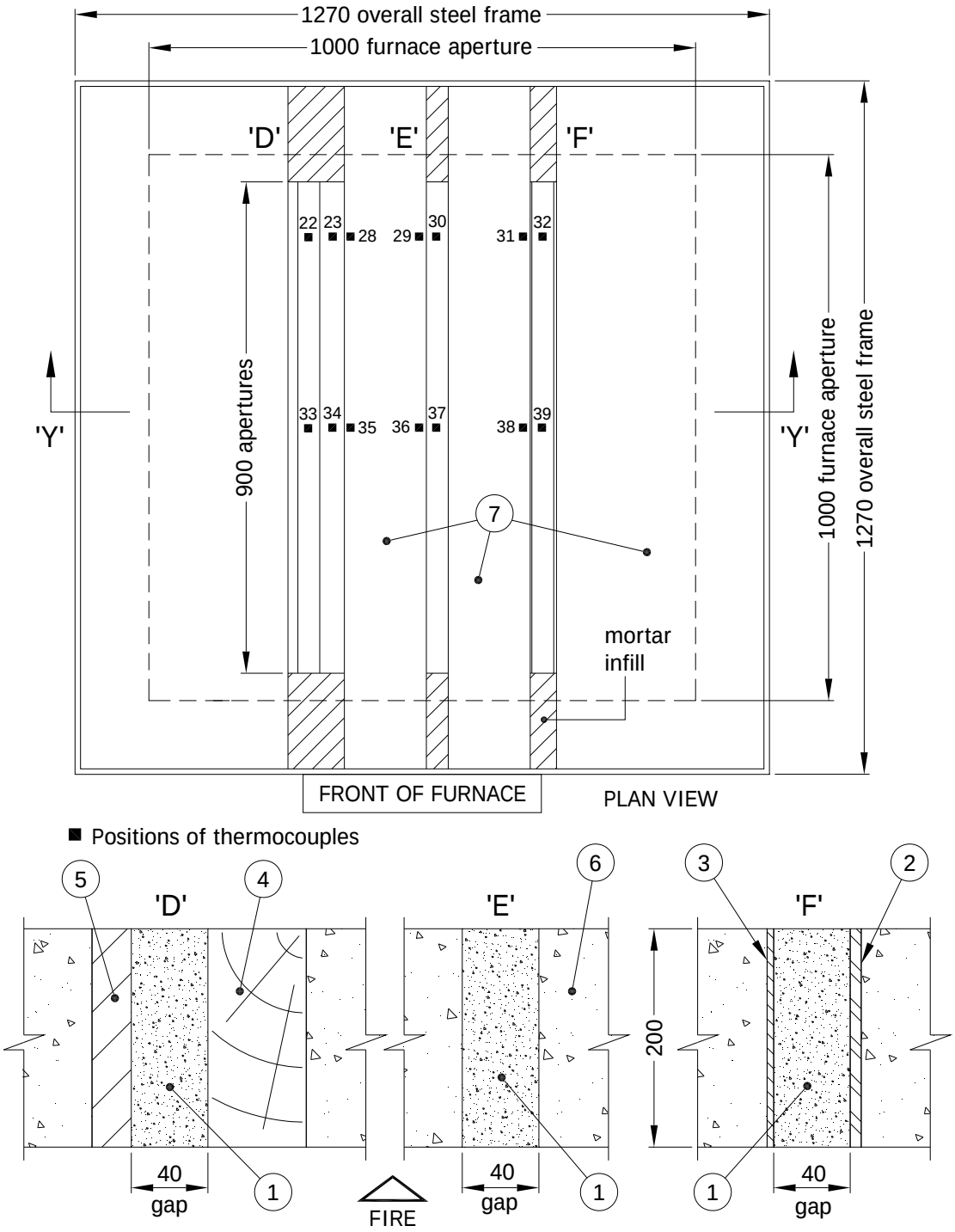
GENERAL ELEVATION



TYPICAL SECTION X-X THROUGH SPECIMENS

Do not scale. All dimensions are in mm

Figure 2 – General Plan of Floor Specimens and Unexposed Face Thermocouples



TYPICAL SECTION Y-Y THROUGH SPECIMENS

Do not scale. All dimensions are in mm

Schedule of Components

(Refer to Figures 1 & 2)
(All values are nominal unless stated otherwise)
(All other details are as stated by the sponsor)

Item		Description
1. Gap Seal		
Manufacturer	:	Würth International AG
Reference	:	Würth fire protection joint foam – B1 – PU
Material	:	Polyurethane foam
Overall Size of Sealant (width x depth)	:	40 mm x 200 mm
Application method	:	Direct from canister supplied
2. Gap Facing (specimen 'A' and 'F')		
Material	:	Mild steel
Thickness	:	5 mm
Overall size	:	200 mm wide x 900 mm long
Fixing method to concrete	:	5 no. 62 mm long x 4 mm (No.8) diameter countersunk head steel screws into plastic plugs.
3. Gap Facing (specimen 'A' and 'F')		
Material	:	Aluminium
Thickness	:	3 mm
Overall size	:	200 mm wide x 900 mm long
Fixing method to concrete	:	5 no. 62 mm long x 4 mm (No.8) diameter countersunk head steel screws into plastic plugs.
4. Gap Facing (specimen 'C' and 'D')		
Material	:	Timber, softwood
Overall section size	:	45 mm thick x 200 mm wide x 900 mm long
Fixing method to concrete	:	5 no. 80 mm long x 3.5 mm (No.6) diameter countersunk head steel screws into plastic plugs
5. Gap Facing (specimen 'C' and 'D')		
Material	:	Plywood
Thickness	:	18 mm
Overall section size	:	200 mm wide x 900 mm long
Fixing method to concrete	:	5 no. 80 mm long x 3.5 mm (No.6) diameter countersunk head steel screws into plastic plugs
6. Concrete Wall		
Material	:	Autoclaved aerated concrete lintels
Density	:	670 kg/m^3
Overall section size	:	200 mm x 150 mm
7. Concrete Floor		
Material	:	Autoclaved aerated concrete lintels
Density	:	670 kg/m^3
Overall section size	:	200 mm x 150 mm

Test Observations

Time		All observations are from the unexposed face unless noted otherwise.
mins	secs	The ambient air temperature in the vicinity of the test construction was 15ºC at the start of the test with a maximum variation of 1ºC during the test.
00	00	**Test commences.**
04	00	Smoke release from all specimens from the top and bottom edges.
06	00	Smoke issue is greatest from specimen C at bottom, between softwood and concrete.
09	00	Timber in specimens C and D has ignited and is charring on exposed face.
20	00	Pink fire stopping material in specimen F appears to be bulging up and out of gap from mid thermocouple position to end of gap. (End without thermocouple).
24	00	Specimen A is bulging in the same manner as specimen F from top to bottom. Both, specimens A and F are bulging more on the side of the Aluminium substrate.
27	00	Brown smoke coming from specimen A at mid thermocouple position.
28	00	Gaps have formed in specimens A and F where Aluminium has distorted, at approximately mid position of both specimens.
28	30	Cotton pad applied to specimen A above mid thermocouple position and ignites. **Integrity failure is deemed to have occurred.**
29	00	Cotton pad applied to specimen F adjacent to mid thermocouple position and ignites. **Integrity failure is deemed to have occurred.**
33	00	Pink fire stopping material in specimens A and F is turning black at positions of integrity failure.
45	00	Almost all the material in specimens A and F has turned black, and is charring at positions of integrity failure.
55	00	Aluminium is melting away from specimens A and F at gap positions.
60	00	Specimen E is beginning to turn black at thermocouple 30 position and approximately 200 mm below it.
65	00	Specimens A and F are blanked off.
75	00	Smoke issue increasing from specimen D adjacent to thermocouple 23.

Time		
mins	**secs**	
91	**00**	Burn through 100mm below mid height of specimen B occurs. Sustained flames issue from the gap. **Integrity failure is deemed to have occurred.**
115	**00**	Burn through at back edge of specimen E, cotton pad applied and ignites. **Integrity failure is deemed to have occurred.**
120	**00**	Specimen C is beginning to blacken at either end and at other locations.
125	**00**	Large area of charring on specimen D, starting from mid thermocouple position and extending approximately 300 mm, cotton pad applied but did not ignite.
127	**00**	Burn through and sustained flaming on specimen D. **Integrity failure is deemed to have occurred.**
150	**00**	Pink material in Specimen C is beginning to turn brown at the bottom edge.
176	**00**	Pink material in Specimen C is beginning to turn brown at the top edge.
180	**00**	Specimen C continues to satisfy all integrity and insulation criterion.
187	**00**	Some black spots appearing on pink material approximately 200 mm up from the bottom of specimen C
190	**00**	Chipboard beginning to blacken at the top edge of specimen C, smoke release increasing from this area.
193	**00**	Pink material at mid thermocouple position has started to bulge out, large amount of smoke release.
195	**00**	Burn through at area mentioned at 193 minutes, cotton pad applied but did not ignite,
196	**00**	Sustained flaming at top of specimen C, between chipboard and concrete. **Integrity failure is deemed to have occurred.**
197	**00**	**Test discontinued.**

Test Photographs

The exposed face of the wall construction prior to testing



The exposed face of the floor construction during the test



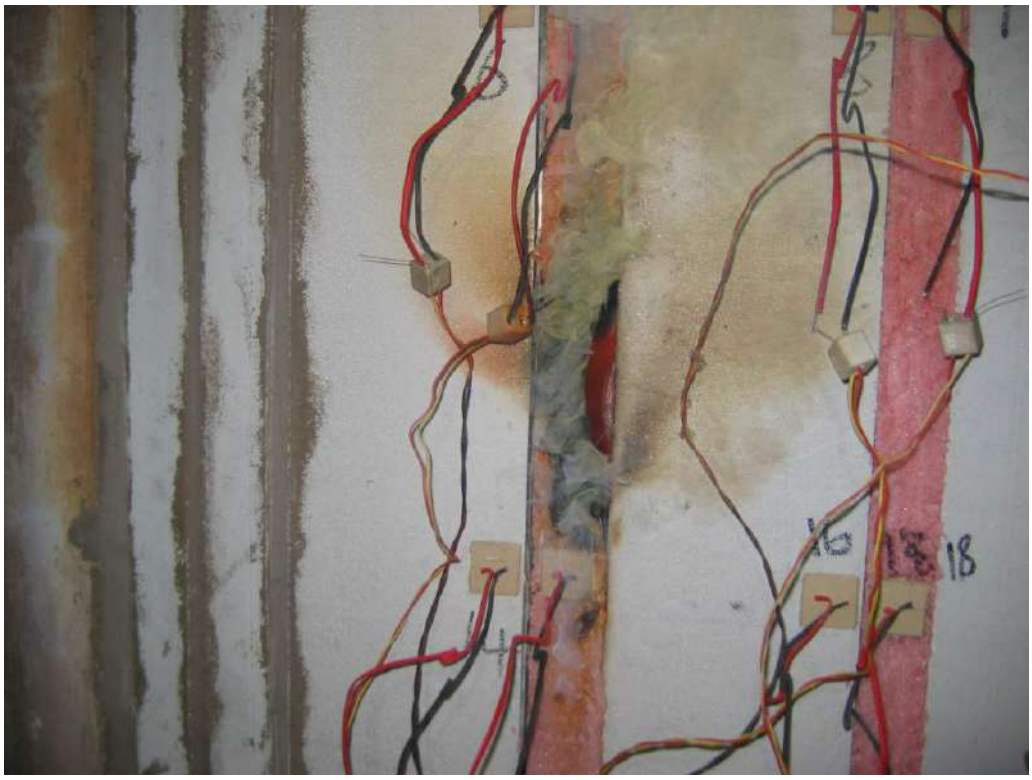
The unexposed face of the wall construction prior to testing



The unexposed face of the floor construction during the test



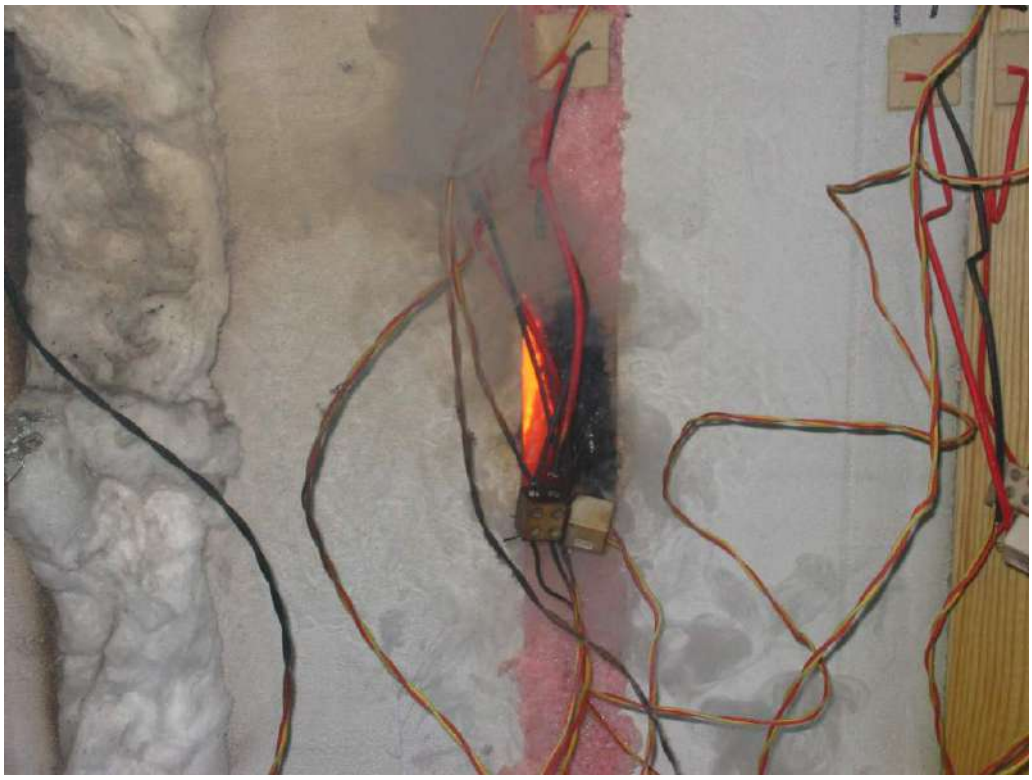
Integrity failure of specimen A after a duration of 28 minutes



Integrity failure of specimen F after a duration of 29 minutes



Integrity failure of specimen B after a duration of 91 minutes



Integrity failure of specimen E after a duration of 115 minutes



Integrity failure of specimen D after a duration of 127 minutes



Specimen C after a duration of 190 minutes



Temperature Data

Mean Furnace Temperature, Together With The Temperature/Time Relationship Specified In The Standard

Time Minutes	Specified Furnace Temperature Deg. C	Actual Furnace Temperature Deg. C
0	20	29
10	678	674
20	781	780
30	842	839
40	885	885
50	918	919
60	945	958
70	968	977
80	988	992
90	1006	996
100	1022	1029
110	1036	1047
120	1049	1064
130	1061	1076
140	1072	1085
150	1082	1087
160	1092	1093
170	1101	1114
180	1110	1129
190	1118	1137
197	1123	1143

Individual Temperatures Recorded On And Adjacent To The Unexposed Surface Of Seal A

Time Minutes	T/C Number 6 Deg. C	T/C Number 7 Deg. C	T/C Number 14 Deg. C	T/C Number 15 Deg. C
0	21	20	21	20
10	22	22	21	21
20	30	34	27	33
30	59	72	51	61
40	80	298	74	265
50	100	500	119	398
60	146	657	168	604
70	272	*	287	*
80	355		294	
90	361		315	
100	368		327	
110	376		346	
120	383		359	
130	369		371	
140	391		383	
150	433		405	
160	467		416	
170	470		425	
180	478		444	
190	489		472	
197	496		480	

* Thermocouples removed

Individual Temperatures Recorded On And Adjacent To The Unexposed Surface Of Seal B

Time Minutes	T/C Number 8 Deg. C	T/C Number 9 Deg. C	T/C Number 16 Deg. C	T/C Number 18 Deg. C
0	20	19	21	21
10	20	19	20	21
20	20	19	20	21
30	25	20	21	22
40	22	19	23	23
50	24	20	25	26
60	34	21	32	35
70	42	46	37	35
80	62	62	60	49
90	79	26	80	55
100	82	24	75	56
110	*	27	*	*
120		25		
130		25		
140		317		
150		*		
160				
170				
180				
190				
197				

* Thermocouples removed

Individual Temperatures Recorded On And Adjacent To The Unexposed Surface Of Seal C

Time Minutes	T/C Number 10 Deg. C	T/C Number 11 Deg. C	T/C Number 12 Deg. C	T/C Number 19 Deg. C	T/C Number 20 Deg. C	T/C Number 21 Deg. C
0	21	20	19	21	20	20
10	21	21	19	22	20	20
20	21	21	19	22	20	20
30	21	21	19	22	21	21
40	22	21	20	22	21	21
50	22	22	20	23	22	22
60	25	24	23	27	24	25
70	27	25	24	29	26	26
80	32	26	25	32	28	29
90	35	28	28	33	28	29
100	42	29	30	36	29	30
110	48	33	34	46	34	35
120	53	36	35	49	35	37
130	56	39	36	51	38	38
140	58	42	37	53	40	41
150	62	46	41	59	45	45
160	65	48	42	64	48	48
170	67	51	43	69	54	53
180	69	54	48	73	60	61
190	72	57	52	76	66	72
197	75	61	64	76	79	271

Individual Temperatures Recorded On and Adjacent To The Unexposed Surface Of Seal D

Time	T/C Number	T/C Number	T/C Number	T/C Number	T/C Number	T/C Number
Minutes	22	23	28	33	34	35
	Deg. C	Deg. C	Deg. C	Deg. C	Deg. C	Deg. C
0	21	21	21	20	21	21
10	21	21	21	21	21	21
20	21	21	21	20	21	21
30	21	21	21	21	21	21
40	21	22	22	22	22	22
50	23	22	23	23	22	23
60	25	24	24	26	25	26
70	27	26	26	41	33	34
80	29	32	63	30	29	30
90	36	52	67	32	29	30
100	42	58	74	35	29	31
110	48	64	80	40	31	36
120	49	57	83	44	34	42
130	62	69	91	62	45	57
140	73	80	97	153	71	83
150	*	*	*	*	*	*
160						
170						
180						
190						
197						

* Thermocouples removed

Individual Temperatures Recorded On And Adjacent To The Unexposed Surface Of Seal E

Time Minutes	T/C Number 29 Deg. C	T/C Number 30 Deg. C	T/C Number 36 Deg. C	T/C Number 37 Deg. C
0	22	21	22	21
10	22	21	22	21
20	22	21	22	21
30	22	22	23	23
40	24	23	24	26
50	27	26	28	34
60	32	30	32	39
70	41	39	47	56
80	50	42	42	40
90	60	50	46	43
100	70	57	52	45
110	80	69	57	47
120	97	660	61	50
130	162	*	97	737
140	209		157	927
150	*		*	*
160				
170				
180				
190				
197				

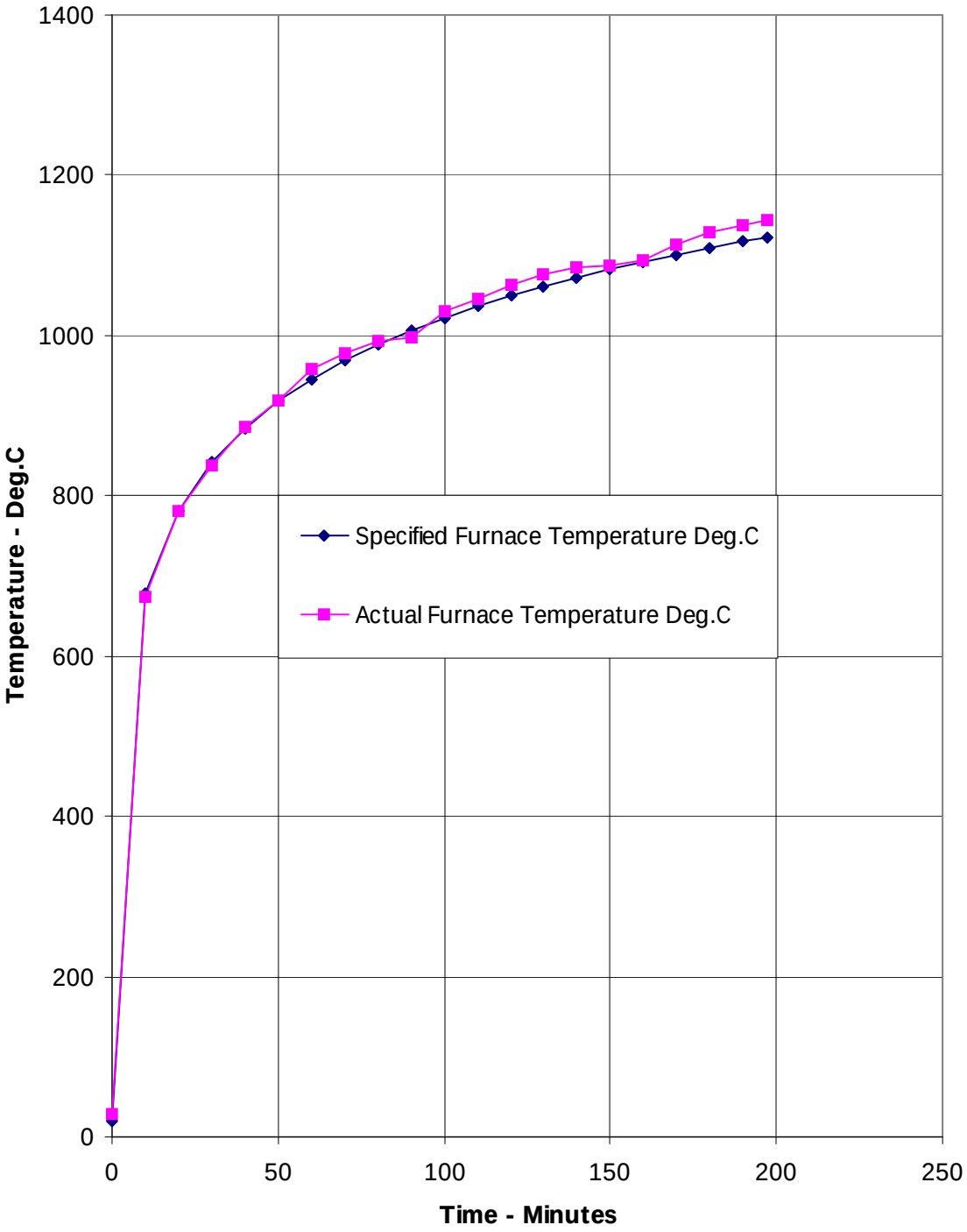
* Thermocouples removed

Individual Temperatures Recorded On And Adjacent To The Unexposed Surface Of Seal F

Time Minutes	T/C Number 31 Deg. C	T/C Number 32 Deg. C	T/C Number 38 Deg. C	T/C Number 39 Deg. C
0	23	21	23	23
10	26	23	26	25
20	39	31	42	37
30	66	44	75	67
40	84	68	91	265
50	93	137	124	386
60	99	392	153	852
70	112	*	308	*
80	98		301	
90	98		309	
100	103		310	
110	108		322	
120	116		331	
130	*		355	
140			387	
150			*	
160				
170				
180				
190				
197				

* Thermocouples removed

Graph Showing Mean Furnace Temperature, Together With The Temperature/Time Relationship Specified In The Standard



Performance Criteria and Test Results

Integrity

It is required that there is no collapse of the specimen, no sustained flaming on the unexposed surface and no loss of impermeability. These requirements were satisfied for the periods given in the table below.

Insulation

The mean and maximum temperature rise allowable on the unexposed face of the specimen by BS 476: Part 20: 1987 are 140°C and 180°C respectively, however, due to the reduced size of the specimens only the maximum temperature rise criterion was utilised. These requirements were satisfied for the periods given in the table below.

Specimen Reference	Integrity Minutes	Insulation Minutes
A	28	28
B	91	91
C	196	196
D	127	127
E	115	115
F	29	29

Ongoing Implications

Limitations

The results relate only to the behaviour of the specimens of the element of construction under the particular conditions of test. They are not intended to be the sole criteria for assessing the potential fire performance of the element in use, nor do they reflect the actual behaviour in fires.

The results may not be applicable to situations where the joint widths, orientations and supporting construction vary from those tested.

As no movement was induced into the specimens during the test there can be no evaluation of the performance of the seals where movement is induced in a building under actual fire conditions.

This test report is additional to that issued as WF Test Report No. 154618, dated 28th June 2006. The original test report remains valid and is not replaced by this additional test report. The product which was the subject of the test has not been retested and this additional report does not involve any technical change or technical review of the original test report. Details of the original product name and sponsor of the test are documented by Exova Warringtonfire and are maintained in confidential company records.

Review

This report covers a test which was conducted to a procedure which is not the subject of any British Standard specification, but the test utilised the general principles of fire resistance testing given in BS 476: Part 20: 1987 and prEN 1366-4: 2005. Since fire tests are the subject of a continuing Standardisation process, and because existing standards are the subject of review and possible amendment and new interpretations, it is recommended that the report be referred back to the test laboratory after a period of two years to ensure that the methodology adopted and the results obtained remain valid in the light of the situation prevailing at that time.

Conclusions

Evaluation against objective

A fire resistance test which utilised the general principles of BS 476: Part 20: 1987, in conjunction with additional guidelines adopted from prEN 1366-4: 2001, has been conducted to assess the ability of eight different floor and wall mounted specimens of linear joint sealing system to reinstate the integrity and insulation performance (as defined in BS 476: Part 20: 1987) of simulated floor and wall constructions where adjacent structures abut.

If the performance of each specimen was assessed against the performance requirements for integrity and insulation (maximum temperature rise) specified in BS 476: Part 20: 1987, the results obtained could be expressed as follows:

Test Results

If the performance of the specimens were assessed against the integrity and insulation (maximum temperature rise only) performance criteria of BS 476: Part 20: 1987. The results obtained could be expressed as follows:

Specimen Reference	Integrity Minutes	Insulation Minutes
A	28	28
B	91	91
C	196	196
D	127	127
E	115	115
F	29	29

The test was discontinued after a period of 197 minutes.

ENAC ENSAYOS Nº 4/LE699
MEMBER OF EGOLF

REPORT No. 13_03140-2-a

CUSTOMER	WÜRTH INTERNATIONAL AG
CONTACT PERSON	PETER ZANG
ADDRESS	ASPERMONTSTRASSE 1 CH-7000 CHUR (SWITZERLAND)
PURPOSE	FIRE RESISTANCE CLASSIFICATION ACCORDING TO UNE-EN 13501-2:2009+A1:2010
TESTED SAMPLE	LINEAR JOINT SEALS REF. **«WÜRTH FIRE PROTECTION JOINT FOAM B1 PU»**
DATE OF ISSUE	30.09.2013

Razón Social / FUNDACIÓN TECNALIA RESEARCH & INNOVATION Nº F-69 Registro de Fundaciones del Gobierno Vasco CIF G48975767

Abel Capelastegui
Fire Safety and Protection Researcher
Technological Services

Izaskun Martinez
Head of Fire Safety and Protection
Technological Services

* The results of the current report concern only and exclusively the material tested.
* This report shall not be reproduced, except in full, without the express authorisation of FUNDACIÓN TECNALIA R&I.
* In case of a lawsuit, the original Spanish report No. 13_00139-2-1 M1 shall be taken as reference.

1.- INTRODUCTION

This classification report defines the resistance to fire classification assigned to linear joint seals of unequal width, referenced as **«WÜRTH FIRE PROTECTION JOINT FOAM B1 PU»** in accordance with the procedures given in [C].

1.1 REFERENCE STANDARDS

[A] *UNE-EN 1363-1:2000 "Ensayos de resistencia al fuego. Parte 1: Requisitos generales".*

[B] *UNE-EN 1366-4:2008+A1:2010 "Ensayos de resistencia al fuego de instalaciones de servicio. Parte 4: Sellados de junta lineal.".*

[C] *UNE-EN 13501-2:2009+A1:2010 "Clasificación en función del comportamiento frente al fuego de los productos de construcción y elementos para la edificación. Parte 2: Clasificación a partir de datos obtenidos de los ensayos de resistencia al fuego excluidas las instalaciones de ventilación".*

2.- DETAILS OF CLASSIFIED PRODUCTS

2.1 GENERAL

The samples referenced as **«WÜRTH FIRE PROTECTION JOINT FOAM B1 PU»** are defined as linear joint seals according to [C] 7.5.9.

2.2. DESCRIPTION

The samples main descriptive characteristics, linear joint seal referenced as **«WÜRTH FIRE PROTECTION JOINT FOAM B1 PU»**, have been provided by the applicant. This information is included below.

	"1"	**"2"**	**"3"**	**"4"**
Width (mm)	10	20	30	40
Length (mm)	900	900	900	900
Seals composition	Simple	Simple	Simple	Simple
¿Splice?	Yes	Yes	Yes	Yes

Type of splice	Field	Field	Field	Field
Material	PU Foam	PU Foam	PU Foam	PU Foam
Thickness (mm)	200	200	200	200
Movement capability	No	No	No	No
Joint orientation	Vertical	Vertical	Vertical	Vertical
Support orientation	Vertical	Vertical	Vertical	Vertical

The drawings elaborated by the laboratory after verifying the samples are included below and in Annex 1 of test report No 13_00139-1 M1.

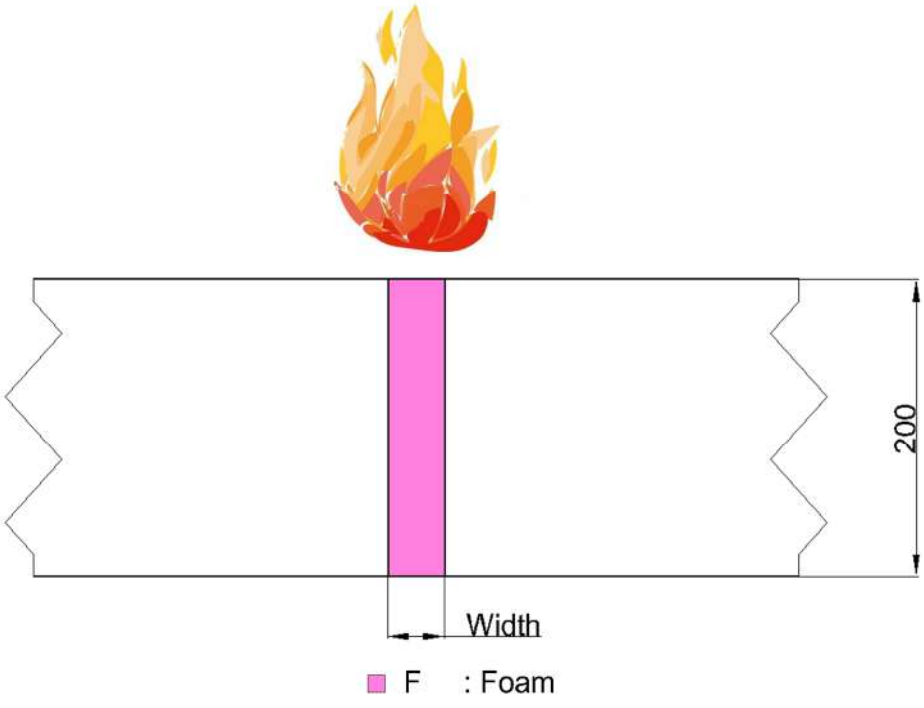


Figure – Transversal cross section of joints

3.- TEST REPORTS AND TEST RESULTS IN SUPPORT OF CLASSIFICATION

3.1 TEST REPORTS

ISSUING LABORATORY	TEST APPLICANT	TEST REPORT No.	Test method	Date of issue
TECNALIA RESEARCH & INNOVATION	*WÜRTH INTERNATIONAL AG*	*13_00139-1*	*[B]*	*18.03.2013*

3.2 RESULTS

Samples	**"WÜRTH FIRE PROTECTION JOINT FOAM B1 PU"**
Test method	[B]
Test report No.	13_00139-1 M1
Test report issue date	09.04.2013

		"1"	"2"	"3"	"4"
Integrity (E)		**242 min**	**242 min**	**195 min**	**103 min**
Performance criteria					
Cotton pad	Non-flaming inflammation or combustion on the cotton pad.	242 min	242 min	195 min	103 min
Sustained flames > 10 s	Appearance of sustained flames during more than 10 s on the unexposed side.	242 min	242 min	195 min	103 min
Insulation (I)		**242 min**	**242 min**	**195 min**	**102 min**
Performance criteria					
Maximum temperature	Not exceeding the initial temperature of	242 min	242 min	195 min	102 min

	each thermocouple by 180 ºC.

4.- CLASIFICATION AND FIELD OF APPLICATION

REFERENCE OF CLASIFICATION

This classification has been carried out in accordance with [C] Clause 7.

4.2 CLASSIFICATION

According to [C] the linear joint seals, referenced as **«WÜRTH FIRE PROTECTION JOINT FOAM B1 PU»**, classification is:

Fire resistance classification:
EI 90 V- X- F- W 10 to 40

Fire resistance classification:
EI 180 V- X- F- W 10 to 30

Fire resistance classification:
EI 240 V- X- F- W 10 to 20

Classification key:

ENAC ENSAYOS Nº 4/LE699
MEMBER OF

Test conditions	Designation
Specimen orientation	
• Horizontal supporting construction	H
• Vertical supporting construction - vertical joint	V
• Vertical supporting construction - horizontal joint	T
Movement capability	
No movement	X
Movement induced (in %)	M000
Type of splices	
Manufactured	M
Field	F
Both manufactured and field	B
Joint widths range (in mm)	W00 to 99

4.3 FIELD OF APPLICATION

The field of direct application of the test results refers to those changes that can be done on a sample after a fire resistance test with a satisfactory result. These variations can be entered automatically without requiring approval of the petitioner to obtain additional evaluations, calculations or approvals

Parameter	Permitted variation	Sample tested
Orientation.	-	Vertical linear joint in a vertical test construction
Supporting construction.	Concrete, block work and masonry separating elements of a thickness and density equal to or greater than that tested.	Autoclaved aerated concrete standard supporting construction with 200 mm width and 550 kg/m^3 density.
Seal position	-	The entire thickness of supporting construction (200 mm)
Mechanically induced movement.	Movement capability ± 7,5%.	Without mechanically induced movement.

5.- LIMITATIONS

This document does not represent type approval or certification of the product.

Any modifications that have not been expressly included in the sections above will not be considered for the purpose of possible changes without due additional express approvals.

LABORATORY REPORT

Wurth Gulf FZE
PO Box 17036, Jebel Ali South Zone 6
Dubai – United Arab Emirates

Report No: WLRP17-1786/1
Sample No: WSP17-1786
Date of Report: 09/11/2017

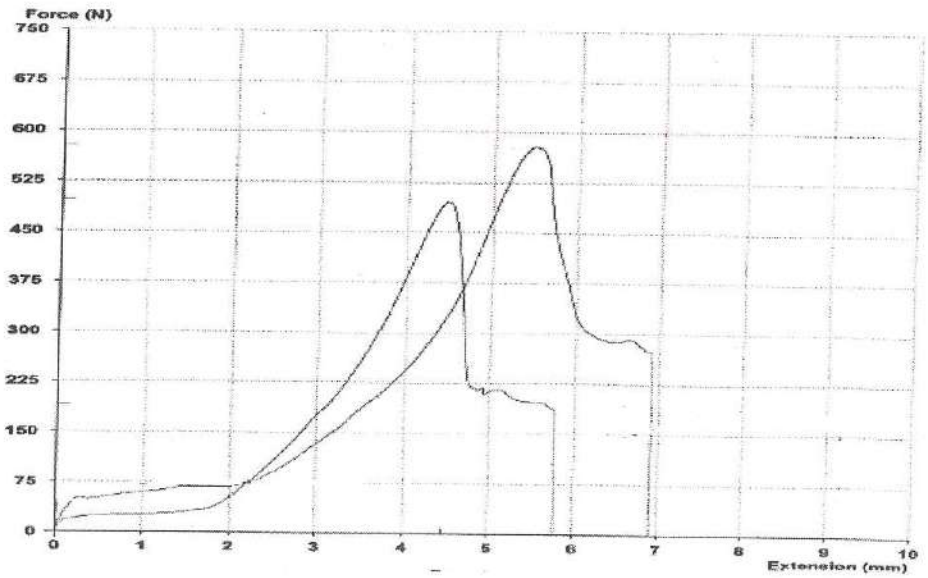
Introduction: Further to the request received from **M/s. Wurth Gulf FZE** dated 31st October 2017, the sample of WÜRTH 1K-ASSEMBLY FOAM B3 was tested for Tensile strength.

Sample description : WÜRTH 1K-ASSEMBLY FOAM B3
Art No : 08921551
Sample Received : 31/10/2017
Test Completion Date : 09/11/2017
Tested by : SL

Tensile Strength

Test Method: ASTM D1623
Substrate: Concrete
Test Temperature: 23±2°C
Relative Humidity: 50±5%
Age of Specimen: 24 Hours

Sample No	Width (mm)	Breath (mm)	Maximum Force (N)	Tensile Strength (N/mm^2)
WSP17-1786	93.0	68.0	496	0.0784
	94.0	68.0	577.5	0.0903
			Average	**0.084**



Remarks: None
Signed for and on behalf of Wimpey Laboratories

Binu K.Babu
Technical Manager

WIMPEY LABORATORIES P.O.BOX: 123279, DUBAI-U.A.E.

Test results relate only to the samples tested
This report shall not be reproduced except in full, without the written approval of the laboratory.
-End of text-

LABORATORY REPORT

Wurth Gulf FZE
PO Box 17036, Jebel Ali South Zone 6
Dubai – United Arab Emirates

Report No: WLRP17-1786/2
Sample No: WSP17-1786
Date of Report: 09/11/2017

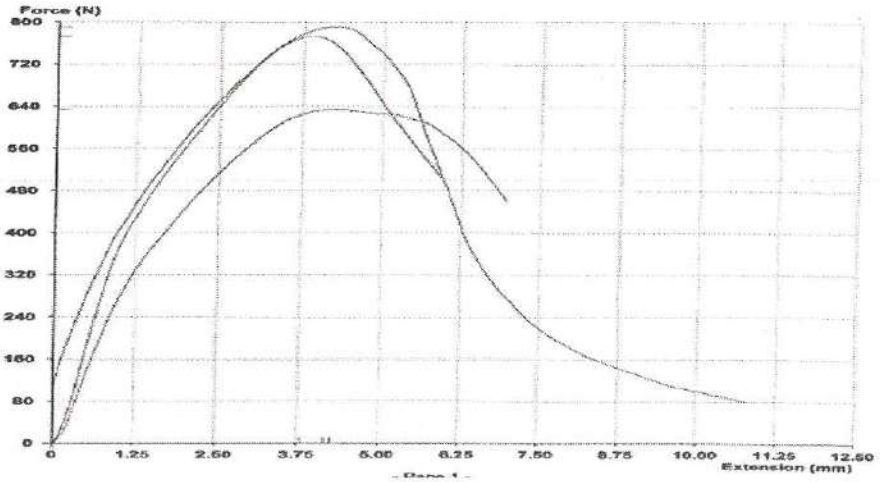
Introduction: Further to the request received from **M/s. Wurth Gulf FZE** dated 31st October 2017, the sample of WÜRTH 1K-ASSEMBLY FOAM B3 was tested for Shear Strength.

Sample description : WÜRTH 1K-ASSEMBLY FOAM B3
Art No : 08921551
Sample Received : 31/10/2017
Test Completion Date : 09/11/2017
Tested by : SL

Shear Strength

Test Method: ASTM C273
Substrate: Concrete
Test Temperature: 23±2°C
Relative Humidity: 50±5%
Age of Specimen: 24 Hours

Sample No	Bond Area (mm^2)	Maximum Force (N)	Shear Strength (N/mm^2)
WSP17-1786	8550	795	0.0930
	8550	632	0.0739
	8550	770	0.0900
		Average	**0.0856**



Remarks: None

Signed for and on behalf of Wimpey Laboratories

Binu K.Babu
Technical Manager

Test results relate only to the samples tested
This report shall not be reproduced except in full, without the written approval of the laboratory.
End of text.

LABORATORY REPORT

Wurth Gulf FZE
PO Box 17036, Jebel Ali South Zone 6
Dubai – United Arab Emirates

Report No: WLRP17-1786/3
Sample No: WSP17-1786
Date of Report: 09/11/2017

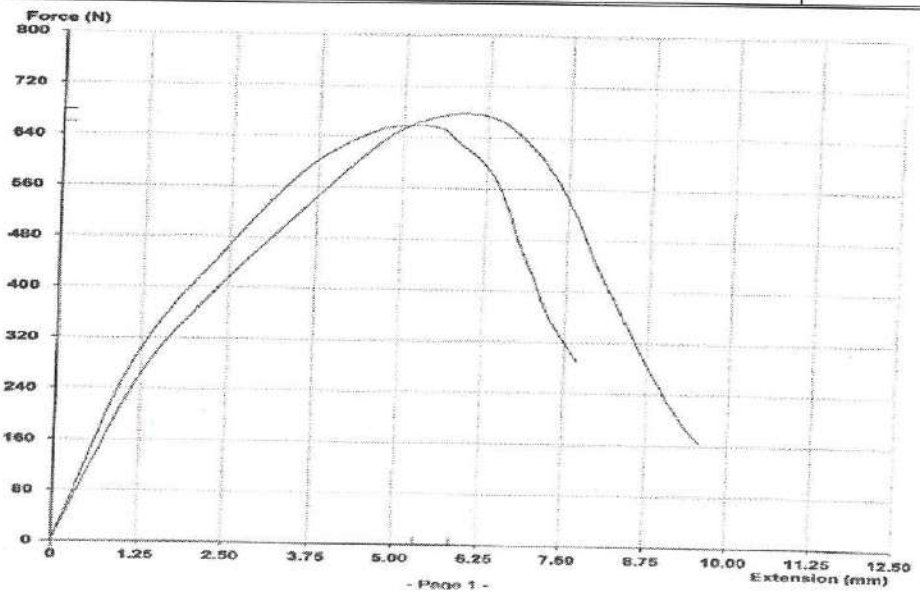
Introduction: Further to the request received from **M/s. Wurth Gulf FZE** dated 31st October 2017, the sample of WÜRTH 1K-ASSEMBLY FOAM B3 was tested for Shear Strength.

Sample description : WÜRTH 1K-ASSEMBLY FOAM B3
Art No : 08921551
Sample Received : 31/10/2017
Test Completion Date : 09/11/2017
Tested by : SL

Shear Strength

Test Method: ASTM C273
Substrate: Wood
Test Temperature: 23±2°C
Relative Humidity: 50±5%
Age of Specimen: 24 Hours

Sample No	Bond Area (mm^2)	Maximum Force (N)	Shear Strength (N/mm^2)
WSP17-1786	8550	675	0.0790
	8550	663	0.0775
		Average	**0.0783**



- Page 1 -

Remarks: None
Signed for and on behalf of Wimpey Laboratories

Binu K.Babu
Technical Manager
Test results relate only to the samples tested
This report shall not be reproduced except in full, without the written approval of the laboratory.
End of text.

WIMPEY LABORATORIES * P.O.BOX: 123279, DUBAI-U.A.E. *

Certificate No.: 2016102649

WÜRTH

Date: February 6, 2016

Dubai,

Certificate of Confirmation
of hazardous material elimination

We as Würth Gulf and under our sole responsibility herewith confirm that our below mentioned product according to the elimination of hazardous material complies as follows:

Art. #	Description	Asbestos Level	Chromated Copper Arsenate (CCA)	Formaldehyde
0893 303402	Joint Foam Fire Resistant Plus B1	Free Of Asbestos	Free of CCA	Free of Formaldehyde

We trust to have been of service with this confirmation and remain,

With kindest regards,

WÜRTH P.O.Box: 17036 Jebel Ali Dubai - U.A.E. WURTH GULF FZE

Jeroen Nijland
Product Department Manager
Würth Gulf FZE

Certificate No.: 2015011455-1
November 3, 2020

Declaration of LEED Compliance
According to NC-v3 EQc4.1: Low Emitting Materials Adhesives and Sealants

TO WHOM IT MAY CONCERN

We herewith declare under our sole responsibility that Würth Joint Foam Fire Resistant Plus is categorized as a special purpose aerosol adhesive with following limits and properties

Art. #	Description	VOC Limit acc.to LEED	Actual VOC Level	Compliance
0893 303402	Joint Foam Fire Resistant Plus B1	70% VOC by Weight	170.7 G/Liter 16.2% by weight	This Product fulfills the requirements of LEED for adhesives and sealants

We trust to have been of service with this declaration and remain
With kindest regards,

Tamer Assaf
Product Department
Würth Gulf FZE

WURTH P.O.Box: 17036 Jebel Ali Dubai - U.A.E. WURTH GULF FZE

Wurth Gulf FZE-Plot # S61303, Jebel Ali South 6 ,Dubai ,U.A.E - P.O.Box:17036
T: +9714 8809991, 04 8834229(old), F: +971 4 8809255, 04 8834303(old), E: wurthglf@emirates.net.ae - www.wurth.ae

Certificate No.: 2015011398

Date: November 15, 2015

Dubai,

Declaration of Country of Origin

TO WHOM IT MAY CONCERN

We herewith declare under our sole responsibility that:

Würth PU Foam Class B2 – Fire Classified – item no. 0892 155210

And

Würth PU Foam Class B1 – Fire Rated – item.no. 0893 303402

are manufactured exclusively in our factories in Europe under supervision of our Würth Quality Control laboratories and the country of origin is Slovenia

We trust to have been of service with this declaration and remain
With kindest regards,

WURTH
P.O.Box: 17036
Jebel Ali
Dubai - U.A.E.
WURTH GULF FZE

Jeroen Nijland
Product Department Manager
Würth Gulf FZE

Wurth Gulf FZE-Plot # S61303, Jebel Ali South 6 ,Dubai ,U.A.E - P.O.Box:17036
T: +9714 8809991, 04 8834229(old), F: +971 4 8809255, 04 8834303(old), E: wurthglf@emirates.net.ae - www.wurth.ae



Produktprüfung
Zertifizierung
Qualitätssicherung

eco INSTITUT

eco-INSTITUT GmbH • Sachsenring 69 • 50677 Köln

Würth Work 12
Serbia

eco-INSTITUT GmbH
Sachsenring 69
50677 Köln

Fon +49-(0)221-931 245-0
Fax +49-(0)221-931 245-33

www.eco-institut.de
www.eco-info.de
info@eco-institut.de

Geschäftsführer
Dr. Hans-Ulrich Krieg
Dr. Frank Kuebart

Köln HRB 25664
UstId: DE 811775799

Raiffeisenbank
Frechen-Hürth
BLZ 370 623 65
Konto 1 703 060 010

Akkreditiertes Prüflabor
nach DIN EN ISO/IEC 17025

DAkkS Deutsche Akkreditierungsstelle D-PL-14117-01-00

Test Report No. 34654-001

Client:	**Würth Work 12**
Sample description by client:	**Würth B1 Foam (0893 303402)**
Sampled by:	client
Date of arrival of sample:	17.02.2012
Date of report:	27.3.2012
Number of pages of report:	21
Testing parameter:	see table of contents
Testing laboratory:	eco-INSTITUT GmbH, Cologne

Content

Content 2
Sample view 2
Test Report 3
1 Emission test 3
1.1 Volatile Organic Compounds (VOC) 3
Measurement time 3 days after test chamber loading 7
1.1.1 CMR-VOC_{3d} 7
1.1.2 VOC / $TVOC_{3d}$ 8
1.1.3 $VVOC_{3d}$ 10
1.1.4 $SVOC_{3d}$ 11
1.2 $Formaldehyde_{3d}$ 12
Measurement time 10 days after test chamber loading 13
1.2.1 CMR-VOC_{10d} 13
1.2.2 VOC / $TVOC_{10d}$ 14
1.2.3 $VVOC_{10d}$ 16
1.2.4 $SVOC_{10d}$ 17
1.3 $Formaldehyde_{10d}$ 18
2 Expert evaluation AgBB-sheme, Germany 19
2.1 Summary evaluation 19
3 Expert evaluation decree no. 2011-321, France 20
3.1 Summary evaluation 20
4 Evaluation d'expert décret n°2011-321, France 21
4.1 Résumé d'évaluation 21

Sample view

Internal Sample - no.	Description by customer	Condition upon delivery	Material composition	Material	Type of sample
A001	Würth B1 Foam 0893 303402	without objection	PU FOAM	PU FOAM	TINPLATE 750 ml CAN

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

Test Report

1 Emission test

1.1 Volatile Organic Compounds (VOC)

Definition of terms:

VOC (volatile organic compounds)	All individual materials with a concentration ≥0,001 mg/m³ in retention range C_6 (n-Hexane) to C_{16} (n-Hexadecane) Substances refer to LCI lists / AgBB (DIBt)
TVOC (Total volatile organic compounds)	Sum of all individual substances in retention range C_6 to C_{16}.
CMR-VOC (carcinogenic, mutagenic, reproduction-toxic VOC, VVOC and SVOC)	All individual substances with the following categories: Regulation (EC) No. 1272/2008: Category Cat.1A and 1B, Muta. 1A and 1B, Repr. 1A and 1B TRGS 905: K1 and K2, M1 and M2, R1 and R2 IARC: Group 1 and 2A DFG (MAK lists): Category III1and III2
VVOC (very volatile organic compounds)	All individual substances wit concentration ≥0,001 mg/m³ in retention range < C_6
TVVOC (Total very volatile organic compounds)	Sum of all VVOC in retention range < C_6
SVOC (semi volatile organic compounds)	All individual materials ≥0,001 mg/m³ in retention range > C_{16} (n-Hexadecane) to C_{22} (Docosane)
TSVOC (Total semi volatile organic compounds)	Sum of all SVOC in retention range > C_{16} to C_{22}.
Identified and calibrated substances ($c_{id\ sub}$), substance specific calculated	Spectrum and retention time are concordant with the calibrated comparison substance
Not identified substances calculated as toluene equivalent ($c_{ni\ tol}$)	Suggestion from the spectrum library with high probability and/or allocation to a group of substances
SER	Specific emission rate (see appendix)
LCI value	Lowest Concentration of Interest; calculated value for the evaluation of VOC, established by the Committee for Health-related Evaluation of Building Products (Ausschuss zur gesundheitlichen Bewertung von Bauprodukten - AgBB)
R value	The quotient of the concentration and the LCI value is generated for every substance which is detected in the test chamber air. The sum of the calculated quotients results in the R value.

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

List of analysed VOCs:

Aromatic hydrocarbons
Toluene
Ethylbenzene
p-Xylene
m-Xylene
o-Xylene
Isopropylbenzene
n-Propylbenzene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
1,2,3-Trimethylbenzene
2-Ethyltoluene
1-Isopropyl-4-methylbenzene
1,2,4,5-Tetramethylbenzene
n-Butylbenzene
1,3-Diisopropylbenzene
1.4-Diisopropylbenzene
Phenyl octane
1-Phenyl decane[2]
1-Phenyl undecane[2]
4-Phenylcyclohexene
Styrene
Phenyl acetylene
2-Phenyl propene
Vinyl toluene
Naphthalene
Indene
Benzene
Cresol

Saturated aliphatic substances
Hydrocarbons
2-Methyl pentane[1]
3-Methyl pentane[1]
n-Hexane
Cyclohexane
Methylcyclohexane
n-Heptane
n-Octane
n-Nonane
n-Decane
n-Undecane
n-Dodecane
n-Tridecane
n-Tetradecane
n-Pentadecane
n-Hexadecane
Methylcyclopentane
1,4-Dimethylcyclohexane

Terpenes
-3-Caren
-Pinene
-Pinene
Limonene
Longifolene
Caryophyllene
Isolongifolene
alpha-Phellandrene
Myrcene
Camphene
alpha-Terpinend
Longipinene
beta-Caryophyllene
beta-Farnesen
alpha-Bisabolen

Aliphatic alcohols and ether
1-Propanol[1]
2-Propanol[1]
tert-Butanol
2-Methyl-1-propanol
1-Butanol
1-Pentanol
1-Hexanol
Cyclohexanol
2-Ethyl-1-hexanol
1-Octanol
4-Hydroxy-4-methyl-pentan-2-one
1-Heptanol
1-Nonanol
1-Decanol

Aromatic alcohols (phenols)
Phenol
BHT (2,6-di-tert-butyl-4-methylphenol)
Benzylalcohol

Glycols, Glycol ether, Glycol ester
Propylenglycol (1,2-Dihydroxypropane)
Ethylene glycol (Ethandiol)
Ethylene glycol monobutyl ether
Diethylene glycol
Diethylene glycol-monobutyl ether
2-Phenoxyethanol
Ethylene carbonate
1-Methoxy-2-propanol
Glycolic acid butyl ester
Texanol
Butyldiglycol acetate
Dipropylenglycol mono-methyl ether
2-Methoxyethanol
2-Ethoxyethanol
2-Propoxyethanol
2-Methylethoxyethanol
2-Hexoxyethanol
1,2-Dimethoxyethane
1,2-Diethoxyethane
2-Methoxyethyl acetate
2-Ethoxyethyl acetate
2-Butoxyethyl acetate
2-(2-Hexoxyethoxy)-ethanol
1-Methoxy-2-(2-methoxy-ethoxy)-ethane
Propylene glycol di-acetate
Dipropylene glycol
Dipropylene glycol monomethylether acetate
Dipropylene glycol mono-n-propylether
1,4-Butanediol
Tripropyleneglycolmonomethyl ether
Triethylene glycol dimethyl ether
1,2-Propylene glycol dimethyl ether
TXIB
Ethyldiglycol
Dipropylene glycol-dimethyl ether
Propylene carbonate
Hexylene glycol

Aldehydes
Butanal[1,3]
Pentanal[3]
Hexanal
Heptanal
2-Ethylhexanal
Octanal
Nonanal
Decanal
2-Butenal[3]
2-Pentenal[3]
2-Hexenal
2-Heptenal
2-Octenal
2-Nonenal
2-Decenal
2-Undecenal
Furfural
Glutaraldehyde
Benzaldehyde
Acetaldehyde[1,3]
Propanal[1,3]
Propenal[1,3]
Isobutenal

Ketones
Ethylmethylketone[3]
3-Methyl-2-propanol
Methylisobutylketone
Cyclopentanone
Cyclohexanone
Acetone[1,3]
2-Methylcyclopentanone
2-Methylcyclohexanone
Acetophenone
1-Hydroxyacetone

Acids
Acetic acid
Propionic acid
Isobutyric acid
Butyric acid
Pivalic acid
n-Valeric acid
n-Hexanoic acid
n-Heptanoic acid
n-Octanoic acid
2-Ethylhexanoic acid

Esters and Lactones
Methylacetate[1]
Ethyl acetate[1]
Vinyl acetate[1]
Isopropyl acetate
Propyl acetate
2-Methoxy-1-methylethyl acetate
n-Butyl formate
Methylmethacrylate
Isobutylacetate
1-Butyl acetate
2-Ethylhexyl acetate
Methyl acrylate
Ethyl acrylate
n-Butyl acrylate
2-Ethylhexyl acrylate
Adipic acid dimethyl ester
Fumaric acid dibutyl ester
Succinic acid dimethyl ester
Hexandioldiacrylate
Maleic acid dibutyl ester
Butyrolactone
Dibutyl glutarate
Dibutyl succinate
Dimethylphthalate
Texanol

Chlorinated hydrocarbons
Tetrachlorethene
1,1,1-Trichlorethane
Trichlorethene
1,4-Dichlorbenzene

Others
1,4-Dioxane
Caprolactam
N-Methyl-2-pyrrolidone
Octamethylcyclotetrasiloxane
Methenamine
2-Butanonoxime
Triethyl phosphate
5-Chlor-2-methyl-4-isothiazolin-3-one
2-Methyl-4-isothiazolin-3-one (MIT)
Triethylamine
Decamethylcyclopentasiloxane
Dodecamethylcyclopentasiloxane
Tetrahydrofuran (THF)
1-Decene
1-Octene
2-Pentylfuran
Tetramethyl succinonitrile
Propylencarbonate
Isophorone
Dimethylformamide (DMF)
Tributyl phosphate

1 VVOC
2 SVOC
3 Analysis after DIN ISO 16000-3

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

Explanation of the Specific Emission Rate SER

Emission measurements are accomplished in test chambers under defined physical conditions (temperature, relative humidity, room loading, air change rate etc.).

Test chamber measurement results are directly comparable only if the investigations were accomplished under the same basic conditions.

If the differences of the physical conditions refer only to the change of air rate and/or the loading, the "SER" or "specific emission rate" can be used for comparability of the measurement results. The SER indicates how many volatile organic compounds (VOC) are released by the sample for each material unit and hour (h).

The SER can be calculated using the formula below for each proven individual component of the VOC from the data in the test report.

As material units the following are applicable:

l = unit of length (m)	relation between emission and length
a = unit area (m^2)	relation between emission and surface
v = unit volume (m^3)	relation between emission and volume
u = piece unit (unit = piece)	relation between emission and complete unit

From this the different dimensions for SER result:

length-specific	SER_l in µg/m h
surface-specific	SER_a in µg/m^2 h
volume-specific	SER_v in µg/m^3 h
unit specific	SER_u in µg/u h

SER thus represents a product specific rate, which describes the mass of the volatile organic compound, which is emitted by the product per time unit at a certain time after beginning of the examination.

$$SER = q \bullet C$$

q specific air flow rate (quotient from change of air rate and loading)
C Concentration of the measured substance(s)

The result can be indicated in milligrams (mg) in place of micro grams (µg), whereby 1 mg = 1000 µg.

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

Test method

Preparation of test sample:	DIN EN ISO 16000-11	
	Date:	28.02.2012
	Pre-treatment:	not applicable
	Masking of backside:	ja
	Masking of edges:	100 %
	Relationship of unmasked edges to surface:	not applicable
	Charging:	related to area
	Dimensions:	10 cm x 5,8 cm x 1,5 cm
Test chamber conditions::		
	Chamber volume:	0,125 m^3
	Temperature:	23 °C
	Relative humidity:	50 %
	Air pressure:	normal
	Air:	cleaned
	Air change rate:	0.5 h^{-1}
	Air velocity:	0,3 m/s
	Loading:	0.007 m^2/m^3
	Specific air flow rate:	71 $m^3/m^2 \cdot h$
	Air sampling:	3 and 10 days after test chamber loading
Analytics:	DIN ISO 16000-3	
	DIN ISO 16000-6	
	Detection limit:	1 µg/m^3

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

Measurement time 3 days after test chamber loading

1.1.1 CMR-VOC$_{3d}$

Test parameter:

Carcinogenic, mutagenic and reproduction-toxic volatile organic compounds (CMR VOC), test chamber, air sampling 3 days after test chamber loading

Test result:

Sample-No.: | A001,

No.	Substance	CAS No.	Concentration (Test chamber air) [µg/m³]	CMR classification*)
VOC$_{3d}$: Identified and calibrated substances in accordance with LCI list/AgBB, substance specific calculated (c$_{id\,sub}$)				
-	-	-	-	-
VOC$_{3d}$: Further identified and calibrated CMR substances in addition to LCI list/AgBB, substance specific calculated(c$_{id\,sub}$)				
-	-	-	-	-

VOC$_{3d}$: Further identified, not calibrated CMR substances, calculated as toluene equivalent (c$_{ni\,tol}$)				
-	-	-	-	-

	Concentration (Test chamber air) [µg/m³]	SERa [µg/m²h]
Sum of VOC with the following categorisations: Regulation (EC) No. 1272/2008: Category Carc. 1A and 1B, Muta. 1A and 1B, Repr. 1A and 1B TRGS 905: K1 and K2, M1 and M2, R1 and R2 IARC: Group 1 and 2A DFG (MAK list): Category III1 and III2	**n.d.**	**n.d.**

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

1.1.2 VOC / TVOC $_{3d}$

Test parameter:

Volatile organic compounds (VOC), test chamber, air sampling 3 days after test chamber loading

Test result:

Sample-No.: | A001,

No.	Substance	CAS No.	Concentration (Test chamber air) [µg/m³]
VOC_{3d}: Identified and calibrated substances in accordance with LCI list/AgBB, substance specific calculated ($c_{id\,sub}$)			
1	**Aromatic hydrocarbons**		
1-1	Toluene	108-88-3	2
7	**Aldehydes**		
7-7	Nonanal	124-19-6	2
7-8	Decanal	112-31-2	4
7-19	Benzaldehyde	100-52-7	1

VOC_{3d}: Identified and calibrated substances in accordance with LCI list/AgBB, substance specific calculated ($c_{id\,sub}$)			
No.	**Substance**	**CAS No.**	**Concentration (Test chamber air) [µg/m³]**
12	**Others**		
	Hexamethylcyclotrisiloxan		1

VOC_{3d}: Not calibrated substances calculated as toluene equivalent ($c_{ni\,tol}$)			
	nicht identifiziert		2

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

Total volatile organic compounds	**Concentration (test chamber air) [µg/m³]**	**SER_a [µg/m³h]**
$TVOC_{3d}$	**12**	**857**

Further VOC sums	**Concentration (test chamber air) [µg/m³]**	**SER_a [µg/m²h]**
Sum VOC without LCI	**3**	**214**
Sum of bicyclic terpenes	**n.d.**	**n.d.**
Sum of sensitising materials with the following categorisations: DFG (MAK lists): Category IV German Federal Institute for Risk Assessment lists: Cat A TRGS 907	**n.d.**	**n.d.**
Sum of VOC with the following categorisations: Regulation (EC) No. 1272/2008: Category Carc. 2, Muta. 2, Repr. 2 TRGS 905: K3, M3, R3 IARC: Group 2B DFG (MAK list): Category III3	**2**	**143**
C_9 - C_{14} - Alkanes / Isoalkanes		**n.d.**
Sum C_4-C_{11} Aldehydes, acyclic, aliphatic	**6**	**429**

R-Value (without dimension)$_{3d}$	**0.017**

n.d. = not detectable

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

1.1.3 $VVOC_{3d}$

Test Parameter:
Very volatile organic compounds (VVOC), test chamber, air sampling 3 days after test chamberloading

Test result::

Sample-No.: | A001,

No.	Substance	CAS-No.	Concentration (test chamber air) [µg/m³]
$VVOC_{3d}$: Identified and calibrated substances in accordance with LCI list/AgBB, substance specific calculated($c_{id\,sub}$)			
4	**Aliphatic alcohols and ethers**		
4-2	1-Propanol	71-23-8	1
10	**Esters und Lactones**		
10-1	Methylacetate	79-20-9	1
10-2	Ethylacetate	141-78-6	1
$VVOC_{3d}$: Further identified and calibrated substances in addition to LCI list/AgBB, substance specific calculated($c_{id\,sub}$)			
-	-	-	-
$VVOC_{3d}$: Not calibrated, identified substances calculated as toluene equivalent ($c_{ni\,tol}$)			
	Alkan C<6, verm. Pentan		4

Total very volatile organic compounds	Concentration (test chamber air) [µg/m³]	SER_a [µg/m²h]
$TVVOC_{3d}$	**7**	**500**

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

1.1.4 $SVOC_{3d}$

Test parameter:

Semivolatile organic compounds (SVOC), test chamber, air sampling 3 days after test chamber loading

Test result:

Sample-No.: | A001,

No.	Substance	CAS No.	Concentration (test chamber air) [µg/m³]
$SVOC_{3d}$: Identified and calibrated substances in accordance with LCI list/AgBB, substance specific calculated($c_{id\,sub}$)			
-	-	-	-
$SVOC_{3d}$: Further identified and calibrated substances in addition to LCI list/AgBB, substance specific calculated($c_{id\,sub}$)			
	Diethylphthalat	84-66-2	2
	Dibutylphthalat	84-74-2	3
$SVOC_{3d}$: Not calibrated substances calculated as toluene equivalent ($c_{ni\,tol}$)			
-	-	-	-

Total semivolatile organic compounds	Concentration (test chamber air) [µg/m³]	SER_a [µg/m²h]
$TSVOC_{3d}$	**5**	**357**

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

1.2 Formaldehyde$_{3d}$

Test parameter:

Formaldehyde, test chamber, air sampling 3 days after test chamber loading

Test method:

Preparation of test sample:	according to DIN EN 717-1	
	see No. 1.1 VOCs	
Test chamber conditions:	DIN EN 717-1 with the following deviations:	
	No determination of the equilibrium concentration; the formaldehyde emission is indicated at a measuring point as determined above.	
	Chamber volume: see No. 1.1 VOCs	
	Relative humidity: 50%	
	Air change rate and loading: see No. 1.1 VOCs	
	Emission chamber parameters: see No. 1.1 VOCs	
	Air sampling:	3 days after test chamber loading
Analytics:	DIN ISO 16000-3	
	Detection limit:	3 µg/m³ ≙0,003 ppm

Test result:

Sample-No.: A001,

Substance	**Concentration** (Test chamber air) **[µg/m³]**	**Concentration** (Test chamber air) **[ppm]**
Formaldehyde	< 3	< 0.003

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

Measurement time 10 days after test chamber loading

1.2.1 CMR-VOC$_{10d}$

Test parameter:

Carcinogenic, mutagenic and reproduction-toxic volatile organic compounds (CMR VOC), test chamber, air sampling 10 days after test chamber loading

Test result:

Sample-No.: | A001,

No.	Substance	CAS No.	Concentration (Test chamber air) [µg/m³]	CMR classification*)
VOC$_{10d}$: Identified and calibrated substances in accordance with LCI list/AgBB, substance specific calculated ($c_{id\,sub}$)				
-	-	-	-	-
VOC$_{10d}$: Further identified and calibrated CMR substances in addition to LCI list/AgBB, substance specific calculated($c_{id\,sub}$)				
-	-	-	-	-

VOC$_{10d}$: Further identified, not calibrated CMR substances, calculated as toluene equivalent ($c_{ni\,tol}$)				
-	-	-	-	-

	Concentration (Test chamber air) [µg/m³]	SERa [µg/m²h]
Sum of VOC with the following categorisations: Regulation (EC) No. 1272/2008: Category Carc. 1A and 1B, Muta. 1A and 1B, Repr. 1A and 1B TRGS 905: K1 and K2, M1 and M2, R1 and R2 IARC: Group 1 and 2A DFG (MAK list): Category III1 and III2	**n.d.**	**n.d.**

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

1.2.2 VOC / TVOC $_{10d}$

Test parameter:

Volatile organic compounds (VOC), test chamber, air sampling 10 days after test chamber loading

Test result:

Sample-No.: | A001,

No.	Substance	CAS No.	Concentration (Test chamber air) [µg/m³]
VOC_{10d}: Identified and calibrated substances in accordance with LCI list/AgBB, substance specific calculated ($c_{id\,sub}$)			
-	-	-	-

VOC_{10d}: Identified and calibrated substances in accordance with LCI list/AgBB, substance specific calculated ($c_{id\,sub}$)			
No.	**Substance**	**CAS No.**	**Concentration (Test chamber air) [µg/m³]**
-	-	-	-

VOC_{10d}: Not calibrated substances calculated as toluene equivalent ($c_{ni\,tol}$)			

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

Total volatile organic compounds	**Concentration (test chamber air) [µg/m³]**	**SER_a [µg/m³h]**
$TVOC_{10d}$	**n.d.**	**n.d.**

Further VOC sums	**Concentration (test chamber air) [µg/m³]**	**SER_a [µg/m²h]**
Sum VOC without LCI	**n.d.**	**n.d.**
Sum of bicyclic terpenes	**n.d.**	**n.d.**
Sum of sensitising materials with the following categorisations: DFG (MAK lists): Category IV German Federal Institute for Risk Assessment lists: Cat A TRGS 907	**n.d.**	**n.d.**
Sum of VOC with the following categorisations: Regulation (EC) No. 1272/2008: Category Carc. 2, Muta. 2, Repr. 2 TRGS 905: K3, M3, R3 IARC: Group 2B DFG (MAK list): Category III3	**n.d.**	**n.d.**
C_9 - C_{14} - Alkanes / Isoalkanes		**n.d.**
Sum C_4-C_{11} Aldehydes, acyclic, aliphatic	**n.d.**	**n.d.**

R-Value (without dimension)$_{10d}$	**0**

n.d. = not detectable

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

1.2.3 $VVOC_{10d}$

Test Parameter:
Very volatile organic compounds (VVOC), test chamber, air sampling 10 days after test chamber loading

Test result::

Sample-No.: | A001,

No.	Substance	CAS-No.	Concentration (test chamber air) [µg/m³]
$VVOC_{10d}$: Identified and calibrated substances in accordance with LCI list/AgBB, substance specific calculated($c_{id\,sub}$)			
-	-	-	-
$VVOC_{10d}$: Further identified and calibrated substances in addition to LCI list/AgBB, substance specific calculated($c_{id\,sub}$)			
-	-	-	-
$VVOC_{10d}$: Not calibrated, identified substances calculated as toluene equivalent ($c_{ni\,tol}$)			
	Alkan C<6, verm. Pentan		2

Total very volatile organic compounds	Concentration (test chamber air) [µg/m³]	SER_a [µg/m²h]
$TVVOC_{10d}$	**2**	**143**

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

1.2.4 $SVOC_{10d}$

Test parameter:

Semivolatile organic compounds (SVOC), test chamber, air sampling 10 days after test chamber loading

Test result:

Sample-No.: | A001,

No.	Substance	CAS No.	Concentration (test chamber air) [µg/m³]
$SVOC_{10d}$: Identified and calibrated substances in accordance with LCI list/AgBB, substance specific calculated($c_{id\,sub}$)			
-	-	-	-
$SVOC_{10d}$: Further identified and calibrated substances in addition to LCI list/AgBB, substance specific calculated($c_{id\,sub}$)			
-	-	-	-
$SVOC_{10d}$: Not calibrated substances calculated as toluene equivalent ($c_{ni\,tol}$)			
-	-	-	-

Total semivolatile organic compounds	Concentration (test chamber air) [µg/m³]	SER_a [µg/m²h]
$TSVOC_{10d}$	**n.d.**	**n.d.**

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

1.3 Formaldehyde$_{10d}$

Test parameter:
Formaldehyde, test chamber, air sampling 10 days after test chamber loading

Test method:

Preparation of test sample:	according to DIN EN 717-1	
	see No. 1.1 VOCs	
Test chamber conditions:	DIN EN 717-1 with the following deviations:	
	No determination of the equilibrium concentration; the formaldehyde emission is indicated at a measuring point as determined above.	
	Chamber volume: see No. 1.1 VOCs	
	Relative humidity: 50%	
	Air change rate and loading: see No. 1.1 VOCs	
	Emission chamber parameters: see No. 1.1 VOCs	
	Air sampling:	10 days after test chamber loading
Analytics:	DIN ISO 16000-3	
	Detection limit:	3 µg/m³ ≙ 0,003 ppm

Test result:

Sample-No.:	A001,

Substance	**Concentration** (Test chamber air) **[µg/m³]**	**Concentration** (Test chamber air) **[ppm]**
Formaldehyde	< 3	< 0.003

Cologne, 27.3.2012

Dr. Hans-Ulrich Krieg
(Technical Manager)

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

2 Expert evaluation AgBB-sheme, Germany

The product **Würth B1 Foam** has been product tested on behalf of **Würth Work 12, Serbia**.

This evaluation bases on the test criteria of the scheme Health-related Evaluation of Emissions of Volatile Organic Compounds (VOC and SVOC) from Building Products (Issue: May 2010).

The results documented in the test report were evaluated as follows.

	Start value Day 3 [µg/m³]		Final value Day 28 [µg/m³]	
	Result	Requirement	Result	Requirement
TVOC (C_6-C_{16})	12	≤10000	<1	≤1000
TSVOC (C_{16}-C_{22})	2	-	<1	100
R (dimensionless)	0,017	-	0	≤1
TVOC without. NIK	3	-	<1	≤100
Cancerogene (EU-Kat 1 und 2)	<1	≤10	<1	≤1

3 Tage-Emissionen.....fulfilled
28 Tage-Emissionen.....fulfilled

2.1 Summary evaluation

The product **Würth B1 Foam** meets the requirements of AgBB-scheme.

Cologne, 2012-03-27



Daniel Tigges, Dipl.-Holzwirt
(Project Manager)

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

3 Expert evaluation decree no. 2011-321, France

The product **Würth B1 Foam** has been product tested on behalf of **Würth Work 12, Serbia**.

This evaluation bases on the test criteria of the decree no. 2011-321 of March 23, 2011 of the French Ministry of Ecology, Sustainable Development, Transport and Housing.

The results documented in the test report were evaluated as follows:

Emissions analysis	**Concentration** (Test chamber air)	**Classes**			
Substances	**[µg/m³] after 10 days**	**C**	**B**	**A**	**A+**
Formaldehyde (ALK02)	< 3	>120	<120	<60	<10
Acetaldehyde (ALK03)	< 3	>400	<400	<300	<200
Toluene (1-1)	< 1	>600	<600	<450	<300
Tetrachloroethylene (11-1)	< 1	>500	<500	<350	<250
Xylene (1-4, 1-5, 1-6)	< 1	>400	<400	<300	<200
1,2,4-Trimethylbenzene (1-11)	< 1	>2000	<2000	<1500	<1000
1,4-Dichlorobenzene (VOC w/o LCI)	< 1	>120	<120	<90	<60
Ethylbenzene (1-2)	< 1	>1500	<1500	<1000	<750
2-Butoxyethanol (6-3)	< 1	>2000	<2000	<1500	<1000
Styrene (1-25)	< 1	>500	<500	<350	<250
TVOC	< 1	**>2000**	**<2000**	**<1500**	**<1000**

3.1 Summary evaluation

The product **Würth B1 Foam** meets the requirements of the **Class A+** of the decree no. 2011-321 of March 23, 2011 of the French Ministry of Ecology, Sustainable Development, Transport and Housing.

Cologne, 2012-03-27



Daniel Tigges, Dipl.-Holzwirt
(Project Manager)

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

4 Evaluation d'expert décret n°2011-321, France

Le produit **Würth B1 Foam** a été testé sous la responsabilité du producteur **Würth Usine 12, Serbia**.

.

Cette évaluation est basée sur les critères du décret n°2011-321 du 23 mars 2011 par le Ministère de l'écologie, du développement durable, des transports et du logement.

Les résultats documentés dans le rapport du test sont évalués comme suit:

Èmissions analysès	**Concentration** (l'air de chambre d'èmissions) [µg/m³] après 10 jours	**Classes**			
Substances		**C**	**B**	**A**	**A+**
Formaldéhyde (ALK02)	< 3	>120	<120	<60	<10
Acétaldéhyde (ALK03)	< 3	>400	<400	<300	<200
Toluène (1-1)	< 1	>600	<600	<450	<300
Tetrachloroéthylène (11-1)	< 1	>500	<500	<350	<250
Xylène (1-4, 1-5, 1-6)	< 1	>400	<400	<300	<200
1,2,4-Triméthylbenzène (1-11)	< 1	>2000	<2000	<1500	<1000
1,4- Dichlorobenzène (VOC w/o LCI)	< 1	>120	<120	<90	<60
Èthylbenzène (1-2)	< 1	>1500	<1500	<1000	<750
2- Butoxyéthanol (6-3)	< 1	>2000	<2000	<1500	<1000
Styrène (1-25)	< 1	>500	<500	<350	<250
COVT (composés organiques volatils totaux)	< 1	**>2000**	**<2000**	**<1500**	**<1000**

4.1 Résumé d'évaluation

Le produit **Würth B1 Foam** correspond aux exigences de la classification A+ sur les critères du décret n°2011-321 du 23 mars 2011 par le Ministère de l'écologie, du développement durable, des trans- ports et du logement.

Cologne, 27/03/2012



Daniel Tigges, Dipl.-Holzwirt
(management du project)

Remark: The test result referred to the submitted test sample exclusively. The validity of the report is three years at most and will end immediately at any alternation of material composition or in manufacturing process. Publishing in parts requires authorisation.

WÜRTH GULF SUBMITTAL

JOINT FOAM FIRE-RESISTANT PLUS

Art. No. 0893 303 402

8 - ACOUSTICS REPORT



ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Management Service

CERTIFICATE

Certificate Registration No.: **12 100 23791 TMS** / Order No.: **70020920**

The Certification Body
of TÜV SÜD Management Service GmbH

certifies that the organization

WÜRTH

Adolf Würth GmbH & Co. KG

Reinhold-Würth-Str. 12-17 • 74653 Künzelsau
Germany

for the scope

Development and distribution of fasteners, hand tools and storage systems. Distribution of products (standard parts, special parts, systems) for industrial safety, construction, workshops, fire protection technology, chemical-technical applications, anchor technology, direct assembly, electrical installations, material processing, installation, measuring technology, soldering and welding technology, as well as of products such as electrical and pneumatic tools and machines, small and replacement parts for automotive vehicles, advertising media. Maintenance of electric power tools, pin driver technology and pneumatic tools as well as testing of fall arrest systems, length measuring tools (laser technology) and tools for torque measurement and vehicle conversion or installation of storage systems including load securing in vehicles as well

including the sites see enclosure

has established and applies a Quality Management System.

An audit was performed and has furnished proof
that the requirements according to

DIN EN ISO 9001:2015

are fulfilled.

The certificate is valid from **2024-04-10** until **2027-04-09**.

Fred Wenke
Head of Certification Body
Munich, 2024-03-13

IAF MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT

DAkkS Deutsche Akkreditierungsstelle D-ZM-14143-01-00

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Management Service

ENCLOSURE OF CERTIFICATE

Certificate Registration No.: **12 100 23791 TMS** / Order No.: **70020920**

certificate holder:

Adolf Würth GmbH & Co. KG
Reinhold-Würth-Str. 12-17
74653 Künzelsau
Germany

at the sites	**scope**
Adolf Würth GmbH & Co. KG Reinhold-Würth-Str. 12-17 74653 Künzelsau Germany	Development and distribution of fasteners, hand tools and storage systems. Distribution of products (standard parts, special parts, systems) for industrial safety, construction, workshops, fire protection technology, chemical-technical applications, anchor technology, direct assembly, electrical installations, material processing, installation, measuring technology, soldering and welding technology, as well as of products such as electrical and pneumatic tools and machines, small and replacement parts for automotive vehicles, advertising media. Maintenance of electric power tools, pin driver technology and pneumatic tools as well as testing of fall arrest systems, length measuring tools (laser technology) and tools for torque measurement.
Adolf Würth GmbH & Co. KG **Fahrzeugeinrichtungen** Am Seebach 2 74182 Obersulm-Willsbach Germany	Vehicle conversion or installation of storage systems including load securing in vehicles.

Fred Wenke
Head of Certification Body
Munich, 2024-03-13

MS/01-07/2023

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Management Service

CERTIFICATE

Certificate Registration No.: **12 104 23791 TMS** / Order No.: **70020920**

The Certification Body
of TÜV SÜD Management Service GmbH

certifies that the organization

WÜRTH

Adolf Würth GmbH & Co. KG

Reinhold-Würth-Str. 12-17 • 74653 Künzelsau
Germany

for the scope

Development and distribution of fasteners, hand tools and storage systems. Distribution of products (standard parts, special parts, systems) for industrial safety, construction, workshops, fire protection technology, chemical-technical applications, anchor technology, direct assembly, electrical installations, material processing, installation, measuring technology, soldering and welding technology, as well as of products such as electrical and pneumatic tools and machines, small and replacement parts for automotive vehicles, advertising media. Maintenance of electric power tools, pin driver technology and pneumatic tools as well as testing of fall arrest systems, length measuring tools (laser technology) and tools for torque measurement

has established and applies an Environmental Management System.

An audit was performed and has furnished proof
that the requirements according to

DIN EN ISO 14001:2015

are fulfilled.

The certificate is valid from **2024-05-24** until **2027-05-23**.

Fred Wenke
Head of Certification Body
Munich, 2024-03-13

IAF MLA DAkkS Deutsche Akkreditierungsstelle D-ZM-14143-01-00

MS/01-07/2023

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Management Service

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH

certifies that

Adolf Würth GmbH & Co. KG

Reinhold-Würth-Str. 12-17 • 74653 Künzelsau
Germany

has established and applies
an Energy Management System for

Development and distribution of fasteners, hand tools and storage systems. Distribution of products (standard parts, special parts, systems) for industrial safety, construction, workshops, fire protection technology, chemical-technical applications, anchor technology, direct assembly, electrical installations, material processing, installation, measuring technology, soldering and welding technology, as well as of products such as electrical and pneumatic tools and machines, small and replacement parts for automotive vehicles, advertising media. Installation of storage systems including load securing in automotive vehicles. Maintenance of electric power tools, pin driver technology and pneumatic tools as well as testing of fall arrest systems, length measuring tools (laser technology) and tools for torque measurement.

An audit was performed, Order No. **70020920**.

Proof has been furnished that the requirements
according to

ISO 50001:2018

are fulfilled.

The certificate is valid in conjunction
with the main certificate from **2022-10-04** until **2025-10-03**.

Certificate Registration No.: **12 340 23791/01 TMS**.

Head of Certification Body
Munich, 2022-10-05

DAkkS Deutsche Akkreditierungsstelle D-ZM-14143-01-00

MS/01-01/2019

No.: P 24/11-510-1

ZAG LJUBLJANA

LABORATORY MEASUREMENTS OF AIRBORNE SOUND INSULATION ACCORDING TO THE STANDARD SIST EN ISO 140-3 (1997)	Annex A Page: 3/10

CLIENT: WURTH GULF FZE
DUBAI / UAE

SPECIMEN No.:	A-32/11
MEASURED IN:	Lab.1, Lab. 2
DATE:	7. 9 .2011

SAMPLE LABEL AND THICKNESS:
JOINT FOAM FIRE RESISTANT PLUS B1 (S2) – 10 mm

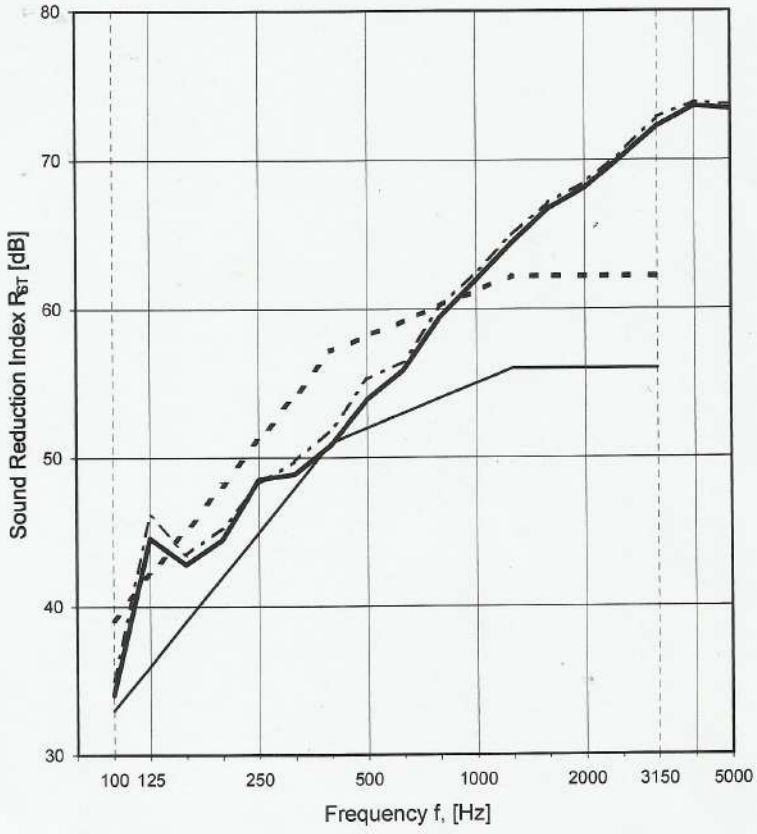
ASSEMBLY METHOD AND DESCRIPTION OF THE TEST SPECIMEN

Insulating foam sample in solid state with dimensions 120 x 10 x 1 [cm] - provided by client. Sample was installed into a slot between metal frames and the frames inserted into prepared test opening. Metal frames as well as construction forming the opening had high insulation properties to airborne sound. Reference sample sound reduction index curve is presented for comparison.

Sample thickness:	10 mm
Air temperature:	23°C
Relative air humidity:	63%
Receiving room volume:	51,5 m3

Sample sound reduction index R_{ST} (f) [dB]
Reference sample $R_{ST,max}$ (f) [dB]
Adjusted curve of reference values
Frequency range
Reference values curve (ISO 717-1)

Frequency f [Hz]	R (third oct.) [dB]
50	
63	
80	
100	23,8
125	28,2
160	29,5
200	35,8
250	42,1
315	42,5
400	43,4
500	46,0
630	50,0
800	50,9
1000	52,7
1250	56,0
1600	60,3
2000	62,6
2500	64,2
3150	65,2
4000	
5000	



Rating according to SIST EN ISO 717-1, (1997) :

$R_{ST,w}$ $(C;C_{tr})$ = **58 (-2, -7)** **dB**

Evaluation based on laboratory measurement results.

MEASUREMENTS PERFORMED BY:
Davor Radič, Civ.Eng.
Rok Rudolf, B.Sc.(Phys.)

HEAD OF LABORATORY:
Mihael Ramšak, M.Sc. (Mech.Eng.)

Tresults of the test refer only to the tested specimen. This report may only be reproduced as a whole.

WÜRTH

WÜRTH IS QUALITY

Everywhere and every time



PREFACE

Ladies and Gentlemen, dear customers,

In practice, the quality of a product or service is measured by the degree to which customers' expectations are fulfilled.
Prof. Dr. h. c. mult. Reinhold Würth, Chairman of the Supervisory Board of the Würth Group's Family Trusts, goes one step further by setting this goal: "We have to inspire our customers in every way."

All our employees are well aware how important it is to reliably fulfill customers' wishes – your wishes and your orders – day in and day out.

This is why Würth's vision for quality is:

WÜRTH IS QUALITY
everywhere & every time

By providing quality products and services, we want to "take the load off your back", and we also want to give you the opportunity to increase your productivity and efficiency through innovative solutions.
This enables you to focus on your customers' needs, thereby increasing your success.

To assure you that the quality is there, we make no compromises, especially when it comes to selecting suppliers and when testing and approving Würth products. Würth strives for optimum quality in every market segment. Before we include products in our sales line, it is subjected to fatigue tests at our testing laboratory for days and sometimes even weeks under real-life conditions. In fact, most testing is carried out under tougher conditions that are seen in practice.

Würth operates a worldwide network of testing laboratories with first-rate equipment and a well-trained, motivated team of quality managers who act locally and globally to guarantee our quality standards.

Würth also works together with external testing laboratories where practicable to enable a third party to confirm the fulfillment of your specifications, national and international standards and Würth's own specifications.

Another focal point of our efforts in the area of quality management is the selection of the most suitable suppliers and their obligation to manufacture products in accordance with our quality standards.

The most environmentally friendly manufacturing of products and the use of appropriate materials are naturally of critical importance to us.

Of course we are also aware that the quality of the business processes of our company are crucial in determining your satisfaction. Our quality management systems are process oriented and the requirements are defined globally for Würth.

The central organ of the Würth Group in matters of quality is the Würth Quality Team (WQT). This team's job is to promote quality consciousness and quality, to point out improvement opportunities and necessities and to continuously support improvement processes. This work is supplemented within the Würth line at the so-called Quality Competence Center and, naturally, by a large number of teams at the individual companies.

In this brochure, we want to provide you with an overview of the instruments and people with whom we are working in the areas of
- Quality and environmental management (pages 3 – 5)
- Supplier qualification (page 6)
- Quality assurance (page 7)
- Testing laboratories in the Würth network (pages 8 – 19)

in order to fully live up to the "Würth is quality – Everywhere and every time" reputation.

Sincerely,



Dr.-Ing. Siegfried Beichter
Head Quality Management Würth Group

QUALITY MANAGEMENT WITH A SYSTEM

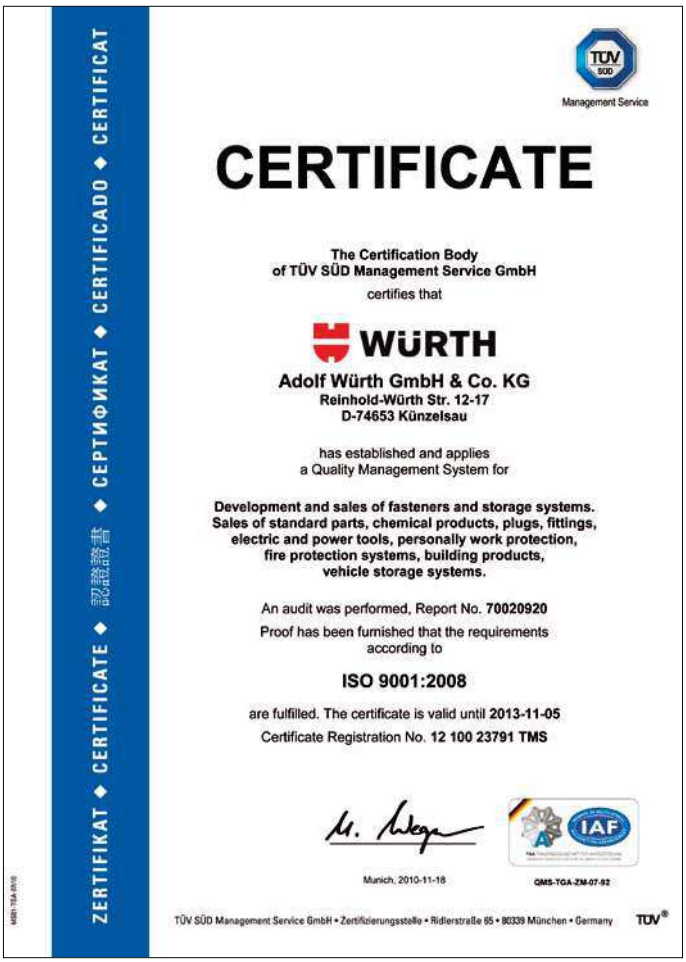
At the parent company of the Würth Group, Adolf Würth GmbH & Co. KG in Künzelsau, we have held an awareness for the demands, questions and problems of our customers as a focal point of our quality philosophy for a long time.

This is why, in 1993, we decided to have our quality-management system certified in accordance with DIN EN ISO 9001 by an external institution, the TÜV Süd certification agency. Using DIN EN ISO 14001, we are forming a process-oriented integrated management system which paves the way for continual improvement of our services.

Important elements of this system include determining customer satisfaction, evaluating effectiveness by the company management, continual improvement of the processes using internal audits, ensuring product quality through systematic and consistent testing, fair evaluation of suppliers, efficient complaint processing for monitoring of our products on the market and our own initiative for continual improvement of work routines to increase customer satisfaction.

The performance of this entire system is tested through monitoring audits carried out annually by TÜV Süd and re-certification audits by independent experts carried out every 3 years. At the last re-certification audit in November of 2010, we verified the conformity of our system with DIN EN ISO 9001:2008. This certification attests to our exceptional customer orientation and very keen quality consciousness.

Our distinct customer orientation was rewarded eventually with the German Customer Champion Award 2010.



ZERTIFIKAT ◆ CERTIFICATE ◆ 認證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Management Service

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH
certifies that

WÜRTH

Adolf Würth GmbH & Co. KG
Reinhold-Würth Str. 12-17
D-74653 Künzelsau

has established and applies
a Quality Management System for

Development and sales of fasteners and storage systems.
Sales of standard parts, chemical products, plugs, fittings,
electric and power tools, personally work protection,
fire protection systems, building products,
vehicle storage systems.

An audit was performed, Report No. 70020920
Proof has been furnished that the requirements
according to

ISO 9001:2008

are fulfilled. The certificate is valid until 2013-11-05
Certificate Registration No. 12 100 23791 TMS

Munich, 2010-11-18

QMS-TGA-ZM-07-92

TÜV SÜD Management Service GmbH • Zertifizierungsstelle • Ridlerstraße 65 • 80339 München • Germany



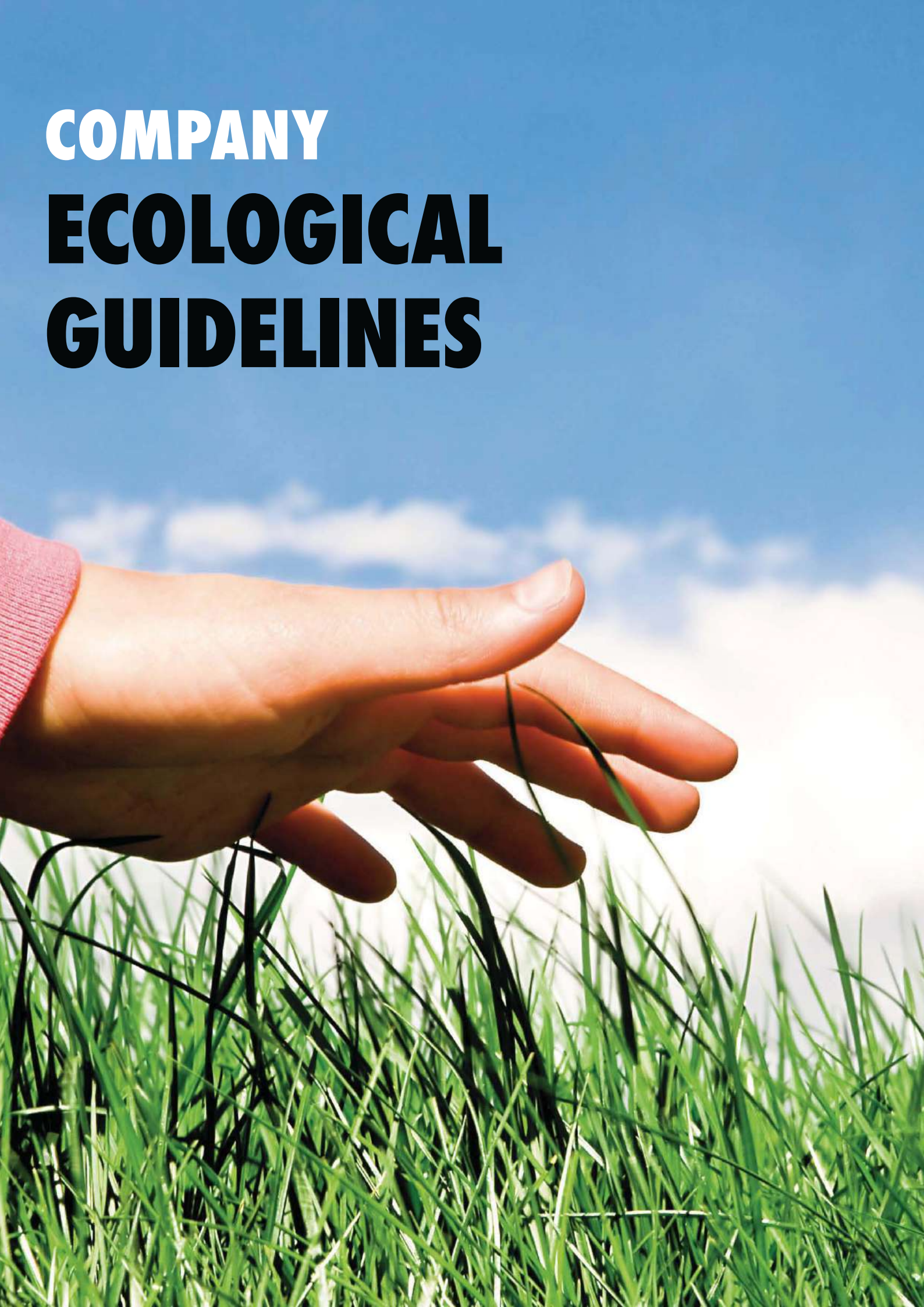


Dr.-Ing. Siegfried Beichter
Quality Management Würth Group

Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12–17
74653 Künzelsau, Germany

Phone: +49 7940 15-2680
Fax: +49 7940 15-52680
siegfried.beichter@wuerth.com

COMPANY ECOLOGICAL GUIDELINES



Company ecological guidelines

Adolf Würth GmbH & Co. KG has integrated environmental protection into its company philosophy as a main pillar and has been certified in the area of environmental management in accordance with DIN EN ISO 14001 since 1996. The company philosophy includes a clear commitment to environmental protection which is expressed in the preamble as follows.

Adolf Würth GmbH & Co. KG strictly adheres to the law in all the states of Germany and is obligated to comply with the principles of the social market economy and the health of people and the environment. We also strive to continually improve our company's environmental protection practices.

Our commitment to environmental protection has yielded the following five company ecological guidelines:

- **Actively work to protect health and the environment in all areas** of our doing and to use this for standing out against competition.
- **Expansion of ecological Würth products and service strategies** with the goal of offering our customers the best health protection modern technology can offer.
- **Acceleration of the development of new ideas for the safety and health** of people and the environment.
- **Motivation of our employees to deal in an environmentally conscious way** at the workplace and privately through information and training.
- **When selecting our product ranges and suppliers,** we ensure that the manufacture, use and consumption of products cause as little harm to the environment as possible by using state-of-the-art technologies.

Environmentally responsible product portfolio

The ecologically minded product and service strategies of Adolf Würth GmbH & Co. KG (AW KG) benefit customers and protect the environment from additional pollution.

For its service to environmental protection, AW KG was recognized at the 1998 "Environment Award for Companies" ceremony in the state of Baden-Württemberg.

In 2009, AW KG received the environmental technology prize from the state of Baden-Württemberg in the "material efficiency" category for the VKP Trio Sealing Tape.

Ecological product lines and application solutions

- ECOLINE
- WÜRTH isi!! – Online hazardous material management
- REFILLO®MAT



Goals of environmental management

Protection of the environment has long been a constituent part of Adolf Würth GmbH & Co. KG and includes the following tasks:

- Specification and implementation of a location-based environmental policy, environmental program and environmental goals.
- Systematic and objective regular assessment of the performance of these instruments.
- Provision of information on internal environmental protection for the company, the public and especially for our customers.

Environmental challenges for the future

- Environmentally minded product range creation
- Minimization of environmental risks
- Waste avoidance
- Responsible handling of natural resources



Bianca Gilsdorf
Environment management

Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12–17
74653 Künzelsau, Germany

Phone: +49 7940 15-2482
Fax: +49 7940 15-4512
bianca.gilsdorf@wuerth.com

TECHNICAL
SUPPLIER QUALIFICATION

Würth seeks out the best suppliers in the world!

Würth's high demand for quality is placed at the very beginning of our supply chain with our global partners. In addition to process and product quality, the factors of delivery dependability, the environment and social aspects are "on the test rig". Trained auditors with highly comprehensive knowledge about the processes involved in creating new products and services test these products on site. Along with our quantitative and qualitative growth, supplier development activities are continuously being expanded and further developed according to the expectations of our customers.

To ensure an optimum audit process, we have at our disposal a host of customized tools for audits ranging from short half-day audits to supplier-development audits to comprehensive, multi-day audits. These tools are standardized methodically at the largest companies, which means that the results can be compared with and applied at other locations. We offer our knowledge at multi-day lectures and workshops at the Würth Academy.

The goals of supplier development are to ensure quality and environmental obligations, long-term cooperation with partners and reductions in nonconformity costs. What motivates us in supplier development are customers who enthusiastically use their product, purchased for the fairest price, and can rely on "their Würth".









Andreas Dierolf
Quality assurance
and supplier qualification

Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12–17
74653 Künzelsau, Germany

Phone: +49 7940 15-2349
andreas.dierolf@wuerth.com

PERFORMANCE
OF QUALITY ASSURANCE

Quality beats price – quality assurance at Würth

To assure the customer that the quality is 100% there, we make no compromises when it comes to selecting suppliers and when testing and approving Würth products. Würth demands the best possible product quality in each respective market in order to meet all our customers' demands. They are the ones who decide whether or not a product is good.

Engineers, technicians and masters of their craft work on the following tasks for quality assurance:

- Initial sample testing
- Incoming goods inspection
- Complaint processing
- New product testing



Incoming products are subjected to an incoming goods inspection in accordance with the random sample plan. This is oriented toward DIN ISO 3269 and forms the basis for the scope of the random sample based on the delivery quantity.

The inspections are checked as per specifications of the standard and internal inspection instructions from independent professionals. All inspection equipment used is regularly calibrated.

New products are subjected to special requirement profiles by the quality assurance personnel. If the inspection yields positive results, approval is granted by quality assurance.

An important component of our success is the internal development of innovative products. Here, quality assurance works very closely with the product management and development departments and accompanies development projects through practice-oriented tests and determination of product requirements from the get-go.

The customer is an important part of our continual product-improvement process. All customer complaints are evaluated on a weekly basis. The quality assurance team responds immediately to increases in key figures so that solutions to possible problems can be developed early on.
Typical measures include inventory checks, supplier development, product optimization, 8D reports and the avoidance of usage errors through improved product information while taking the information gleaned from customers into account.



THE LARGEST TESTING LABORATORIES OF THE WÜRTH LINE



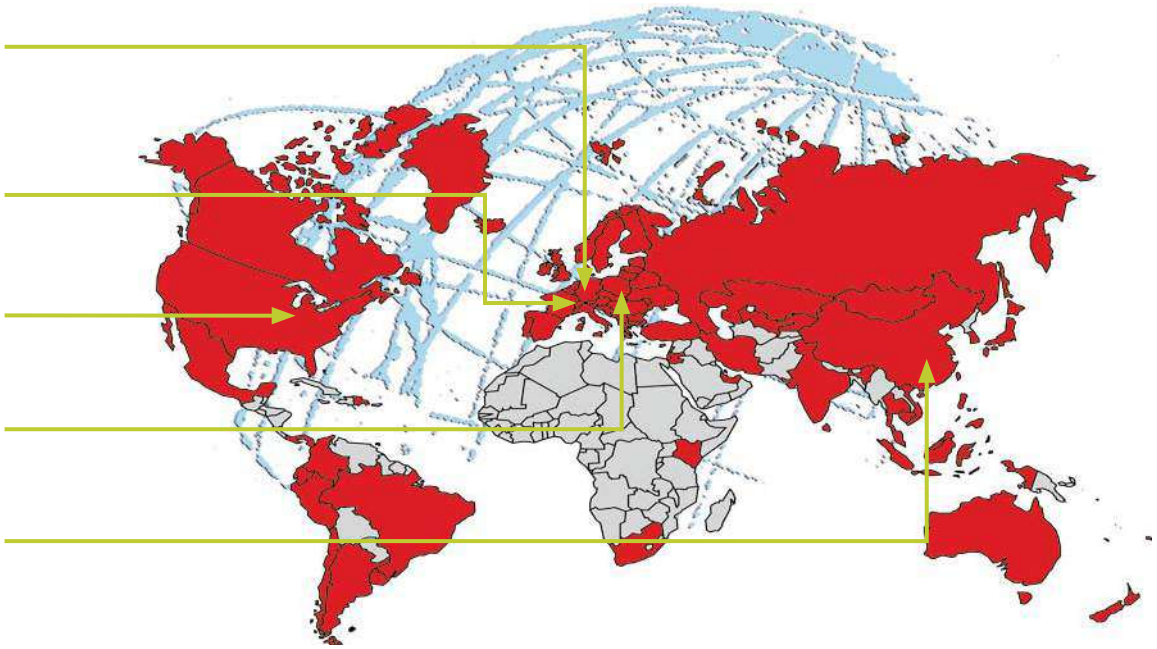
Germany
Künzelsau-Gaisbach,
Bad Mergentheim

Switzerland
Chur

US
Indianapolis

Slovakia
Bratislava

China
Shanghai



= Würth companies worldwide

ACCREDITED WÜRTH TESTING LABORATORY

The growing demands of the global market and our customers have led Adolf Würth GmbH & Co. KG to make the decision to establish an independent material-technical testing laboratory in accordance with the requirements of DIN EN ISO/IEC 17025.

Thanks to the professional competence in materials and anchor technology and the confidential handling of information and protection rights, the laboratory serves as a superordinate testing location within the Würth Group.

Altogether, six employees with over 70 years of combined professional experience and various professional backgrounds, e.g. master mechanics and metal industry tradesmen, structural engineers and chemical engineers, attend to your concerns. This ensures not only high testing quality, but also a professional interpretation of the measurement values.

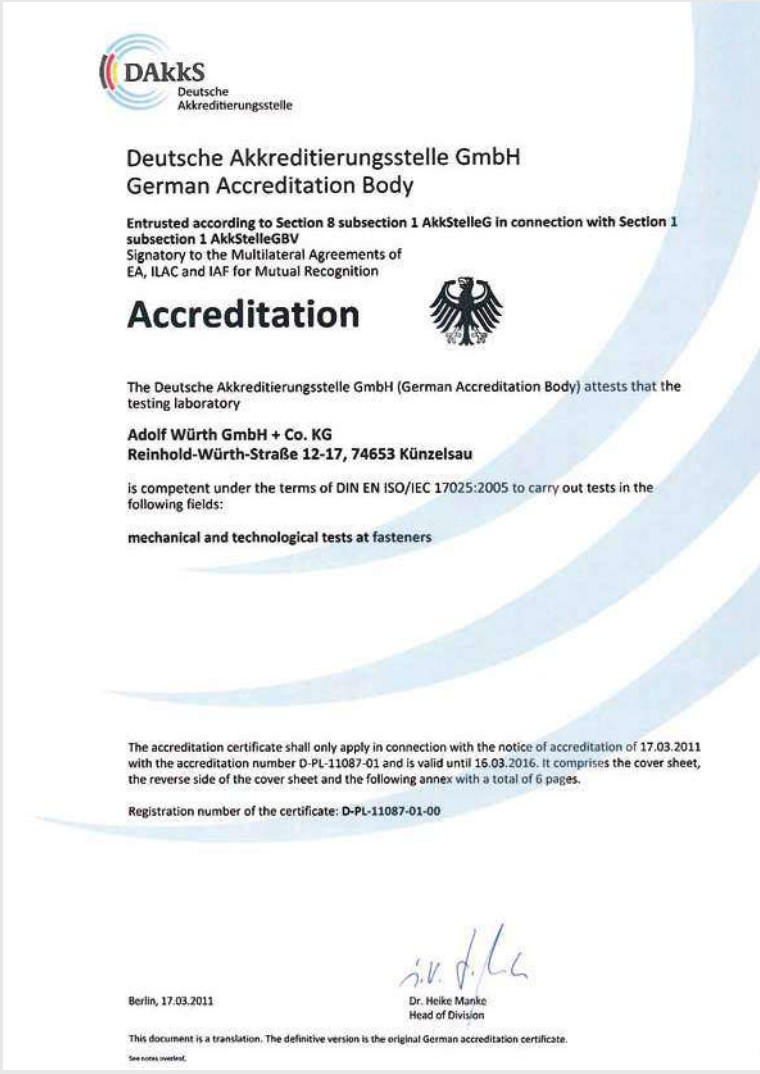
We offer our customers fast and competent processing of their orders. Since the Würth testing laboratory is located at the Künzelsau location, and is therefore close to the central warehouse of Adolf Würth GmbH & Co. KG, quick access to Würth products is possible. This enables us to respond quickly to possible special needs of your order.

Our accreditation certification with appendix can be found on our homepage or directly on the website of the DAkkS under laboratory number D-PL-11087-01-00.

For inquiries or more information on the Würth testing laboratory, we stand ready to assist you.

Jan Kobald
Würth testing laboratory

ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-11087-01-00



DAkkS Deutsche Akkreditierungsstelle

Deutsche Akkreditierungsstelle GmbH
German Accreditation Body

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV
Signatory to the Multilateral Agreements of
EA, ILAC and IAF for Mutual Recognition

Accreditation

The Deutsche Akkreditierungsstelle GmbH (German Accreditation Body) attests that the testing laboratory

Adolf Würth GmbH + Co. KG
Reinhold-Würth-Straße 12-17, 74653 Künzelsau

is competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out tests in the following fields:

mechanical and technological tests at fasteners

The accreditation certificate shall only apply in connection with the notice of accreditation of 17.03.2011 with the accreditation number D-PL-11087-01 and is valid until 16.03.2016. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 6 pages.

Registration number of the certificate: D-PL-11087-01-00

Berlin, 17.03.2011

Dr. Heike Manke
Head of Division

This document is a translation. The definitive version is the original German accreditation certificate.



Hermann Müller
Würth testing laboratory

Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12–17
74653 Künzelsau, Germany

Phone: +49 7940 15-2082
Fax: +49 7940 15-4121
hermann.mueller@wuerth.com



Jan Kobald
Würth testing laboratory

Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12–17
74653 Künzelsau, Germany

Phone: +49 7940 15-2648
Fax: +49 7940 15-52680
jan.kobald@wuerth.com

ADOLF WÜRTH GMBH & CO. KG TEST LABORATORY
TESTING OPTIONS (EXCERPT)



Tension testing machine
- Tensile test/compression test of components
- Strength testing of bolts and nuts





Screw-in test (right)
Internal development:
Measurement of the screw-in times of non-self-drilling and self-drilling screws





Vickers hardness tester (right)
Hardness test in accordance with DIN EN ISO 6507
- Determination of edge and core hardness
- Hardness progression curves

Measuring microscope (left)
Contact-less measurement of geometries







Robot test rig
a) Grinding
b) Cutting
c) Hammer drilling

a) Grinding test
- Grinding, flap and fiber disks
- Endurance test
- Material removal/ loss of material on disk
- Time/performance recording

b) Cutting disk test
- Cutting disks from 115 – 230 mm
- Number of seperating cuts/ loss of material on disk

c) Hammer drilling test
- SDS plus, SDS max
- Endurance test
- Drilling time, number of drill holes



Infrared spectroscope
Measuring of product specific spectra
(finger print)





Spark emission spectrometer (left)
Determination of steel composition

Weather simulation cabinet (right)
Accelerated outdoor weather simulation
in accordance with DIN EN ISO 4892-2



Salt-spray chamber

- Salt-spray test in accordance with DIN EN ISO 9227
- Condensate test in accordance with DIN EN ISO 6270-2
- A wide variety of environmental simulations



Dispensing unit (internal development)
System testing of products in cartridges or bags

- Thickenings
- Air inclusions
- Color mixing
- User viscosity





Lamp test rig (left)

- Testing of light lamps and automotive bulbs
- Geometry
- Service-life test
- Luminous flux measurement (lumens)
- Vibration test
- Measurement of the light spectrum and the color-reproduction value

Spectral photometer(right)
Measurement of the color of products such as silicones and paints in the CIELAB color space



X-ray fluorescence spectroscope

- Measurement of the thickness of surface coatings
- Determination of heavy metals in plastics/ metals
- RoHS screening process



Rheometer
Determination of viscosity, flow characteristics of liquids and pasty products



Machine test rig
- Magnetic powder eddy current brake for high torques and high speeds
- Service life testing of machine batteries
- Testing of machine characteristics

Not shown

Occupational safety
- Martindale abrasion test for gloves
- Cut protection test
- Penetration test

Fall testing
- Cardboard
- Shipping boxes
- Hand tools

Cardboard testing
- Box Cardboard Tester (BCT)
- Edge Crush Test (ECT)

Battery testing
- Types: micro (AAA), mignon (AA), baby, mono, 9-Volt block, button cells
- Discharge time and discharge cycles for various load cases, e.g. flash, camera
- Service-life test for rechargeable batteries

Precision measuring system
- 2D shadow measuring system
- Automatic measurement of screw dimensions

Plier testing
Cut test for sheet-metal shears and VDE pliers

Service life test for flashlights

... and lots more

SAMPLE OF SERVICES FROM ADOLF WÜRTH GMBH & CO. KG AT A GLANCE

Dear Customer,
We would be happy to perform testing at your behest. This list is intended to provide you with a small overview of the testing possibilities offered at our testing laboratory. Should you be interested in our offer, we would be happy to advise you. Please contact your sales rep or the contact partner of the accredited Würth testing laboratory.

Tensile test
- Tensile testing on whole and machined test pieces DIN EN ISO 898-1*
- Force test for nuts DIN EN 20898-2*
- Measurement of breaking strength and tear elongation of adhesive tapes DIN EN 14410
- Determination of the tensile shearing strength of high-strength overlapping adhesions DIN EN 1465
- Determination of adhesive strength of adhesive tapes DIN EN 1939
- Determination of tear strength, tensile strength, tear elongation and tension values of rubber/elastomere DIN 53504

Hardness testing
- Surface and core hardness, hardness profiles
- HRC/HRB Brinell
- HV 0.3/1/5/10 DIN EN ISO 6507*
- Decarbonization and carbonization test DIN EN 898-1*
- Edge decarbonization DIN EN 898-5*

Torque
Determination of torques up to 5,000 Nm

Coating thickness test
Measurement of metallic coverings using x-ray fluorescence process*

RoHS screening
Non-destructive testing using x-ray fluorescence process

Dimension testing
- Thread testing, length measurement, geometry*
- Measuring microscope*
- 2D shadow measuring unit

Material analysis
- OES spark emission analysis for high- and low-alloy steels*
- Infrared spectral analysis FT-IR

Environment simulation
- Accelerated outdoor weathering DIN EN 4892-2
- Environmental test DIN EN 60068-8-52
- Corrosion testing in artificial atmosphere – Salt-spray test DIN EN ISO 9227*
- Climate tests -40°C to 180°C at 10 – 98% rel. humidity
- High tempering up to 650°C

Surface testing
- Surface roughness
- Measurement of colors in CIELAB color space
- Visual assessment

Component test
Depending on the customer's requirements, we adjust to their specific equipment and determine the material properties required by architects or stress analysts, for example.

Residual field intensity
Measurement of the field strength e.g. of screws

Fall testing
Fall testing, e.g. of cases, packages DIN EN 22248

Cardboard testing
Measurement with box carton testers up to 30 kN DIN EN ISO 12048
Edge crush resistance 5 kN DIN EN ISO 3037

Battery testing
Capacity, discharging properties and charging properties, from button cells to monocells

Lamp testing
Measurement of the light spectrum and lumens of light bulbs, LEDs and energy-saving lamps

Protective equipment
- Martindale abrasion test
- Cut protection test
- Penetration test

*Testing possible at accredited testing laboratory (DIN EN ISO/IEC 17025)

WÜRTH INTERNATIONAL AG IN CHUR

Würth International AG developed during 50 years into a company with more than 400 employees. Today, central purchasing for the Würth Group is one of the most important mainstays of Würth International AG. In the mid-1990s, central purchasing branches were founded in America and Asia. This enabled Würth International AG to meet its customers' needs even better.

The logistics center in Landquart was brought to life almost at the same time. This facility makes it possible to supply customers quickly and reliably. Our subsidiary in Bratislava (Slovakia) also provides a weighing service for the entire Würth Group. The testing laboratories of Würth central purchasing are located in Switzerland (Landquart), Slovakia (Bratislava) and China (Shanghai).



TESTING LABORATORY IN LANDQUART (SWITZERLAND)

From the very beginning, professionally competent and reliable quality assurance was ensured for the inspection of incoming goods at the logistics center of Würth International AG in Landquart. In addition to the incoming goods inspection, the sampling of new products and complaint processing are some of the main tasks handled by the central purchasing quality assurance personnel.

With the construction of the new warehouse in 2002 and complete redesigning of the testing laboratory in 2011, the laboratory was outfitted with a modern and targeted infrastructure.

In addition to the classic mechanical tests, the testing laboratory also became specialized in the examination of chemical products. Some of the most important testing devices include a 20 kN tension testing machine, a measuring microscope which can record 3D models, various hardness testers (Rockwell, Vickers, Shore), a 2D measuring station, a box column drill for service-life and tool tests, simple breakage torque tests, an x-ray for material analysis of metals and coating measurements, a salt-spray chamber for corrosion-protection tests, an infrared spectrometer for testing chemical substances, a climate cabinet, a rheometer for viscosity measurement and other analytical testing possibilities for the determination of poisonous substances, such as PAKs and chrome 6.







Manuel Hallauer
Quality assurance

Würth International AG
Lagerhaus Landquart
Mühlestrasse 9
7302 LANDQUART, SWITZERLAND

Phone: +41 81 300 6142
Fax: +41 81 558 1775
manuel.hallauer@lagerhaus-landquart.ch

TESTING LABORATORY IN BRATISLAVA (SLOVAKIA)

Würth International Trading s.r.o. in Bratislava is the Würth Group's competent organization for DIN and standard parts.

In addition to trading activities, our colleagues in Bratislava handle a host of logistic services for the Würth Group companies.

Thanks to the use of state-of-the-art equipment and trained personnel, we are able to satisfy the demand for high quality by customers.
All requirements for initial samples and new product and standard testing are fulfilled at the laboratory in Bratislava.



Norbert Cillik
Quality assurance

Würth International Trading s.r.o.
P.O. Box 18
83107 BRATISLAVA 36
SLOVAKIA

Phone: +421 2 4921 1239
Fax: +41 81558 1955
norbert.cillik@wurth-int.com





TESTING LABORATORY IN SHANGHAI (CHINA)

Initial samples from Asian suppliers, in particular, are tested at the testing laboratory in Shanghai. Samples are taken from each delivery and tested to determine whether they meet our high quality standards.

The very well-trained personnel and the laboratory, which is equipped with all the important testing devices (e.g. a tension testing machine, a coating thickness measuring device, a torque test rig and other testing devices) ensures high quality, including that of imports from Asia. This ensures that only faultless products are shipped.



Steven Xu
Quality assurance

Würth International Trading
(Shanghai) Co. Ltd.
Capital of Leaders – Building 9
Zhangdong Road No. 1387
201203 SHANGHAI – P.R. CHINA

Phone: +86 21 5856 9056
Fax: +86 21 5856 9995
steven.xu@wurth-international.com.cn





WÜRTH INDUSTRIE SERVICE GMBH & CO. KG

Würth Industrie Service GmbH & Co. KG was founded on 1/1/99 as a spin-off of the industry division of Adolf Würth GmbH & Co. KG in Bad Mergentheim.

In the area of quality assurance, a well-equipped testing laboratory is available. Both the equipment and personnel of this laboratory are continually invested in. All the required geometric measurement possibilities required for our products, our own means for metallography and a broad spectrum of testing devices are available, for example:

- Hardness tests for metals and plastic
- Small-load hardness test
- Torque test rigs
- Pulling test rig for dimensions up to M80
- Tension testing machine
- X-ray fluorescence spectroscope
- Surface-roughness measuring device
- Measuring microscope
- 3D-coordinate measuring machine
- Contour measuring device
- Optical rotation measurement system
- Impact test bending facility





Optical coordinate measuring machine (3D): Optical 3-coordinate measurement, measurement precision down to 3 µm and serial measurement possible. Contact-less measurement system for determining diameters, radii, angles etc.

Friction coefficient testing machine/torsion testing machine





Initial sample testing

Before we begin the serial supply of our industrial customers, we generate corresponding initial sample test reports at our laboratories on request, for example in accordance with the VDA, PPAP or custom specifications.

Applicable deliveries to Würth Industrie Service GmbH & Co. KG are also ensured using the initial sample process in these cases, whereby our laboratories cross-check the initial sample test reports from suppliers accordingly and make decisions regarding approval.



Dr. Uwe Hasselmann
Technical department

Würth Industrie Service GmbH & Co. KG
Drillberg – Industriepark Würth
97980 Bad Mergentheim, Germany

Phone: +49 7931 91-2678
Fax: +49 7931 91-4273
uwe.hasselmann@wuerth-industrie.com



Part Submission Warrant 7831-00

Part Name: SECHSKANTSCHRAUBE MIT SCHAFT TP.
Shown on Drawing No.: 246340
Engineering Change Level: 02-084
Additional Engineering Changes:
Safety and/or Government Regulation: ☐ Yes ☑ No
Purchase Order No.:
Checking Aid No.:
Checking Aid Engineering Change Level:

ORGANIZATION MANUFACTURING INFORMATION

Würth Industrie Service GmbH + Co.KG /
Supplier Name / Supplier Code
Drillberg
Street Address
Bad Mergentheim 97980 Germany
City Postal Code Country

CUSTOMER SUBMISSIO

☑ Dimensional ☑ Mate
Customer Name/Division
Buyer/Buyer Code
Application

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? ☑ Yes ☐ No
Submitted by IMDS-ID-Nr.: 173512105 / 2
Are plastic parts identified with appropriate ISO marking codes? ☐ Yes ☑ No

REASON FOR SUBMISSION (Check at least one)

☐ Initial Submission
☐ Engineering Change(s)
☐ Tooling: Transfer, Replacement, Refurbishment, or additional
☐ Correction of Discrepancy
☐ Tooling Inactive > than 1 year
☐ Change to Optional Co
☑ Sub-Supplier or Materia
☐ Change in Part Process
☐ Parts Produced at Add
☐ Other - please specify

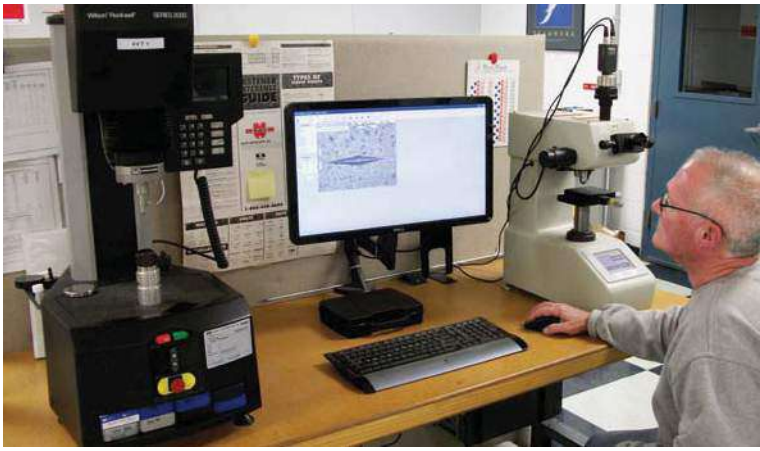
Excerpt from an OEM PPAP form

WÜRTH SERVICE SUPPLY INC. (USA)

Würth Service Supply Inc. in Indianapolis offers industrial customers a broad product range, individualized support and comprehensive technical consultation by applications engineers.

At the quality assurance testing laboratory, a broad spectrum of dimensional testing possibilities and test devices are available for testing mechanical properties such as hardness, tensile and torsion strength, impact testing work and micro-hardness. In addition, a variety of functional tests are carried out in joint development and coordination with our customers.







Stan Davis
Quality assurance

Würth Service Supply Inc.
4935 W. 86th Street
INDIANAPOLIS, IN 46268

Phone: +001 317-704-8603
Fax: +001 317-507-1936
sdavis@servicesupply.com

WÜRTH GULF SUBMITTAL

JOINT FOAM FIRE-RESISTANT PLUS

Art. No. 0893 303 402

11 - APPROVALS



CLIENT	PROJECT MANAGER	LEAD CONSULTANT	MAIN CONTRACTOR
al shara INVESTMENT	mace	hoford's	AIG

TECHNICAL DOCUMENT

	"W" HOTEL & RESIDENCES PALM JUMEIRAH DUBAI	DOCUMENT REF	REVISION
		WHR-AIG-ID-SMP-3901-0118	A

DESCRIPTION: FIRE RATED EXPANSION FOAM - JOINT FOAM FIRE RESISTANT PLUS

CONTRACTOR	WORK PACKAGE DISCRIPTION	MANUFACTURER	SUPPLIER
Advanced Industrial Group (AIG)	Fitout - D52 & G62 Sold Apartments	WURTH	WURTH

Reference Document Specification / BOQ Ref. Alternate if any: FIRE RATED EXPANSION FOAM

Location of use
- Building: ☐ Hotel ☐ External ☐ Project Wide ☐ Residence East ☑ Residence West ☐ Wadi
- Level: ☐ Basement ☐ Ground ☐ L1 ☐ L2 ☐ L3 ☐ L4 ☐ L5 ☐ L6 ☐ Lower Ground ☐ Project Wide ☐ Roof

Discipline: ☐ AD ☐ AR ☐ CS ☐ EL ☐ FR ☐ GB ☐ HS ☐ LD ☐ LG ☐ ME ☐ OS ☐ OS ☐ PM ☐ PH ☐ QA ☐ ST ☐ KL

ENCLOSURES

- ☑ Test Reports (RPT)
- ☐ Calculations (CAL)
- ☑ Compliance Statement(CER)
- ☐ Material (MAS)
- ☐ Method Statement (MST)
- ☑ Samples (SMP)
- ☐ Schedule (SCH)
- ☑ Warranty (WRY)
- ☐ O&M Manual (MAN)
- ☑ Technical Data (TC)
- ☐ Plan (PLN)
- ☐ Others:

Issued for
- ◉ Issued For Approval
- ○ Issued For Information/Record

PREPARED BY (SUB-CON / AIG)	REVIEWED FOR AIG	EHS-GREEN VERIFICATION	APPROVED FOR AIG
Signature:			
Name:- Mrs. Nancy Assad	Mr. John Arun D'Souza		
Date:- February 01, 2018	February 01, 2018		

AIG'S COMMENTS:

Name:..... Signature: ..... Date: .....

AIG STATUS

CONSULTANT COMMENTS:

APPROVED AS NOTED SUBJECT TO FOLLOWING APPLICATION METHOD AS PER MANUFACTURER'S RECOMMENDATIONS

CARE TO BE TAKEN DURING APPLICATION TO ENSURE ALL GAPS ARE FILLED.

MATERIAL TO BE STORED IN A SAFE AND SAFETY MANNER

For and on behalf of Engineer:

Name: ROMAN BLANCO Signature: ..... Date: 04.02.2018

For and on behalf of Employer: Approval (where required)

Name:..... Signature: ..... Date: .....

CONSULTANT STATUS

(8)

RECEIVED 04 FEB 2013

STATUS CODE:
- ☐ A - Approved
- ☒ B - Approved with Comment
- ☐ C - Rejected-Revise and Resubmit
- ☐ D - Reviewed with No Comments

The Engineer / Employer comments shall not relieve the Contractor of any of his responsibilities under the Contract.

1 NO. PHYSICAL SAMPLES RECEIVED : 4/2/2018

198139

Material Submittal / تقديم مواد

Construction | Agency for Security Planning and Development | Ministry of Interior

Consultant / الاستشاري		Contractor / المقاول			
ARCHEN		شركة السيف مهندسون مقاولون المحدودة El Seif Engineering Contracting Company			
Project Name / اسم المشروع	Ministry Of Interior HQ Jeddah	Document No.	MOIHQ-ESC-DEP-TMS-0081	Rev.	00
Project No / رقم المشروع	MOIHQ P-136	Location / الموقع	Jeddah		
Transmittal Ref. No / رقم المرجع	MOIHQ-ESC-DOC-ARC-T-6114	Contract No / رقم العقد	165/53/01		
Sub. To / التقديم الى	ARCHEN	Date / التاريخ	13-May-2017		

Material Description (one item per each form) / (وصف المواد (مادة واحدة لكل نموذج

Technical Material Submittals for Door Fixing Accessories
Wurth B1 –Fire Rated Foam (With Sample)

■ As Specification / حسب المواصفات ☐ Alternative / بديل
☑ Architectural/معماري ☐ Civil/مدني
☐ Electrical/ كهربائى ☐ Mechanical/ميكانيكي

Drawing Ref / مرجع المخطط	MOIHQ-RME-B01-IDE-DWG-	B.O.Q Ref No / المرجع في جدول الكميات	BOQ 1-7
Specification Ref / مرجع المواصفات		Standards, BS, DIN / المعايير	

(Attach all relevant technical literature marked to identify descriptions, current test certificates, samples etc.)
(ارفق كافة البيانات الفنية لايضاح الوصف و شهادات الاختبار و العينات و خلافه)

Manufacturer / Supplier / المُصنّع / المُورّد

Company Name / اسم الشركة :
Wurth Gulf FZE

Address / العنوان :
Wurth Gulf FZE
ZG8 – JAFZA Dubai, United Arab Emirates
P.O. Box 17036

Local Agent / الوكيل المحلي :
NA

Locally Manufactured / مُصنع محلي : **NO**
C.C.A.S.G Manufactured / مُصنع خليجي : **NO**
Production Period / مدة الانتاج : **3 WEEKS**
Overland / شحن برّي : **YES**
Sea Freight / شحن بحري : **NO**
Total Delivery Time / مدة التوريد الكلية : **2 WEEKS**

Programmed Date Material Required On Site: التاريخ المبرمج للمادة لتتواجد بالموقع:	Expected Date Of Arrival On Site: 2 Weeks from Approval التاريخ المتوقع للمادة لتتواجد بالموقع:
Contractor's Authorized Manager توقيع المدير المخول من قبل المقاول	Name / الاسم : Edouard Matta — Signature / التوقيع : Position / الوظيفة : Project Director — Date / التاريخ : 13-May-2017

Consultant's Comments / ملاحظات الاستشاري :

- Material is approved to be used as a gap filling ONLY (Not for fixing), subject to manufacturer technical informations.
-This Material is "Included Item" as apart of "Door Unit".
-Provide method statement for storing & installation plan."as per manufacturer recommendations"
-Refer to comments in attached sheets.

Status / الحالة	☐ Approved معتمد	■ Approved As Noted معتمد بملاحظات	☐ Resubmit As Noted اعادة تقديم وفق الملاحظات	☐ Rejected مرفوض

Consultant's Representative (SITE) / (الموقع) ممثل الاستشاري		Consultant - PD / مدير المشروع	
Name / الاسم : Mostafa Nabiel	Position / الوظيفة : Head Of I.D	Name / الاسم : Bassam Daham	Position / الوظيفة : P.D
Signature / التوقيع :	Date / التاريخ : 24/05/2017	Signature / التوقيع :	Date / التاريخ : 24/05/2017

Distribution:

☐ Client ☐ MOI-PM ☐ Engineer ☐ Contractor

ARCHEN ENGINEERING JHQ Project RECEIVED 28 MAY 2017 11:25 AM

RECEIVED FROM CONTRACTOR ON 30 APR 2017

MATERIAL SUBMISSION

File Ref / 6.8

Project Name	**Serenia Residences, The Palm**	Sub Ref No.	**3376/MAR/A/0334**	Rev 0
Client	Serenia Residences Limited	Date	29/04/2017	
Main Contractor	Khansaheb Civil Engineering	Response Status	■ **Normal**	☐ **Urgent**
Sub-Contractor	Starwood			

Description:

Description	:	Form Fire Rated (Wurth) for Doors
Purpose	:	
Specified : Yes / No	:	Specification Ref. :
Manufacture / supplier	:	M/s. Starwood
Reason for alternative	:	
BOQ Reference	:	
Enclosures	:	

ISSUED TO CONTRACTOR ON 16 MAY 2017

Signature : Shilal For Main Contractor Date: 30/04/2017

Comments

- Material acceptance Subject to addressing comments as follows.
  * To comply with all authority regulations.
  * Application procedure strictly aaordance with manufacturer recommendation.
  * All Safety precautions should be as per KEE EHS / Authority regulations
  * As per spec P12/G50, 930 and 940 to be complied.
  * Civil defense approval letter to be submitted

Confirmed by:	ARCHITECTURAL	STRUCTURAL	MEP	ID / OTHERS
Signature				
Name	SJ			
Date	15/5/17			

KHANSAHEB CIVIL ENGINEERING LLC
KD675 - SERENIA RESIDENCE
DATE RECEIVED 16/05/17
LOG REF 30578

Distribution	Original	Copy	Action
CM			
PM			
PM Structures			
Construction Mgr			
Works Manager			
Planner			
Site Agent			
Site Agent Basement			
Site Agent A			
Site Agent B			
Site Agent C			
MEP Coordinator			
Design Coordinator			
Quantity Surveyor			
Engineers			
QA /QC			
Safety			
Surveyor			
Consultant			
Sub Contractor			
Head Office			
File			

The Document is

☐ Code A	☑ Code B	☐ Code C
No objection **Re-submission not required**	No objection subject to addressing comments (work may proceed) **Re-submission required**	Rejected (work may not proceed) **Re-submission required**

NOTES :- This document is to be read in conjunction with the relevant Contract Conditions; All submissions are to be typed; Hand written submissions will not be accepted.

STARWOOD

Dubai / Abu Dhabi / Sharjah
United Kingdom
PO Box 7185 Dubai
United Arab Emirates
T +971 4 3237555
F +971 4 3237717
E mail@gaj-uae.ae
W www.gaj-uae.ae

Compliance + missing OCD ENRG

GHD GLOBAL PTY LTD
24 MAY 2016
RECEIVED

plafond

GHD

ETIHAD CARGO

Document / Material Transmittal Form

General

Project Name:	Project No:	Submittal No :	Date :
Etihad Cargo Refurbishment	2007	2007-MAT-CIVIL-011	24-May -2016

Requestor Organization: Plafond Fit Out LLC — Rev : 00

Addressed/ Issued to:

Etihad Airways PJSC

Abu Dhabi, UAE

Mr. Dylan Rees

Subject: MATERIAL SUBMITTAL - **Wurth Takafur Pu-Foam,Fireretardant Expension Foam 750ml(Firerated)**

SUBMITTAL DISCIPLINE		STRUCTURAL	MECHANICAL	ELECTRICAL	CIVIL	ARCHITECTURAL
MATERIAL SUBMITTAL	DOCUMENT					

LIST OF SUBMITTED ITEMS

Item	Description	No. of Copies	Remarks
1	Wurth Takafur Pu-Foam,Fireretardant Expension Foam 750ml(Firerated)	1	

REF. SPEC(s):	REF.BOQ	REF. DRWG(s):	REF. R.F.I

COMPLIANCE STATEMENT	The Contractor hereby confirms that the submitted items have been reviewed in detail and are correct and in strict conformance with the Contract Documents except otherwise stated.

For and on behalf of the Contractor : Plafond Fit Out LLC

Name : Shane Hattingh
Signature :

plafond
P.O. Box 24689, Dubai - U.A.E.

Designation : Construction Manager
Date : 24-May 2016

CONSULTANT'S REVIEW COMMENTS

Approved subject to provide all fire rated doors labelling and certificates as per ADCD requirement.
Filling foam for steel door frame jamb

APPROVAL STATUS

☐ Code 1 Approved.	☑ Code 2 Approved As Noted	☐ Code 3 Rejected.	☐ Code 4 For Information Only

Name: Alaa Hussein Signature: Date 24/5/2016

Comments Sheet Attached Yes ☐ No ☐

CLIENT'S COMMENTS

Name: Signature: Date:

Note: The Engineer's approval shall not in any way relieve the Contractor of his obligation under the Contract. The Contractor shall be solely responsible for the soundness and the correctness of the submitted Materials and Documents.

Distribution: 1. Contractor [Original], 2. Employer, 3. Project Manager, 4. QS/Cost Consultant, 5. Consultants, 6. File

The Employer:	The Engineer:	The Contractor:
	خطيب و علمي شركة الاتحاد الهندسية Khatib & Alami consolidated engineering company	العراب و المشاريف للمقاولات (ش.ذ.م.م) Al Araab & Al Masharif Contracting (L.L.C.)

REGAL TOWER - 2

SUBMITTAL SHEET

TRANSMISSION OF MATERIALS, DRAWINGS, DOCUMENTS, SAMPLES, ETC.

Submittal No.	AR-AM-MT-037
Rev.	0
Date:	21/12/2008

SUBMITTED FOR	CODE
APPROVAL	1
INFORMATION	2
ACTION	
APPROVED	APP
APPROVED AS NOTED	AAN
REJECTED	REJ
REVISE AND RESUBBMIT	RAR
CANCELLED	CAN

SUPPLIER / MANUFACTURER:	Wurth Gulf FZE
SUBCONTRACTOR / AGENCY:	Al Araab & Al Masharif Contracting LLC

WE ARE FORWARDING HEREWITH THE DRAWINGS/DOCUMENTS/SAMPLES LISTED BELOW

QTY	DRGS.,SPEC. BOQ.REF.	ITEM SEQ NUMBER	DESCRIPTION	+ TYPE	CODE	
					Submittal	Action
(1)		AR-AM-MT-037 r.0	Wurth Tekafur PU- Foam, Fire Retardant Expansion Foam 750 ml (Fire Rated)	MT	1	
			Item: Wurth Tekafur PU- Foam, Fire Retardant Expansion Foam 750 ml (Fire Rated)			
			Manufacturer: Wurth Gulf FZE			
			a). Product Description			
			b). Typical Uses			
			c). Application			
			d). Certificate of Compliance			
			e). Direction of Use			
			f). Test Procedures			
			g). Test Observations			
			h). Test Photographs			
			i). Temperature Data			
			j). Performance Criteria & Test Results			
			k). Technical Data B1 PU Foam CAN 750 ml			

This Submittal **does not** Deviate from Contract Documents.

FOR CONTRACTOR'S COMMENTS:

Signature:

CONSULTANT'S REMARKS

* material approved subject to cover all authority requirment in application.
* follow up manufacturer instruction and stored properly.
* all safety precautions should be considered
* Sample should be ~~exposed~~ inspected in site.
* Use as per specified and as per drgs with skilled labors. without any additional impact.

Signature:

Date: 22/12/08

+ TYPE: MT Material
SM Sample
PQ Prequalification
MD Manufacturer's Data
SD Shop Drawing
AB As Built
RT Report
GT Guarantee
CT Certification
MS Method Statement
OM Operation Manual
OT Other

Name	Action
Technical Manager	
Construction Manager	
Project Engineer	
Planning Engineer	
Architect	
Document Controller	
Admin	
P.M.	

Corrections or comments made relative to submittals during this review do not relieve the contractor from compliance with the requirements of the Contract Documents. This contract applies only for review of general conformance with the design concept of

AL RAJHI PROJECTS

DOCUMENT CONTROL
RECEIVED
DATE: 23/12/08

RECEIVED
21 DEC 2008
BY: pamela 11:00 Am

23/12/08

EMPLOYER:	ENGINEER:	CONTRACTOR:	MEP CONTRACTOR:
EMIRATES AIRLINE	ARCHGROUP	BU HALEEBA CONTRACTING	TRINITY ENGINEERING SERVICES LLC

CONTRACT:	SUBMITTAL REF:
EMIRATES STAFF HOUSING AT AL MAJAN	TES/PR/1289/MEP/PL- 02, R-0.
	DATE: 22/11/2009

SUBMITTAL FOR APPROVAL OF SHOP DRAWINGS / METHOD OF STATEMENT / PROPOSAL

Description	TECHNICAL DETAILS OF PU FOAM FOR SEALING OF OPENINGS / PENETRATIONS FOR MEP SERVICES IN NON-FIRE RATED WALLS	Arch. [ ] Sty. [ ] **Elec.** [√] **Mech.** [√] Plum. [√]	
Issued by	Trinity Engineering Services L.L.C.	Location: ALL BLOCKS	Level : ALL FLOORS

LIST OF ATTACHMENTS TO THIS FORM

N.	Drg / Doc No.	Rev.	Description	Copies	Engineer's Action
1	TES/PR/1289/MEP/PL-02	0	TECHNICAL DETAILS OF PU FOAM FOR SEALING OF OPENINGS / PENETRATIONS FOR MEP SERVICES IN NON FIRE RATED WALLS	01	
			(Sample attached) H.Chauhan H Chauhan.		

FOR THE ENGINEER

Approved (A)	Approved with Comments (A.W.C)	Additional Information Required (A.I.R)	Rejected (R)

Comments :

① Proposed 'WURTH- Germany Make' 'Fire rated foam to BS 476 Part 20' approved.
openings/penetrations. ② As recommended by manufacturer maximum annular space between service & sleeve, to be not increased.
③ Proposed product should not emit toxic/harmful fumes during fire.
④ Excessive application & spillage of foam to be avoided while sealing onsite.
⑤ Offer Mockup inspection for various applications/services.
⑥ Contractor to ensure proposed product is compatible with adjacent finishes/services.

Gupta
23/11/09

SIGNATURE & DATE OF THE MAIN CONTRACTOR (BHC)		SIGNATURE & DATE OF RECEIPT BY THE ENGINEER	RECEIVED 25 NOV 2009 BY:
SIGNATURE & DATE OF SUB-CONTRACTOR (TES)	H.Chauhan 23/11/09 H Chauhan	SIGNATURE & DATE OF RECEIPT BY CONTRACTOR	
SIGNATURE & DATE OF DECISION BY THE ENGINEER (AG)	25/11/09		

Corrections or comments made relative to submittals during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for confirming and coordinating all quantities and dimensions, selecting fabricating process and techniques of construction, coordinating his work with that of other trades and performing his work in safe and satisfactory manner.

cc: AJM

EMIRATES STAFF HOUSING RECEIVED 08 DEC 09

RECEIVED

M/s Kharthees

AECOM

MEFO283 Material and Equipment Submittal Transmittal

Project	Proposed OSC-MJB Warehouse at JAFZA, Dubai		
Contractor	M/s. System Construct L.L.C	Submittal No.	SYS/6022/C-62
Date	02/03/10	Revision	2

Material description

Polyurethane Spray Foam B 1 (120 Min) fire rated with Sample & data sheet

Location / Use	Manufacturer / Supplier	
A/s Pear Drawings	Supplier	WURTH
	Manufacturer	Vereinigte Arabische Emirate

Material submitted is in accordance with the approved manufacturer outlined in the specifications, and in accordance with the contract drawings.

Contractor

Name	ANUP KR. SINGH	Signature	Anup Kr Sing	Date	02/03/2010

Sub-Contractor

Name		Signature		Date	02/03/10

Received by AECOM

Name		Signature		Date	

AECOM review comments

Proposed WURTH FIRE RESISTANT FOAM TO B1- DIN4102 is Acceptable. * Proposed Product shoud not emit toxic gases during fire. * contractor to follow manufacturer recommendation during application

Approval Status

- ☐ Status 'A' - Approved
- ☑ Status 'B' - Approved with comments / Approved as noted
- ☐ Status 'C' - Not approved - Resubmit / Revise and resubmit
- ☐ Status 'D' - Rejected

Other *(please specify)*

Review completed by < select... >

Name	BHARATH NAYAK		
Signature	Bharath	Date	03/03/2010

3/3/10

Receiving Stamp

RECEIVED 02 MAR 2010 Aecom Middle East Limited

AECOM Middle East Limited
02 MAR 2010
Time: 08:54 AM
INC. NO.

NAME	ACT	INF	RMNS
NK			
BA	/	/	
ZF	/		

JOB NO. 91029408
ATTACH

Received back by Contractor

Name		Signature		Date	

AMBB premier travel inn ARCHGROUP

MATERIAL SUBMITTAL

Planned Submission Date :	Actual submission Date : 16.08.2007
PROJECT TITLE :	**J313, PROPOSED G+5, 308 ROOMS PTI HOTEL AT DIP, DUBAI**
ENGINEER : **Archgroup Consultants**	EMPLOYER :**Premier Travel Inn Gulf Hotels LLC**
Material Submittal Ref. No: CM-52	Rev: - 0
Previous Submittal Ref. No: -	Dated :
Originator : Tanweer	Sign of Originator: App.Req.Before :

We are submitting herewith under separate cover the material listed below:

Specification reference:	T/27 Item-3	Specified Material	Fire Foam
Drawing reference:			
Location/Use	For filling MEP sleeves & openings in walls	Proposed Material	Fire Classified Foam- 1K Assembly Foam
Attachments:	Technical Data Sheet		

	Specified Material	Proposed Material	Reason for proposing alternative material
Manufacturer/Supplier	Hilti	Wurth	Hilti does not Produce
Make/Model	Fire Foam	1K Assembly Foam	
Size / Capacity	As per drawings	As per drawings	

MAIN CONTRACTOR **AMB BUILDING**	Project Manager : **Tulsi Vachhani** Sign:

FOR THE ENGINEER

A	Approved	B	Approved As noted	C	Additional Information Required, Resubmit	D	Rejected

- Provide sample at GF location for approval
- Only for filling the gap. / - To be applied as per manufacturer
- Sealant to be applied on exposed surface

SIGNATURE AND DATE OF DECISION BY THE ENGINEER'S REPRESENTATIVE.

SIGNATURE AND DATE OF RECEIPT BY CONTRACTOR'S REPRESENTATIVE.

Corrections or comments made relative to submittals during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The contractor is responsible for confirming and coordinating all quantities and dimensions, selecting fabricating process and techniques of construction, coordinating his work with that of other trades and performing his work in safe and satisfactory manner.

RECEIVED 16 AUG 2007

RECEIVED 16 AUG 2007

SK engineering & construction

RUWAIS HOUSING COMPLEX EXPANSION PHASE - III
CONSTRUCTION OF MARRIED FLATS – PACKAGE 12

ADNOC

PROJECT NO.6042
AGREEMENT NO.116042C1

MATERIAL APPROVAL REQUEST (MAR)

Serial No.	Rev. No.	Date	S/C Ref.
C 0 2 4 9	0 0	25/09/2013	

☐ Document Class | ☑ First Submission | ☐ Second Submission | ☐ Further Submission

Material Description : Fire Stop (Fire Rated Foam -B1, PU Foam – B2 and PU Foam – B3)

Trade Name	Manufacturer	Supplier :	ADNOC Reg. No.
Fire Rated Foam – B1 PU Foam - B2 PU Foam – B3	Wurth Gulf L.L.C. Box17036, Dubai, UAE Tel: 00971 4 883 4229 Fax: 00971 4 883 4303	Lakshmi Metal Tech. P.O. Box. 119867 Tel. 04 338 6271 Fax. 04 338 6272 Dubai, UAE	

Specification requirement detail	07840 – Fire Stopping	Discipline: CIVIL
Location / Area of use	All Wooden Doors (Between masonry, Sub-frame and wooden doors)	
Technical details	Please refer to the technical data.	

Attachments:

1	Specification comparison Sheet	Yes	☑	NA	☐	4 Other supporting documents (list) :
2	Sample & Sketches	Yes	☑	NA	☐	1. Pre-qualification document DTF-0288 approved by COMPANY on 19th February 2012.
3	Brochure	Yes	☐	NA	☑	

SK E&C PROJECT SITE OFFICE RECEIVED 09 OCT 2013 TIME: BY:

NA :- Not applicable

Notes/Comments:-

For CONTRACTOR

Name : Won Ik Lee
Project Manager

Signature:

SK E&C Project Management ADNOC P.N. 2042 SK ENGINEERING & CONSTRUCTION CO. LTD

Date: 25th September 2013

For ADNOC

☐ Accepted ☑ Accepted subject to ☐ Incorporate comments, resubmit before proceeding ☐ Not accepted

Comments:

- **B 1 is accepted only to be used on all type of fire rated doors.**
- **B 2 and B 3 is accepted for non-fire rated doors only.**

Attn: Mr. Leo (Wurth

09 OCT 2013

Name : Saleh Mohamed Al Jafri
Project Manager

Signature:

Date:

ATKINS

WS Atkins & Partners Overseas
PO Box 20016
Al Ain
United Arab Emirates

Telephone +971 3 7037200
Fax +971 3 7518445

atkins.alain@atkinsglobal.com
www.atkins-me.com
www.atkinsglobal.com

دبليو إس أتكنز وشركاؤه لما وراء البحار
ص.ب ٢٠٠١٦
العين
الإمارات العربية المتحدة

تليفون ٠٠٩٧١ ٣ ٧٠٣٧٢٠٠
تلكس ٤٤٨٤٥ ٣ ٩٧١+

Ref : 5108510/671/MS/AA/R8-852
Date : Tuesday, 26/11/2013

M/s. NAEL & BIN HARMALHYDROEXPORT Est.
P.O. Box: 19692
Al Ain
United Arab Emirates

FAO: Eng. George Ilango, Sr. Project Manager

Dear Sir,

Project: Construction of Infrastructure at Nelma 200 Phase II Residential Complex in Al Ain

Subject: Approval of Material Submittal–Fire Resistant Foam Spray Inside Secondary Substations- Electrical Works

Reference to your Material Submittal record no.0549/NBHH/NRC-2/MAT/WSA/GDI/13/HC, dated: 01/10/2013, please kindly be advised that Al Ain Distribution Company (AADC) has approved the associated Material Submittal IR No. MAT-ELE-27_Rev 0,for the Fire Resistant Foam Spray inside the Secondary Substation for Electrical Works, as per the attached AADC Material Submittal Form.

This is for your information and necessary action.

Yours faithfully,
For and behalf of WS Atkins & Partners Overseas

Michael Samaka
Project Manager

Encl: As above

NELMA PHASE 2		
DISTRIBUTION	INFO	ACT
MD		
OM		
CM		
SPM		
Ali Envicon	✓	✓
Noushad	✓	
Alam	✓	
File Ref		

27/11/13

(2)

Musanada ATKINS

Material Submittal Form

Record Reference: 0549/NBHH/N2C2/MAT/WSA/GDI/13/HC	Date:01/10/2013
Project Details:	Musanada Project Number: PDI/CA/BPS/AC/RS46/P109-62/30/13/6
Project Name: Construction Completion and Maintenance of Infrastructure Works for Nelma Residential Complex –Phase -2	
Client: Musanada	Engineer: WS Atkins & Partners
Contractor: Nael & Bin Harmal Hydroexport	
IR No: MAT-ELE-27	Rev No : 0

Discipline: ☐ Civil ☐ Architecture ☐ Mechanical ☒ Electrical ☐ Others

Material Detail	
Item Description	FIRE RESISTANT FOAM SPRAY
Spec. Ref.	ADWEA/ADDC/AADC STANDARD : S-AAA-FIF - (REV.0-2011)
BOQ. Ref.	PAGE:24, BILL NO.9 CLAUSE: 9/1.12
Drwg. Ref.	NOT VAILABLE
Material Specified	FIRE RESISTANT FOAM SPRAY (INSIDE SUBSTATIONS)
Material Proposed	PREVENT FLAME PROPAGATION INSIDE S/S
Manufacturer / Local Supplier	MANFACTURER: WURTH GROUP -GERMANY SUPPLIER: WÜRTH GULF FZE, JABEL ALI-DUBAI - UAE
Reason for Alternative	N/A
Remarks	FOR ELECTRICAL WORKS.

List of Enclosure

- ☒ Vendor's Technical Literature
- ☒ Compliance Statement.
- ☐ Sustainability Compliance.
- ☒ Previous Test Results.
- ☒ Copy of the Related Specs.
- ☒ Samples with Sample Tag.
- ☒ List of Previous Projects Done.
- ☒ Others

RECEIVED
ATKINS
08 OCT 2013
Construction of Infrastructure at Nelma 200 Phase II Residential Complex in Al Ain
Job No: 516555/0

We certify that the material submitted herewith has been reviewed in details and in accordance with the Contract Drawing and Specifications except as otherwise stated here above.

Contractor Signature:

Discipline Engineer:	QA/ QC	HSE	MEP	Construction Manager:
Received By:			Date: 08/10/2013	

The Engineer:
☒ A- Approved ☐ B- Approved with Comment ☐ C- Revise and Resubmit ☐ D- Rejected
☐ E- Approved with Comment/Resubmit

Comments: Approved.

Reviewed By & Signature: (The Engineer)	Approved By & Signature: (The Engineer)
26/11/13	Michael Semaan 26/11/13
Received By (The Contractor)	Date

Note: Engineer's approval is for conformance with information given and design concept expressed in Contract Documents. Approval does not authorize changes in Contract Documents. Engineer's approval does not relieve the Contractor from his contractual obligation to ensure conformance to the Contract Documents/Specifications. Any deviations, to the Specifications/Contract Documents found subsequent to Engineer's approval, to be corrected by the Employer/Engineer at no extra Cost/Time

Distribution:
☐ Musanada ☐ Engineer ☐ Contractor

Material Compliance Statement

Attachment to Material Submittal Form

Record Reference: 0041 /NBHH/NRC-2/MAT/WSA/GDI/13/HC	Date:01/10/2013
Material Submittal Ref: MAT-E-27	

Discipline: ☐ Civil ☐ Architecture ☐ Mechanical ☒ Electrical ☐ Others

Sl No.	Description	Specified	Proposed	Remarks
1	Supplier			
	a.	N/S	WÜRTH GULF-PZE, JABEL ALI-DUBAI -UAE	
	b.			
2	Source of Supply	WÜRTH GROUP -GERMANY	WÜRTH GROUP -GERMANY	
	a.			
	b.			
3	Area of Use			
	a.	SUBSTATIONS	FIRE RESISTANT FOAM SPRAY	
	b.			
4	Properties			
	a.	ATTACHED DOCUMENTS	ATTACHED DOCUMENTS	COMPLY

Note: The Contractor is to attach copy of the relevant related specification endorsed, signed and stamped to confirm compliance.

Contractor's Statement: We certify that the information submitted herewith has been reviewed in details and in compliance with the contract drawings and specifications except as otherwise stated here above.

Contractor Authorized Signature and Stamp:

Received By | Date

MATERIAL SUBMITTAL FORM

Asset Management Directorate

Power Planning and Development Department

Power Network Performance Section

Project Name:	INFRASTRUCTURE WORKS FOR NEIMA RESIDENTIAL COMPLEX (N200), NEIMA AREA PHASE(2)- AL AIN, UAE	Material Description :	FIRE RESISTANT FOAM SPRAY (INSIDE SUBSTATIONS)
Contract No. :	PD/CA/BPS/AG/R646/P109-52730/13/S	Quantity of Material :	AS PER ATTACHED BOQ
Contractor :	NAEL AND BIN HARMEL HYDROEXPORT EST.	Manufacturer /Supplier Name :	MANFACTURER: WURTH GROUP - GERMANY SUPPLIER: WÜRTH GULF-FZE,JABEL ALI DUBAI-UAE
		Place of Origin :	GERMANY
Consultant :	WS ATKINS & PARTNERS OVERSEAS	Model / Type :	AS PER ATTACHED DOCUMENTS
Supply Arrangement Request No. :	13-06-223	Concerned contact person Information in UAE:	E-Mails: hossam.alotribi@atkinsglobal.com ela3emk@gmail.com
Project Start Date:	10/3/2013		Eng.Ali: +971 56 695 7088
Project Finish Date:	10/3/2015		Eng. Hossam +971 50 4160034

Attachments (shall be in a Folder spilted with separators) :

A	Copy of Approved Supply Arrangement Request DIVIDER NO (1)	Yes. ☑	No. ☐	POWER SUPPLY ARRANGEMENT NO. 13-06-223
B	ADEWA Technical Data Sheet (DTS) Compliance with Consultant Remarks and Stamps DIVIDER NO (2)	Yes. ☑	No. ☐	
C	Copy of Contract Drawing/Sketch DIVIDER NO (3)	Yes. ☐	No. ☑	
D	Copy of AADC Approved Single Line Diagram for the Project DIVIDER NO (4)	Yes. ☑	No. ☐	
E	Catalogue / Brochure (Original < 3 copies) Drawings DIVIDER NO (5)	Yes. ☑	No. ☐	
F	Manufacturer Quality Certificate (ISO or Other) DIVIDER NO (6)	Yes. ☑	No. ☐	
G	Copy of Certificates (Type test, Non-Toxicity or Other) DIVIDER NO (7)	Yes. ☑	No. ☐	
H	Copy of Previous Approvals DIVIDER NO (8)	Yes. ☑	No. ☐	
I	FAT to be witnessed by AADC Engineers, cost shall be bourne by Contractor	Yes. ☐	No. ☑	
J	FAT Protocols and Procedures DIVIDER NO (9)	Yes. ☐	No. ☑	
K	Any Deviation from the Project's Specification (If yes, please give Justifications on a separate sheet)	Yes. ☐	No. ☑	
L	Other Enclosure (if any) ATTACHED DOCUMENTS FROM DIVIDER (10 TO 18)	Yes. ☑	No. ☐	

9/11/13

Consultant's Stamp, Signature & Date

Contractor's Stamp, Signature & Date

For Use of AADC :

Status : ☑ Approved ☐ Approved with Comments ☐ Not Approved

Comments :

Your material submital for the fire resistant foam Spray (inside substations mentioned project is approved as per receive specimen.

	Engineer	Head of Section	Department Manager
Signature & Date	17/11/2013		

AADC Stamp

Note :

This above Comments and/or approvals do not relieve the Contractor from his obligation under the Contract to ensure compliance with any specification deviations found subsequent to approval shall be corrected by the CONTRACTOR to the satisfaction of AADC

DHABI CONTRACTING

DHABI CONTRACTING LLC

RUWAIS HOUSING COMPLEX EXPANSION- PHASE IV, CONSTRUCTION OF VILLAS -PACKAGE 3
PROJECT No. 7010
AGREEMENT No. 147010C11

ADNOC

MATERIAL APPROVAL REQUEST (MAR)

Serial No. C 0 3 4 5 | Rev. No. 0 1 | Date 2 1 / 0 3 / 2 0 1 7 | S/C Ref.

Material Description : **Wooden Doors (Fire Rated & Non Fire Rated)**

Trade Name	Manufacturer	Supplier	ADNOC Reg. No.
Wooden Doors	**M\s Mondo Creation** **M\s Firestop**	**M\s Mondo Creation**	

Specification requirement detail	**Volume 4- DIVISION 8 Section 08200 Wooden Doors**	Discipline: **Architecture**
Location / Area of use	**All Wooden Doors for Villas**	
Technical detail	**As Attached**	

Attachments:

1 **Specification comparison Sheet** ☑ Yes ☐ NA
2 **Samples** ☑ Yes ☐ NA
3 **Original Brochure** ☐ Yes ☑ NA
4 **Other supporting documents (list)**

NA :- Not applicable

Notes/Comments:-

For CONTR. ☐ Accepted ☐ Accepted subject to ☐ Incorporate comments, resubmit before proceeding ☐ Not accepted

Comments:

Name : Ahmed Mansour
Projects Director

Date: 21.03.2017

Signature:

SITE MANAGEMENT S-186 Dhabi Contracting L.L.C

For ADNOC ☐ Accepted ☐ Accepted subject to ☐ Incorporate comments, resubmit before proceeding ☐ Not accepted

Comments:

⇨ **Refer to comments on the attached sheet.**

Dhabi Contracting LLC, Abu Dhabi
S-186, ADNOC Project
02 APR 2017
RECEIVED

Name: MR. Ahmed M. Salem Al Mansoori

Date: 01 APR 2017

Signature:

RUWAIS HOUSING COMPLEX EXPANSION – PHASE IV
CONSTRUCTION OF VILLAS – PACKAGE-3
PROJECT NO.7010 – AGREEMENT NO.147010C11
COMMENTS ON MAR

MAR No.	C-0345	Rev. No.	01	Date Received	21-03-2017	Approval Category	B & C
Description	WOODEN DOORS (FIRE RATED & NON FIRE RATED)						

1. The proposed materials as per the attached technical data sheets are:
   - Solid Mahogany Wood
     - African Mahogany wood is accepted as per revision 00.
   - Mahogany Wood Veneer
     - African Mahogany veneer is accepted as per revision 00.
   - Tubular core
     - Sauerland Spanplatte is accepted as per revision 00.
   - MDF
     - Arreis is accepted.
   - Fire Rating System 60 & 120 min
     - The proposed fire rated IDEAL system by M/s Firestop is accepted as per revision 00.
   - Paint
     - Not accepted.
     - The propose materials are not applicable for external doors as per the attached technical data. Refer to COMPANY comments in MAR C208. The technical data sheets are different than the previous approved one in MAR C084. Clarify!
   - Gasket
     - Reddiplex is accepted subject to complying with fire rated system.
     - Contractor's change in previous proposed material shall be highlighted in the comparison sheet for proper review.
   - Adhesive
     - Proposed materials are accepted.
     - Fevicol SWR, Bulbond PVA and Fevicol Veneer glue.
   - 20 mm thick float clear glass
     - Accepted as per previous approval for windows. Attach copy of previous approval of window glass for reference.
   - WURTH Silicon Acetate
     - Accepted as per previous approval in MAR C208.
   - WURTH PU Foam (Purlogic east foam & Fire Stop Foam FZ Plus)
     - Accepted
   - Sliding Door Rails
     - Is excluding form this submittal.
   - Fire Seal.
     - This is a new proposed material, shall be highlighted for proper review.
     - Rigid box Seal (Pyro Plex) is applicable for 90-minute maximum. Accepted subject to propose material for 120 min.
2. The proposed samples are accepted, Color and finishing shall be matching with mock up villa

For Company

Eng. Ahmed M. Salem Al Mansoori	Project Manager		
Name	Designation	Signature	Date

- WURTH PU Foam (Purlogic east foam & Fire Stop Foam FZ Plus)
  - Accepted
- Sliding Door Rails
  - Not accepted
  - Technical data sheet, original catalog and country of origin must be attached
  - This item shall be submitted via the ironmongery specialist

4. The proposed samples are not accepted, not matching in finishing with mockup villa or the previous approved materials.
5. Attach the fire test report by M/s Firestop for the proposed fire rated doors 60 & 120 min

For Company

Eng. Ahmed M. Salem Al Mansoori	Project Manager		
Name	Designation	Signature	Date

MATERIAL APPROVAL REQUEST

NAKHEEL Arif&Bintoak GlobalTech TROJAN

CONTRACT NO. 1563	MAR NO. MTS-MEP-PL-017
CONTRACT TITLE : RESIDENTIAL DEVELOPMENT AT NADD AL SHIBA THIRD – PLOT NO-6164743, DUBAI / PACKAGE-1 / AREA-1	REVISION NO.: 1
OWNER / CLIENT: NAKHEEL PJSC	REVISION DATE: 24-May-16
CONSULTANT : Arif & Bintoak Cons. Arch & Eng.	TITLE: Material Submittal for Joint Foam Fire Resistant Plus of M/S Wurth Gulf FZE
CONTRACTOR : TROJAN General Contracting L.L.C. Dubai branch L.L.C.	DISCIPLINE: Plumbing
PRODUCT NAME Material Submittal for Joint Foam Fire Resis	SAMPLE PROVIDED NO
MANUFACTURER M/S Wurth Gulf FZE	SUPPLIER: M/S Wurth Gulf FZE
TO: Arif & Bintoak Consulting Architects & Engineers	FROM : Royal Advance Electromechanical

TROJAN GEN. CONT. L.L.C. Project No. : TG-2024 NAD AL SHEBA 489 VILLAS

Arif & Bintoak 25 MAY 2016 RECEIVED PRO.No. 1563/1

ADVANCE ELECTRO MECHANICAL WORKS Residential Development Al Nad Al Shiba Third Construction Of 489 Villas & Associated Infrastructure Works - Package 1 5:00pm 26 MAY 2016 RECEIVED Received By:

CONTRACTOR'S REVIEW:
Contractor has reviewed this submittal prior to submission to the Engineer.

FOR Trojan General Contracting
Engr. Syed Mohd. Towfeek Date: 24-May-16

DESCRIPTION:
Material Submittal for Joint Foam Fire Resistant Plus of M/S Wurth Gulf FZE
Attachments: Material Submittal (3HC+1S)
Area Usage: Fire Protection used to seal openings and joints

ARIF & BINTOAK
Project No.: 1563/1

ARIF & BINTOAK CONSULTANT'S COMMENTS :

No objection subject to
1- Fully Compliance with Contract document and all local Authorities Regulations & Specifications.

Distribution	Copy	Action
P.M./R.E.		
A.R.E.		
Architect		
Elect. Eng.		
Mech. Eng.		
C.S.		

GLOBAL TECH. CONSULTANT'S COMMENTS :

RECEIVED 26 MAY 2016 Rec'd By 3:00

Arif & Bintoak 1563/1 APPROVED WITH COMMENTS Date: 25/5/16.

Infra. Eng.		
Road Eng.		
Irrigation Eng.		
Safety Officer		
Head Office		

SUBMITTAL STATUS

APPROVED NO COMMENTS	☐	FOR RECORD ONLY	☐
APPROVED AS NOTED	☑	EMPLOYER APPROVAL REQUIRED	☐
NOT APPROVED - RESUBMIT	☐		

LEAD SECTOR CONSULTANT'S SIGNATURE

For and on behalf of
Arif & Bintoak

Date : 26 MAY 2016

MATERIAL APPROVAL REQUEST

CONTRACT NO.	1563
CONTRACT TITLE :	RESIDENTIAL DEVELOPMENT AT NADD AL SHIBA THIRD – PLOT NO-6164743, DUBAI / PACKAGE-1 / AREA-1
OWNER / CLIENT:	NAKHEEL PJSC
CONSULTANT :	Arif & Bintoak Cons. Arch & Eng.
CONTRACTOR :	TROJAN General Contracting L.L.C. Dubai branch L.L.C.

MAR NO.	MTS-MEP-PL-017
REVISION NO.:	1
REVISION DATE:	24-May-16
TITLE:	Material Submittal for Joint Foam Fire Resistant Plus of M/S Wurth Gulf FZE
DISCIPLINE:	Plumbing

Arif & Bintoak 25 MAY 2016 RECEIVED PRO No. 1563/1

PRODUCT NAME	Material Submittal for Joint Foam Fire Resis
MANUFACTURER	M/S Wurth Gulf FZE
SAMPLE PROVIDED	NO
SUPPLIER: M/S Wurth Gulf FZE	

TO: Arif & Bintoak Consulting Architects & Engineers

FROM : Royal Advance Electromechanical

CONTRACTOR'S REVIEW:

Contractor has reviewed this submittal prior to submission to the Engineer.

for

FOR Trojan General Contracting
Engr. Syed Mohd. Towfeek Date: 24-May-16

DESCRIPTION:

Material Submittal for Joint Foam Fire Resistant Plus of M/S Wurth Gulf FZE

Attachments: Material Submittal (3HC+1S)

Area Usage: Fire Protection used to seal openings and joints

ARIF & BINTOAK
Project No.: 1563/1

ARIF & BINTOAK CONSULTANT'S COMMENTS :

No objection subject to
1- Fully Compliance with Contract document and all local Authorities Regulations & Requirement

Distribution	Copy	Action
P.M./R.E.		
A.R.E.		
Architect		
Elect. Eng.		
Mech. Eng.		
Q.S.		
Infra. Eng.		
Road Eng.		
Irrigation Eng.		
Safety Officer		
Head Office		

GLOBAL TECH. CONSULTANT'S COMMENTS :

RECEIVED
2 6 MAY 2016
Rec'd By .....

Arif & Bintoak 1563/1 APPROVED WITH COMMENTS 25/5/16. Date:.....

SUBMITTAL STATUS

APPROVED NO COMMENTS	☐	FOR RECORD ONLY	☐
APPROVED AS NOTED	☑	EMPLOYER APPROVAL REQUIRED	☐
NOT APPROVED - RESUBMIT	☐		

LEAD SECTOR CONSULTANT'S SIGNATURE

For and on behalf of
Arif & Bintoak

Date : 26 MAY 2016

ECC | McLAREN | DUBAI WORLD TRADE CENTRE | PARSONS

PN1601-Multi Storey Car Park Project (DWTC) G+5+R

MATERIAL SUBMITTAL

FROM: ECCM (JV)	FROM: PARSONS

Subject:	JOINT FOAM	Project ID J355/M1431	Reference Number		Rev.
			Our Ref:	J355/M1431-PAR-ECCM-MSM-032	01
Enclosure: ☒ Physical Sample ☒ Technical Data ☐ EHS Checklist			Client Ref:		

Discipline:
☐ Architectural ☐ Structural ■ M.E.P. ☐ Interiors ☐ External works ☐ Other *(specify :)*.....

DESCRIPTION	MANUFACTURER	SUPPLIER	STATUS
JOINT FOAM (FIRE-RESISTANT PLUS)	WURTH DUBAI -SLOVENIA	WURTH DUBAI -UAE	A

Note:

Status Code:

A - Approved. *(Work may proceed)*
B - Approved with Comments. *(Work may proceed subject to incorporation of comments indicated)*
C - Revise and resubmit. *(Work may not proceed)*

Date returned by Consultant (PAR): 20 AUG 2017

ECCM (JV) DOCUMENT CONTROL

This section to be completed by Consultant:

Comments:
MIR be submitted upon material delivery with manufacturer quality check certificate etc
Application to manufacturer recommendation 20/8/17

Consultant's Received Date Stamp: RECEIVED 20 AUG 2017 10:15 PARSONS

20 AUG 2017

Name:	Designation:	Signature	Company Stamp & Date

On behalf of ECCM (JV):

QA/QC		Design/MEP		Commercial		Site Team	
Name: Wesley Gravett		Designation: Sr. Project Manager		Signature:		Date	

Below information is for McLaren/Subcontractor Use Only

Originator	COMMODORE CONTRACTING MEP		ECCM (JV) Received Date Stamp	ECCM (JV) Distribution		
Name:	Eng. Rslan Samaan			Client		Others:
Designation	Private Project Director			Consultant		
Date:	16/08/2017	Signature		Originator		

Corrections or comments made receive to submittals during this review do not relieve the contractor from compliance with the requirements of the contract documents

شركة العين للتوزيع
Al Ain Distribution Company

MATERIAL SUBMITTAL FORM

Asset Management Directorate
Power Planning and Development Department
Power Network Performance Section

Project Name:	Al Shwaib Residential Complex 186 Villas-Al Ain	Material Description :	Fire Resistance Foam -B1 & PU Foam B-3
Contract No. :		Quantity of Material :	Lot
Contractor :	Main Contractor: M/s. Nael General Contracting Sub Contractor: Nael Energy & General Ent Est.	Manufacturer Name:	Adolf Wurth GmbH & Co.KG., Germany
		Supplier Name :	Wurth Gulf LLC. Dubai, UAE
		Place of Origin :	
Consultant :	M/s. Tebodin Middle East.	Model / Type :	Joint Foam Fire Resistant-B1- 750ML & 1K Assembly Foam B3-750ML
Supply Arrangement Request No. :	14-12-253 Rev.1 dated 24.12.2014 & 15-08-269 Rev.1 dated 18.10.2015	Concernd contact person information in UAE:	E-mail Address: v.kumar@nael.ae
Project Start Date:	15.06.2014		Tel: 052-9818628
Project Finish Date:	29.01.2017		Fax: 03-7630401, 03-7853664

Attachments (shall be in a Folder splited with separators) :

A	Copy of Approved Supply Arrangement Request	Yes. ☑	No. ☐	Consultant's Stamp, Signature & Date
B	ADEWA Technical Data Sheet (DTS) Compliance with Consultant Remarks and Stamps	Yes. ☑	No. ☐	
C	Copy of Contract Drawing/Sketch	Yes. ☐	No. ☑	
D	Copy of AADC Approved Single Line Diagram for the Project	Yes. ☑	No. ☐	
E	Catalogue / Brochure (Original + 3 copies) Drawings	Yes. ☑	No. ☐	
F	Manufacturer Quality Certificate (ISO or Other)	Yes. ☑	No. ☐	
G	Copy of Certificates (Type test, Non-Toxicity or Other)	Yes. ☑	No. ☐	Contractor's Stamp, Signature & Date
H	Copy of Previous Approvals	Yes. ☑	No. ☐	
I	FAT to be witnessed by AADC Engineers, cost shall be bourne by Contractor	Yes. ☐	No ☑	
J	FAT Protocols and Procedures	Yes. ☐	No. ☑	
K	Any Deviation from the Project's Specification (If yes, please give Justifications on a separate sheet)	Yes. ☐	No. ☑	
L	Other Enclosure (if any)	Yes. ☑	No. ☐	

For Use of AADC :

Status : ☑ Approved ☐ Approved with Comments ☐ Not Approved

Comments :

Your material submittal for the fire Resistance Spray Inside Substations is Approved as per received Specimen.

	Engineer	Head of Section	Department Manager
Signatures & Date	Mobashar 22/12/2016	22/12	26/12/16

AADC Stamp

Note:-
The above Comments and/or approvals do not relieve the Contractor from his obligation under the Contract to ensure conformance to the specification. Any specification deviations found subsequent to approval shall be corrected by the CONTRACTOR to the satisfaction of AADC Engineer.

ECC | McLAREN | DUBAI WORLD TRADE CENTRE | PARSONS

PN1601-Multi Storey Car Park Project (DWTC) G+5+R

MATERIAL SUBMITTAL

FROM: ECCM (JV)	FROM: PARSONS

Subject:	JOINT FOAM	Project ID J355/M1431	Reference Number		Rev.
			Our Ref:	J355/M1431-PAR-ECCM-MSM-032	01
Enclosure: ☒ Physical Sample ☒ Technical Data ☐ EHS Checklist			Client Ref:		

Discipline:
☐ Architectural ☐ Structural ■ M.E.P. ☐ Interiors ☐ External works ☐ Other *(specify :)*.....

DESCRIPTION	MANUFACTURER	SUPPLIER	STATUS
JOINT FOAM (FIRE-RESISTANT PLUS)	WURTH DUBAI -SLOVENIA	WURTH DUBAI -UAE	A

Note:

Status Code:

A - Approved. *(Work may proceed)*
B - Approved with Comments. *(Work may proceed subject to incorporation of comments indicated)*
C - Revise and resubmit. *(Work may not proceed)*

Date returned by Consultant (PAR): 20 AUG 2017

ECCM (JV) DOCUMENT CONTROL

This section to be completed by Consultant:

Comments:
MIR be submitted upon material delivery with manufacturer quality check certificate etc
Application to manufacturer recommendation 20/8/17

Consultant's Received Date Stamp: RECEIVED 20 AUG 2017 10:15 PARSONS

20 AUG 2017

Name:	Designation:	Signature	Company Stamp & Date

On behalf of ECCM (JV):

QA/QC		Design/MEP		Commercial		Site Team	
Name: Wesley Gravett		Designation: Sr. Project Manager		Signature:		Date	

Below information is for McLaren/Subcontractor Use Only

Originator	COMMODORE CONTRACTING MEP		ECCM (JV) Received Date Stamp	ECCM (JV) Distribution		
Name:	Eng. Rslan Samaan			Client		Others:
Designation	Private Project Director			Consultant		
Date:	16/08/2017	Signature		Originator		

Corrections or comments made receive to submittals during this review do not relieve the contractor from compliance with the requirements of the contract documents

APPROVAL REQUEST

M/s. Eng. M. Al Shaikh Mubarak **Architectural & Eng. Consultants** **P. O. Box 4307, Dubai – U. A. E.**	*Date* : 15.07.2018 *Submittal Ref. No.* : MEP-M 20237

RECEIVED
15 JUL 2018
BY:

Project	:	(B+G+5 STOREY) RESIDENTIAL DEVELOPMENT
Client	:	M/s AL GHURAIR PROPERTIES L.L.C.
Main Contractor	:	M/s AL SAYEGH CONTRACTING L.L.C.

Approval for	:	[x] Material	[ ] Shop Drawing	[ ] Sub-contractor
Activity	:	[ ] Architectural	[ ] Structural	[ ] MEP

We kindly request you to approve / comment the following for the above mentioned project :

Item	Description	BOQ Ref.	Specified	Proposed
1	FIRE RATED FOAMS & SEALANTS	B2/15/16-4		WURTH

Submission : [ ] First [ ] Second [ ] Third [ ] Fourth

Attachments : TECHNICAL DATA & COMPANY PROFILE

Contractor Submitted By : ADEL KAMAL

AL SAYEGH CONTRACTING L.L.C. Dubai - U. A. E.

Signature & Stamp :

DECISION BY CONSULTANT

Approved		Returned for Correction / Re-submission	
Approved With Comments	✓	Rejected	

Consultant's Comments :

① Approval is subjected to compliance with Project Specs and Authority Regulations. ② Any discussion with Authority regarding the m/t is contractor's responsibility. ③ Approval is Consultant doesn't relieve Contractor from Contractual Obligations ④ Final approval is subjected to Architect's approval.

Consultant	:	Client / Employer	:
Decision By	:	Decision By	:
Signature & Stamp	:	Signature & Stamp	:
Date	:	Date	:

ENG. MOHD AL SHAIKH MUBARAK
Architectural & Engineering Consultants
P.O Box: 4307, DUBAI - U.A.E.

THE ROYAL ATLANTIS RESORT AND RESIDENCES

SUBMITTAL & REVIEW FORM

TRA/SBJ/DEC/15768

SSANGYONG-BESIX Joint Venture

SUBMISSION OF DOCUMENTS, DRAWINGS, SAMPLES, ETC.

Date 15-May-18

Submitted For *	Code
APPROVAL	1
YOUR INFORMATION	2
ACTION **	
APPROVED	A
APPROVED AS NOTED	B ✓
REVISE & RESUBMIT	C
REJECTED	D

RE: THE ROYAL ATLANTIS RESORT & RESIDENCES-MAIN CONTRACT

Contract No.: CN0063

DEC Dynamic Engineering Consultants

WE ARE SENDING HEREWITH / UNDER SEPARATE COVER, THE DRAWINGS/ DOCUMENTS / SAMPLES LISTED BELOW. (DELETE AS NECESSARY)

Item	DRWS., SPEC. OR BOQ. REF.	REV	DESCRIPTION	TYPE	CODE Submittal	CODE Action
1	TRA-FMT-MAR-GN-GEN-00006	00	Package M4: Material Submittal for Foam Spray Sealant in MEP Penetrations on Non Fire Rated Walls	MAR	1	B

dec DYNAMIC ENGINEERING CONSULTANTS THE ROYAL ATLANTIS PROJECT PALM JUMEIRAH

17 MAY 2018

RECEIVED

SSANGYONG Engineering & Contracting Co. Ltd. BESIX
SSANGYONG E & C CO. LTD. (DUBAI BRANCH)
- BELHASA SIX CONSTRUCT L.L.C.
JOINT VENTURE
Temp. Address : P.O.Box 13055, Dubai, U.A.E.
" Royal Atlantis Resort and Residences- Main Contract Project "

dec
RECEIVED BY: MS

ROUTE	ACTION	COPY
GO	—	
DEC		—

ROYAL ATLANTIS
FILE :

SBJV INTERNAL QA/QC CHECK COORDINATION

☑ MEP ✗ ☐ ARCHITECTURE ☐ FAÇADE

☐ STRUCTURAL - STEEL ☐ STRUCTURAL - CONCRETE ☐ OTHERS (,) _____

TYPE

☑ MAR : MATERIAL SUBMITTAL ☐ PQD : PRE-QUALIFICATION DOCUMENTS ☐ OCT: ORGANIZATION CHART ☐ DDG : DESIGN

☐ SDG : SHOP DRAWINGS ☐ MST : METHOD STATEMENT ☐ GEN : GENERAL ☐ CAL : CALCULATION

Programme of Work Activity ID Ref:
Programme of Work Description:

Planned Start: 15-May-18
Planned Finish: 22-May-18

Copies
Electronic Copy to:
Mr.Andrew Pugh - Sr.Project Manager,F +G
Document Control,F +G

PP
VALERY PAQUIER, PROJECT DIRECTOR

PP
S.P. HAN , DEPUTY PROJECT DIRECTOR

For Contractor

CONSULTANT'S COMMENTS

REFER ATTACHED SHEET FOR COMMENTS.

30/5/18

Copies To:

31.5.18

Project Director: P.P

For DEC Dynamic Engineering Consultants

EMPLOYER'S COMMENTS

(18)

Copies To:

For Employer

Corrections or comments made relative to submittals during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions selecting fabrication processes and techniques of construction; coordinating his work with that of other trades, and performing his work in a safe and satisfactory manner.

Client:	Atlantis The Palm 2 Development LLC	**Doc Title: M4: Foam Spray Sealant for MEP Penetration on Fire Rated Wall**	
Project Manager:	The Royal Atlantis Resorts & Residences Faithful + Gould	**Doc Reference:TRA-FMT-MAR-AC-GEN-00006**	
Engineer:	DEC Dynamic Engineering Consultants	**Submittal Reference:** TRA/SBJ/DEC/15768	
Contractor:	Ssanyong/Besix – JV		
To:	Ali Zakour - SBJ	**Discipline: MEP**	**Date:** 30-May-2018
	Andrew Pugh– F+G	**Department:** MEP	
From:	Gary John Oliphant - DEC		

No	Section	Page	Comments
1.	Compliance Statement		**<u>Approval Subject to Comply of below mention comments prior to procurement of material.</u>** • **All General and execution part of the relevant specification section should be complied and stamped by the Main Contractor** • **<u>Submit compliance statement for project specification SECTION 230529,220529,2300034 & 260020 related to No Fire Rated Walls</u>** • **Submit SECTIONAL DETAILS for Block wall and dry wall for review and approval.** • **Installation to be carried out as per project specification with noncombustible insulation and metal caps**
2.	Supplier Details, Location and Contacts		• No Comments.
3.	Data Sheet		• **Area of Application to be included in submittal (block wall, dry wall,...et**
4.	Material Safety Data Sheet		No Comments.
5.	Storage Requirement		Storage and handling shall be as per Project Specification and Manufacturer's recommendations.

Office 2805 to 2808, Concord Tower,
Dubai Media City, P.O. Box 79593, Dubai, UAE
Tel : + 971 4 2989220
Fax: + 971 4 2989210
Email : info@decengineering.net
WWW.DECENGINEERING.NET

6	Long Lead Items Applicable		No Comments.
7	Latest Test Report, Warranty and Country of Origin		Material to deliver at site with all sites with all shipping documents (C.O.O, Packing list and bill of lading) highlighting common interference between them.
	Project Specification		Installation shall be as per Project Specification and Manufacturer's recommendations.
9	LEED Questionnaire Form		No Comments.

Recommended Status	**Approved As Noted (B)**
Commented by: Reviewed by: Zafar Mustafa, Sr. Site MEP Engineer Signature & Date: 30-May-2018	Approved by : Gary John Oliphant- Resident Engineer (MEP) Signature & Date: 30-May-2018

ISO 9001:2008 REGISTERED
Dubai Quality Group
SME Member

Office 2805 to 2808, Concord Tower,
Dubai Media City, P.O. Box 79593, Dubai, UAE
Tel : + 971 4 2989220
Fax: + 971 4 2989210
Email : info@decengineering.net
WWW.DECENGINEERING.NET

WOODS BAGOT™ AECOM ETIHAD AIRWAYS depa

APPLICATION FOR APPROVAL

Project :	**P252 Fit-Out Works of Etihad Airways Midfield Premium Spaces**	**Date :**	**03 March 2019**
Employer :	**Etihad Airways**	**Originator :**	**DEPA Décor General Contracting and Maintenance LLC**
Lead Consultant :	**Woods Bagot**	**Type :**	**MATERIAL SUBMITTAL**

Submittal Ref:	**EML-DIL-PRW-ID-MAT-00535**					**Rev :**	**00**	**Reference Specification:**
Discipline :	ARCH	ID	STR	MEP	F&B	HSE	GEN	Woods Bagot081400 WOOD DOORS
Manuf / Supp / Sub-Con :	**Wurth Gulf FZE / Depa Interiors LLC**							
Area of Application :	**North Lounge, Arrivals Lounge, Business Check- in Lounge - Fire Rated Doors as per Attached Door Schdule and Approved Shop Drawings.**							

Status :

☐ A - Approved ☐ B - Approved w/ comments ☐ C - Revised & Resubmit ☐ D - For Information & Record

Issued For: ■ **Approval** ☐ **Information** ☐ **Record** ☐ **Other**

Description :
Fire Rated Foam
Product Code : 1K - B1 -750 Ml Wurth
Article No:-0893 303 402
Area of Application: 60 & 90 Minutes Door Frame Fixing

Enclosures:

■ Data Sheets ☐ Catalogues ■ Sample ☐ Others

Submitted by: Mr.Tawfiq Zakarna Signature:

Consultant's Comments:

WOODS BAGOT

☐ Shop Drawing Review
■ Material Review
☐ Inspection Review

☐ No Exception Taken ☐ Revise and Resubmit
■ Note Markings ☐ Rejected

Reviewed for general conformance with the intent of the design documentation only. The review does not limit the contractor or builder's obligations or liabilities under the relevant contract in any way. Without limitation, the contractor or builder remains responsible for all dimensions, quantities, means, methods, techniques, sequences and operations of the construction or works under the contract.

Reviewed by AUSTEN SMITH Date

Manufacturers installation requirements to be followed.

1. shims, 2. Sealant 3. backer rod behind sealant around perimeter on both sides of door (not sealant in the entire gaps)

Name: Signature: Date: 13-03-19

WOODS BAGOT™ AECOM ETIHAD AIRWAYS depa

APPLICATION FOR APPROVAL

Project :	**P252 Fit-Out Works of Etihad Airways Midfield Premium Spaces**	**Date :**	**03 March 2019**
Employer :	**Etihad Airways**	**Originator :**	**DEPA Décor General Contracting and Maintenance LLC**
Lead Consultant :	**Woods Bagot**	**Type :**	**MATERIAL SUBMITTAL**

Submittal Ref:	**EML-DIL-PRW-ID-MAT-00535**					**Rev :**	**00**	**Reference Specification:**
Discipline :	ARCH	ID	STR	MEP	F&B	HSE	GEN	Woods Bagot081400 WOOD DOORS
Manuf / Supp / Sub-Con :	**Wurth Gulf FZE / Depa Interiors LLC**							
Area of Application :	**North Lounge, Arrivals Lounge, Business Check- in Lounge - Fire Rated Doors as per Attached Door Schdule and Approved Shop Drawings.**							

Status :

☐ A - Approved ☐ B - Approved w/ comments ☐ C - Revised & Resubmit ☐ D - For Information & Record

Issued For: ■ **Approval** ☐ **Information** ☐ **Record** ☐ **Other**

Description :
Fire Rated Foam
Product Code : 1K - B1 -750 Ml Wurth
Article No:-0893 303 402
Area of Application: 60 & 90 Minutes Door Frame Fixing

Enclosures:

■ Data Sheets ☐ Catalogues ■ Sample ☐ Others

Submitted by: Mr.Tawfiq Zakarna Signature:

Consultant's Comments:

WOODS BAGOT

☐ Shop Drawing Review
■ Material Review
☐ Inspection Review

☐ No Exception Taken ☐ Revise and Resubmit
■ Note Markings ☐ Rejected

Reviewed for general conformance with the intent of the design documentation only. The review does not limit the contractor or builder's obligations or liabilities under the relevant contract in any way. Without limitation, the contractor or builder remains responsible for all dimensions, quantities, means, methods, techniques, sequences and operations of the construction or works under the contract.

Reviewed by AUSTEN SMITH Date

Manufacturers installation requirements to be followed.

1. shims, 2. Sealant 3. backer rod behind sealant around perimeter on both sides of door (not sealant in the entire gaps)

Name: Signature: Date: 13-03-19

DUBAI WORLD TRADE CENTRE

中建中東有限責任公司
CHINA STATE CONSTRUCTION ENGRG. CORP. (MIDDLE EAST)(L.L.C)

KEO

SITE TRANSMITTAL of Shop Drawings, Materials, etc.

TRANSMITTAL NO : CSC/EV-P7/TS/00117

REV : 01

To: KEO International Consultants

PROJECT	DIV/PACKAGE	OWNER	CONTRACTOR
EXPO VILLAGE	CP07	DWTC	CSCEC

WE ARE SENDING HEREWITH THE DRAWINGS / DOCUMENTS / SAMPLES LISTED BELOW FOR YOUR REVIEW.

ITEM NO.	REF. No.	GENERAL DESCRIPTION AND REVISION DETAILS	TYPE (i)	COPIES	ACTION CODE (ii)
1	PN1502-CP07-PQ-ST-CSC-00117	Prequalification for M/S Wurth Gulf for Manufacture and Supply of Joint Sealant	OT	1	B

We certify that the items submitted herewith have been reviewed in detail and are in strict conformance with the Contract Drawings and Specifications except as otherwise stated.

CONTRACTOR :

DATE: 18-Jun-18

RECEIVED BY KEO :

DATE:

KEO'S REMARKS :

No objection subject to comply with project specifications, DM requirements, and Manufacturer recommendations.

Corrections or comments made relative to submittals during this review does not relieve the contractor from compliance with the requirements of his Contract, drawings and specifications. This review is only in respect of general conformance with the design intent of the project and general compliance with the information given in the Contract documents. The contractor remains responsible, among other things, for the design of the project or such parts of the project he has design responsibility for (if design forms part of the Contract), for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating his work with that of other trades, and performing his work in a safe and satisfactory manner, all in accordance with the Contract.

KEO CM / RE

DATE:

RECEIVED BY CONTRACTOR :

DATE:

(i) TYPE:
- SD: Shop Drawings
- SM: Sample
- GT: Guarantee
- MD: Manufacturer's Data
- CT: Certificates
- OT: Others

(ii) ACTION CODE:
- A: No objection
- B: No objection subject to incorporation of all comments as noted
- C: Rejected, to be resubmitted

© KEO International Consultants W.L.L.

AMAR Golden Design L.L.C

ABU DHABI PORTS

Ali & Sons

CONSTRUCTION OF ZAYED PORT CRUISE TERMINAL-2

MATERIAL SUBMITTAL

DOCUMENT CODE	ADPC JOB NO.	SUBJOB NO.	DOCUMENT IDENTIFICATION CODE	ENTITY CODE	SEQUENCE NUMBER	SUBMITTAL NUMBER	DATE
	2107	263	V4	8000	00282	C03	4-Dec-19

ISSUED BY: ALI & SONS CONTRACTING Co. (INTERIORS DIVISION) L.L.C.

ATTENTION: Abu Dhabi Ports

MATERIAL AS PROPOSED BY CONTRACTOR	MATERIAL AS PER SPECIFICATION/BOQ/DWGS	
	Manufacturer/Origin	Finish/ Color
Fire Rated Foam for Wooden Doors	M/s Wurth Gulf FZE	

Specifications/ Drawing Ref.: No Reference

Location to be used in: Fire Rated Wooden Doors

Attachments: Sample [x] Technical data [x] Specs/BOQ co [ ]
Original Catalogues [ ] Compliance Statement [x] Others [x]

Subcontractor/Supplier: M/s Ali and Sons Interior Address: UAE

ABU DHABI PORTS AMD DCC

CONTRACTOR'S SIGNATURE: Syed Huzaifa Ahmad 05/12/19

Ali & Sons Contracting Co. LLC (Interiors Division)

RECIPIENT'S SIGNATURE:

04 DEC 2019

No:

RECEIVED

Client/ Consultant's comments:

- [x] Approved
- [ ] Approved with Comments
- [ ] Not Approved, To be Resubmitted
- [ ] Rejected

CLIENT'S REPRESENTATIVE	CONSULTANT'S REPRESENTATIVE
Name: Brain Kemble	Name: Mohamed Diraz
Signature:	Signature: M. Diraz
Date: 05/12/19	Date: 5/12/19

موانئ أبوظبي ABU DHABI PORTS	Abu Dhabi Ports Project	Ali & Sons CONTRACTING - INTERIORS DIVISION
PROJECT TITLE	Contract No. 2107-280 Conversion of Shed#1 into Office Building in Zayed Port	

Material Approval Request for Joint Foam Fire Resistance Plus (PU Foam) – Manufacturer Wurth

CONTRACTOR'S VERIFICATION STAMP

We, Ali & Sons Contracting Co., verify that this contractor's document:

- Has been produced and checked in accordance with contractor's quality assurance plan
- Is of a standard that will enable the employer to accept it in accordance with the contract
- Complies with all requirements of the contract

Following deviations to contract are referenced for which a dispensation has been accepted by the employer:

None

Other related letters/CTIs which document clarifications associated with this document are listed below:

None

Consultant/Contractor's Project Manager:

Amjad Ghazal — Project Manager — Signature — 07.06.2020 — Date

DOCUMENT STATUS STAMP

☐	Code 1:	Work may proceed.
☒	Code 2:	Revise & Resubmit. Work may proceed subject to incorporation of comments indicated.
☐	Code 3:	Revise & Resubmit. Work may not proceed.
☐	Code 4:	Review not required. Work may proceed.

The statement "work may proceed" applies to the following work activities associated with the matters contained within the contractor's document:

Any review, comment or acceptance by employer under this contract with respect to any of contractor's documents shall not in any way be, or deemed to be, an approval of any works or an acceptance that the contractor's documents meet the requirements of the contract, as contractor has the sole responsibility for performing the works in accordance with the requirements of this contract.

Sangeeth Kumar — Abu Dhabi Ports — 15.06.20 — Date

Document Number: 2107-280-V4-6800-00006

Rev	Date	Reason For Revision	Prepared	Checked	Approved
002					
001	07-June-2020	Issued for Approval	Khubaib	Gladys	Amjad Ghazal

Holders of registered copies receive revisions to this document, should they occur, with a request that the superseded copy be destroyed. Registration of copies eases at taking over date. The revision number is included at the end of the document number, which is noted in the right of the bottom of each page. When amendments occur, the whole document is re-issued with the revision number updated accordingly.

(1) Revisions are shown in italics. Deletions are hidden. Earlier additions revert to normal text in subsequent amendments
(2) The QA Manager reviews and the project Manager approves amendments by signature on the cover sheet to the document
(3) **The document controller maintains a Register of the holders of this document**
(4) Amendments to the document are distributed according to (1) above and this I reflected in the register

The document controller keeps the original of the latest version of this document

Raj

The Client:	The Consultant:	MEP Consultant	The Main Contractor:
LIMITLESS	BEL-YOAHAH ARCHITECTURAL & CIVIL CONSULTANTS	CBC CONSISTENT ENGINEERING CONSULTANTS	هندسة التعمير والبناء ش.ذ.م.م CONSTRUCTION & BUILDING ENGG. L.L.C

Project: MX-05 CAR PARK BUILDING INCLUDING BRIDGE (MAIN WORK TENDER COMPLETION OF REMAINING WORKS) AT DOWNTOWN JEBEL ALI ZONE 1 - BLOCK 2

MATERIAL SUBMITTAL

Ref. No. CBE-346-MS-0149

Rev. No. 2

■ ARCH ☐ CIVIL/STRU ☐ ELEC ☐ MECH ☐ PLUME ☐ OTHERS

List of Enclosure

Item Description	Fire Rated Foam for Metal Doors Hollow Frame Filling and to Fill the Gap Between Masonry Element and Wooden/Metal Door Frames.
Specs. / BOQ / Drwg. Reference	
Material Specified	
Material Proposed	Wurth - Joint Foam Fire - Resistent Plus
Sub-Contractor	Wurth Gulf FZE
Laboratory	-
Remarks	1 Set Hard Copy

(Tick the Related Box)

- ☑ Vendor's Technical Literature
- ☐ Compliance Statement
- ☑ Previous Test Results
- ☐ Copy of the Related Specs.
- ☐ Sample
- ☐ List of Previous Projects Done
- ☑ Others (Specify):
- ☑ INDUSTRIAL LICENCE

Main Contractor Statement: We certify that the material submitted herewith has been reviewed in details and in compliance with the contract drawings and specifications except as otherwise stated hereabove.

Contractor Signature: *Date:* 3-Jun-18 03 JUN 2018

Consultant Received: *Date:* 11:05 am

Engineer's Comments:

1. CBE/supplier has to submit proposed material DCD approval for BYC review prior to application and Project Completion taking over
2. Material approval subject to Cover all authority, requirements, DCD, project Contract requirements and without any cost and time impact to Employee.
3. CBE/supplier has to ensure that proposed material is Compatible with steel & wood finishes, Sealant backing rod at wall as in Compliance to DCD while applying to DCD for final NOC at BCC Stage
4. Follow manufacturer recommendation strictly for application

- ☐ APP - Approved
- ☑ AAN - Approved As Noted
- ☐ NA - Not Approved, Resubmit
- ☐ IR - Incomplete, Resubmit

Bel-Yoahah RE Signature: Sachin.M.P *Date:*

Main Contractor Received: *Date:* RECEIVED 14 JUN 2018 C.B.E. - 346 BY:

Corrections or comments made relative to submittals during this review do not relieve the contractor from compliance with the contract requirement and specifications. This check is only for review of general conformance with the design concept of the project.

SUB-00152

AFC | EMAAR | U+A

18106 - Burj Royale - Plot 97

The Engineer: U+A

CONTRACT:	N/A	Package No:	N/A

MATERIAL SUBMITTAL

Date :	10-Sep-20	Submittal No. :	18106-DIL-MAT-AR-00012 REV.00

To The Engineer : U+A

New Submittal : Resubmittal :

MATERIAL DESCRIPTION — AS SPECIFICATION [✓] ALTERNATIVE [ ]

Material Submittal for Fire Rated Door
Foam for Door Frame Fixing

Drawing Ref. 18106-A-535 B.O.Q. Ref. No. Fire rated Door

Specification Ref. 08 1400 - Wood Doors Standards , BS , DIN : BS Standard

(Attach all relevant technical literature marked to identify relevant descriptions , current test certificate , samples etc.)

MANUFACTURER / SUPPLIER

Make Company Name :
Wurth / Depa Interiors L.L.C
Address:Office Address : Dubai

Specialist Supplier/ Integrator.
Depa Interior L.L.C

DELIVERY

Country of Origin : China

Availability — Locally Manufactured [ ] ; C.C.A.S.G. Manufactured [ ]

Manufacture — Production Period [____]

Delivery Ex-Works [____]

Total delivery time [____]

Overland [ ]

Sea Freight [ ]

Total Freight [ ]

PROGRAMME Date material required on site _____
Estimated date of arrival on site _____ Signature:

Engineer's Comments :

NO OBJECTION

20/9/2020

Approval Status

A. Approved [ ] B. Approved with Comments [ ] C. Rejected Revise & Resubmit [ ] D. For Information [ ]

RESIDENT ENGINEER		Date :

Distribution:

Head Office ☐ Client ☐ QS ☐ Others ☐

18106 Emaar Plot 97 UA
RECEIVED
10 SEP 2020
By: Time: 01:30

AFC | EMAAR | UA

18106 - Burj Royale - Plot 97

Sample Tag		Ref. No.	18106-DIL-MAT-AR-00012
		Rev. No.	00
Originator of the Submittal:	**Depa Interiors LLC**	*Date:*	**10-Sep-20**
Authorized Signature:		*Req. By:*	

Material Detail

Item Description	**Material Submittal for Fire Rated Foam for Door Frame Fixing** **Product Code: Joint Foam Fire - Resistant Plus, Art no.0893 303 402** **Manufacturer / Supplier - Wurth**
Area of Use	**Fire Rated Door**

Main Contractor Statement: We certify that the material submitted herewith is a specimen of the material which to be used in the areas described above, and in compliance with the contract drawings and specification except as otherwise stated on the related Material Submittal Form.

Engineer's Comments:

NO OBJECTION

- ☑ APP - Approved
- ☐ AAN - Approved As Noted
- ☐ NA - Not Approved, Resubmit

Engineer's Signature: 20/9/2020 *Date:*

FORM:

Material Submittal for Fire Rated Foam for Door Frame Fixing
Product Code : Joint Foam Fire - Resistant Plus, Art no.0893 303 402
Manufacturer / Supplier - Wurth



Distribution:

Head Office ☐ Client ☐ QS ☐ Others ☐

Date: October 18, 2024

DRAFT WARRANTY CERTIFICATE

PROJECT:

CLIENT:

Product: Assembly Foam (1K-B1-fire resistance foam-750ML)

Manufacturer: Wurth Gulf FZE

Supplier: Wurth Gulf FZE

Draft of Warranty: Effective from the issue date of final taking-over certificate

Duration of Warranty: 5 Years

Guarantee / Warranty "Coverage and Description":

We as Würth Gulf confirm a 5-year warranty on material specifications and against material defects for our product mentioned above, providing the material is applied in accordance with the instructions provided by us. This warranty is conditional to application in accordance to building material class B1 (DIN 4102) and our technical instructions and is restricted to replacement of defective material against the original invoice cost. Würth Gulf does not take responsibility for any defects caused by wrong application during installation or when material is applied on non-conforming substrates.

Name:	Abdul Rahman Hussein	Company Seal
Designation:	Category Manager / Chemicals	
Date:	18.7.2023	

وورث جلف م.م.ح
WÜRTH GULF FZE
P.O.Box: 17036
Product Department

gF{3EC9=(DD8EEE94{8=(DD<=: : EC'.w14RF{3EC9(=(DD8E: AA4{8=(DD<=<8<C'.w14G{ ffüz.y@x- ff xffi"x .t x(- . ffü.t x

YOUR RIGHT PARTNER

Please feel free to contact us using the details below - we would be more than happy to visit and demonstrate our way of working, products we supply and service we provide.

l ” ff(yffx“w...(**Würth Gulf Sales Consultant**(°.(. ffi(üx“(ffxfl ffkw(u (” 4 üx(v ffi” – xff(t (” ff(v” “ x“ %“vx6

WÜRTH GULF FZE

cdb dN’ f(9C8<B(Vxux.(M.%f ” ü(B4
P ut %4h dMGQ6
g63EC9(=(DD8EEE9
R63EC9(=(DD8E: AA
E. wurthglf@emirates.net.ae
www.wuerth.ae
www.wuerth.com

WÜRTH GULF OUTLET

N..x(f üxw4mS 5D4O’xt ff(e” “w(t u” 9<%(
Vxux.(M%4P ut %4h dMGQ6
g43EC9(=(DD<=: : E(
R43EC9(=(DD<=<8<
E. japickshop1@wurthgulf.ae

DUBAI SHOWROOM

318th Almidan Road,
M(d ” (Uw fffff .(=4P ut %4h dMGQ6
g43EC9(=(DD<=: : E(
R43EC9(=(DD<=<8<
E. dxbpickshop1@wurthgulf.ae

SHARJAH SHOWROOM

First Industial Area St
Sharjah, U.A.E.
g43EC9(B(A<E9E9E
R43EC9(B(A<E9E9C
E. shjpickshop1@wurthgulf.ae

ABU DHABI SHOWROOM

11 St. Mussafah 14
Mu (P üt u %4h dMGQ6
gF(3EC9(: (AA==9AA
RF(3EC9(: (AA==9EE
E: adpickshop1@wurthgulf.ae

AL AIN SHOWROOM

Nahyan, The First St.
Near Grand Hafeet Station,
M(M“ 4Mu (P üt u %h dMGQ6
gF(3EC9(<(CBBD=8:
E: alnpickshop1@wurthgulf.ae