

European Technical Assessment

ETA 14/0002
of 04/02/14

General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011:	
Trade name of the construction product	M703 Solvent Free, Fire Resistant Silicone Sealant- FS703- B733- BF300 (Four References For Once Product)
Product family to which the construction product belongs	Fire Stopping and Sealing Product , Linear Joint and Gap Seal
Manufacturer	Nullifire (A brand of Tremco illbruck Coatings Ltd) Torrington Avenue Coventry CV4 9TJ
Manufacturing plant(s)	E046
This European Technical Assessment contains	12 pages including 3 Annex(es) which form an integral part of this assessment.
	Annex(es) A - C Contain(s) confidential information and is/are not included in the European Technical Assessment when that assessment is publicly available.
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	ETAG 026, edition 2011, used as European Assessment Document (EAD)

General Comments

1. This European Technical Assessment is issued by Warrington Certification Limited on the basis of ETAG 026 Fire Protective Products Part 1: General June 2013, and Part 2: Fire Stopping and Fire Sealing Products Aug 2011, Used as European Assessment Document.
2. This European Technical Assessment is not to be transferred to manufacturers or agents of manufacturers other than those indicated on page 1, or manufacturing plants other than those indicated on page 1.



1 SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical Description of the Product

(Detailed information and data are given in Annexes)

- 1) M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 (four references for the same product) is a silicone based sealant used to form linear gap seals where gaps are present in wall and floor constructions and linear joint seals where wall and floor constructions abut.
- 2) M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 has slight intumescent properties that cause it to swell on heating.
- 3) M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 is supplied in liquid form contained within 310 ml cartridges, 600ml foils or in 5, 10, 15 or 19 litre tubs. The sealant is gunned or trowelled into the aperture in or between the separating element/elements to a specified depth utilising various backing materials.
- 4) Polyethylene backing rod, reference Nullifire PE (RtF class F) is utilised a depth gauge.
- 5) Installation of the M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 – See 4.2

Internal use- ETAG 026-3 (used as European Assessment Document EAD) Type Z₁.

2 Specification Of The Intended Use In Accordance With The Relevant EAD

2.1.1 Intended Use

The intended use of system M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 is to reinstate the fire resistance performance of gaps in and joints between rigid wall constructions, gaps in and joints between rigid floor constructions.

- 1) The specific elements of construction that the system M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 may be used to provide a gap or joint seal in, are as follows:

Rigid Floors: The floor must have a minimum thickness of 150 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m³.

Rigid walls: The wall must have a minimum thickness of 150 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m³.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

- 2) The system M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 may be used to provide a linear joint or gap seal with specific supporting constructions and substrates (for details see Annex C).



- 3) The maximum permitted joint/gap width for system M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 is 50 mm.

The maximum movement capability of system M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 is $\leq 7.5\%$

- 4) The provisions made in this European Technical Assessment are based on an assumed working life of the M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 of 10 years, provided that the conditions laid down in sections 4.2/5.1/5.2 for the packaging/transport/ storage/installation/use/repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

2.1.2 Use Category

Type Z₁: Intended for use in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV.



3 Performance Of The Product And References To The Methods Used For Its Assessment

The assessment of fitness for use has been made in accordance with EOTA ETAG 026 Part 3: 2011-08-08 (used as European Assessment Document, EAD)

ETAG Clause No.	ETA Clause No.	Characteristic	Assessment of characteristic
		Mechanical resistance and stability	Not relevant
		Safety in case of fire	See Clause 2.1
2.4.1	3.1	Reaction to fire	Class F according to EN 13501-1
2.4.2	3.2	Resistance to fire	See clause 2.2 & Annex C
		Hygiene, Health and the Environment	
2.4.3	3.3	Air permeability	See clause 2.3
2.4.4	3.4	Water permeability	No performance determined
2.4.5	3.5	Dangerous substances	See clause 2.5
		Safety in use	
2.4.6	3.6	Mechanical resistance and stability	No performance determined
2.4.7	3.7	Resistance to impact/movement	No performance determined
2.4.8	3.8	Adhesion	No performance determined
		Protection against noise	No performance determined
2.4.9	3.9	Airborne sound insulation	R_w (C;C_{tr})= 38(-2;-9)
		Energy, Economy and Heat Retention	
2.4.10	3.10	Thermal properties	No performance determined
2.4.11	3.11	Water vapour permeability	No performance determined
		General aspects relating to fitness for use	
2.4.12	3.12	Durability and serviceability	Z₁

3.1 Reaction to fire

System M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 is classified 'F' in accordance with EN 13501-1.

3.2 Resistance to fire

System M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 has been tested in accordance with BS EN 1366-4: 2006 based upon the test results and the field of direct application specified within EN 1366-4: 2006, the system M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 has been classified in accordance with EN 13501-2, as given in Annex C:



The seals may only be used in the elements of construction described in Annex C and against the substrates described in Annex C.

Provisions shall be taken such that floor joint seals cannot be stepped on e.g. by covering with wire mesh or floor finishes.

3.3 Air permeability

System M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 has been tested in accordance with BS EN 1314-1 to provide the following results:

Pressure differential Pa	Air flow through the Plain plasterboard specimen m ³ /h	Air flow through specimen with sealant m ³ /h
1	0.04	0.00
2	0.07	0.00
4	0.14	0.00
8	0.27	0.00
10	0.33	0.00
15	0.46	0.00
20	0.68	0.00
30	1.07	0.00
40	1.40	0.00
50	1.67	0.00
60	1.91	0.00
80	2.35	0.00
100	2.90	0.00

Table 3. Air permeability under positive air pressure on indoor face



Pressure differential Pa	Air flow through the Plain plasterboard specimen m ³ /h	Air flow through specimen with sealant m ³ /h
1	0.04	0.00
2	0.07	0.00
4	0.14	0.00
8	0.27	0.00
10	0.33	0.00
15	0.46	0.00
20	0.68	0.00
30	1.07	0.00
40	1.40	0.00
50	1.67	0.00
60	1.91	0.00
80	2.35	0.00
100	2.90	0.00

Table 3. Air permeability under positive air pressure on indoor face

3.4 Water permeability

No performance determined

3.5 Dangerous substances

Firestopit Ltd has presented a declaration that M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 does not contain any substance of high concern with regards to REACH Regulations and are compliant with the requirements reference to <http://ec.europa.eu/enterprise/construction/cpd-ds/index.cfm>

Confirmation has further been declared that all dangerous chemical substances ≥ 1.0 % w/w as well as all toxic, carcinogenic, toxic for reproduction and mutagenic chemical substances ≥ 0.1 % w/w (Status: 29. adaption – 2004/73/EG – of the EU directive 67/548/EEC - classification, packaging and labeling of dangerous substances) are stated in the M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 safety data sheets (according to 91/155/EEC including amendments) and have been considered for the classification of the products according to the directive 1999/45/EG (classification of preparations, including amendments).

All dangerous chemical substances are below the classification limits of 67/548/EEC.

In addition to the specific clauses relating to dangerous substances contained in this European technical approval, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

3.6 Mechanical resistance and stability

No performance determined.



3.7 Resistance to impact/movement

No performance determined.

3.8 Adhesion

Not relevant.

3.9 Airborne sound insulation

R_w (C;C_{tr}) = 38(-2;-9)

3.10 Water vapour permeability

No performance determined.

3.11 Durability and serviceability

M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 has been tested in accordance with EOTA Technical Report - TR024 – Edition November 2006, for the type Z₁ use category specified in ETAG 026-3 (used as European Assessment Document, EAD), and the results of the tests have demonstrated suitability for penetration seals intended for use in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV.

4 Assessment And Verification Of Constancy Of Performance (Hereinafter AVCP) System Applied, With References To Its Legal base

According to the decision 1999/454/EC of the European Commission the system of assessment and verification of constancy of performance (see Annex V to the Regulation (EU) No 305/2011) given in the following table apply:

Products	Intended uses	Level or Class	System
Fire stopping and fire sealing products	For fire compartmentation and / or fire protection or fire performance	Any	System 1



4.1 Attestation of Conformity system

According to the decision 1999/454/EC of the European Commission the system 1 of attestation of conformity applies.

This system of attestation of conformity is defined as follows:

System 1: Certification of the conformity of the product by a notified certification body on the basis of:

- (a) Tasks for the manufacturer:
 - (1) factory production control;
 - (2) further testing of samples taken at the factory by the manufacturer in accordance with a prescribed test plan;
- (b) Tasks for the notified body
 - (1) initial type-testing of the product;
 - (2) initial inspection of factory and of factory production control;
 - (3) continued surveillance, assessment and approval of factory production control.

5 Technical Details Necessary For The Implementation Of The AVCP System, As Provided For In The Applicable EAD.

5.1 Tasks for the Manufacturer

The manufacturer shall provide a technical data sheet and an installation instruction with the following minimum information:

- (a) Technical data sheet:
 - Field of application:

Building elements for which the linear joint seal is suitable, type and properties of the building elements like minimum thickness, density, and - in case of lightweight constructions – the construction requirements.

Limits in size, minimum thickness etc. of the linear joint seal
 - Construction of the linear joint seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.



(b) Installation instruction:

- Steps to be followed
- Procedure in case of retrofitting.

The manufacturer shall, on the basis of a contract, involve a body which is approved for the tasks referred to in section 3.1 in the field of penetration seals in order to undertake the actions laid down in section 3.3. For this purpose, the "control plan" referred to in sections 3.2.1.1 and 3.2.2 shall be handed over by the manufacturer to the approved body or bodies involved.

The manufacturer shall make a declaration of conformity, stating that the construction product is in conformity with the provisions of the European technical assessment ETA-14/0002

5.2 Tasks of approved bodies

In accordance with the provisions laid down in the "Control Plan" of 4/9/13 relating to the European technical assessment 14/0002

The approved body shall retain the essential points of its actions referred to above and state the results obtained and conclusions drawn in a written report.

The approved certification body involved by the manufacturer shall issue an EC certificate of conformity of the product stating the conformity with the provisions of this European technical assessment.

In cases where the provisions of the European technical assessment and its "Control Plan" are no longer fulfilled the certification body shall withdraw the Certificate of Constancy and inform the relevant authorities eg NANDO, EOTA



Manufacturing

The European technical assessment is issued for M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 on the basis of agreed data/information, deposited with Warrington Certification Limited, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to Warrington Certification Limited before the changes are introduced. Warrington Certification Limited will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment or alterations to the ETA, shall be necessary. All surfaces to be sealed must be sound, dry and clean.

- Ensure the correct joint with to depth ratio
- Position PE backing rod to correct depth
- Extrude sealant firmly into joint ensuring good contact with joint sides.
- To ensure a correct bond, always smooth down sealant using a wetted spatula or wetted sponge. Do not saturate the surface, as this will delay the curing process.
- Can be overpainted with most paints some 24-48 hours after application.

5.3 Packaging, transport and storage

The following measures should be adopted with regard to handling and storage of M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300

- Handling
 - Information for safe handling: No special measures required.
 - Information about protection against explosions and fires: No special measures required.
- Storage
 - Store dry and in a cool place.
 - Don't store the product under 0 °C and not over +35 °C
 - Keep out of reach of children
 - Take care for sufficient ventilation

5.4 Use, maintenance, repair

The M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 should be installed and used as described earlier in this document.


System M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 seals which are damaged after installation, should be removed and replaced with undamaged seals.

In the area covered by the ETA when the set up recommendation have been followed there is no maintenance protocol to be followed. The product does not need any maintenance in the life time indicated in the ETA



Signatories


Responsible Officer
C. Abbott* - Senior Certification Engineer


Approved
A. Kearns* - Technical Manager

* For and on behalf of Warrington Certification Limited.



Annex A

Reference Documents and LIST OF ABBREVIATIONS

References to standards mentioned in the ETA:

EN 13501-1	Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire tests
EN 13501-2	Fire classification of construction products and building elements – Part 2: Classification using test data from fire resistance tests

Other reference documents:

EOTA TR 024	Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products
ETAG No. 026: Part 3	Guideline For European Technical Approval of Fire Stopping and Fire Sealing Products, Part 3: Linear Joint Seals(used as European Assessment Document, EAD)



Annex B

Description of Product and Product Literature

M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300

A detailed specification of the product is contained in document "Evaluation Report" relating to the European Technical Approval ETA – 14/0002 issued on 3/2/14 of M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300 which is a non-public part of this ETA.

CIVIS®	(25) (42)
CAW P10	
Uniclass JP10 1.68114	
January 2014	

B733, BF300, FS703 & M703

Solvent Free, Fire Resistant Silicone Sealant

KEY BENEFITS SUMMARY

- Can achieve up to 4 hours joint fire resistance tested in accordance with EN 1366-4
- Accommodates up to 7½% movement
- Suitable for gaps up to 50 mm wide
- Excellent unprimed adhesion
- Slump free with a long service life
- Seal ratio at 2:1 (10 mm width x 6 mm depth)

Safe & Durable

- No shrinkage

PRODUCT INFORMATION

Description

Fire resistant seal for movement joints. For internal and external use.

Usage / Purpose

- Joints in compartment walls and floors
- Gaps between frames and structures
- At junctions of different materials

SUBSTRATES

- Masonry to masonry
- Masonry to timber
- Masonry to steel

Colours

White and grey

Packaging

310 ml cartridges (12 per box)
600 ml sausages (12 per box)

Availability

Direct from Nullifire (see back of leaflet for address and telephone details).

USAGE GUIDELINES

Preparation

- Clean all surfaces of loose particles, moisture, oils, grease and corrosive materials
- Abrade painted or shiny surfaces
- Check specification is suitable for movement, fire rating and gap size

Tools

- Standard cartridge/skeleton gun
- Palette knife or spatula

Installation

- Insert backing material, oversized to joint width to ensure stability, to provide correct depth of seal (minimum 6 mm)
 - For double seal: Use M710 Backing Rod
- Cut nozzle of cartridge to required bead size
- Gun sealant into gap to required depth
- Tool to a smooth finish immediately with a wet palette knife or spatula

Material Required

To determine quantity of sealant required, calculate as follows:

$$\frac{\text{Gap width (mm)} \times \text{Depth (mm)} \times \text{Total length (m)}}{310} = \text{N° of cartridges}$$

For further guidance on application methods, and material requirements, please contact Tremco illbruck Technical Services Department.

Cleaning

Immediately remove all excess sealant adjacent to the joint (use masking tape where appropriate). Cured sealant can only be removed by abrasion.

Maintenance

No maintenance required after installation. Routine inspection recommended to ensure no damage to the system.

Health & Safety Precautions

Product Health and Safety Data Sheets must be read and understood before use.

Storage

Store in dry conditions between +5°C and +27°C.

Shelf Life

12 months when stored in its original unopened containers.

Technical Service

Nullifire has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Customer Services on 02476 855000.



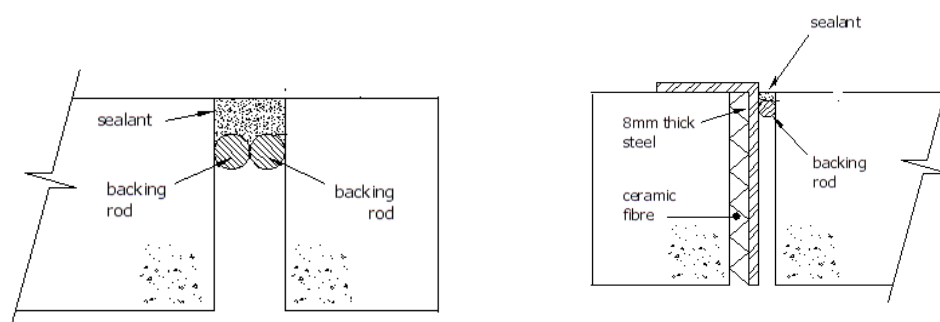

Annex C

Resistance to Fire Classification of M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300

C.1 Rigid floor constructions according to 1.2.1 with floor thickness of minimum 150 mm

C.1.1 Linear joint or gap seal, horizontally orientated with sealant to the unexposed face

Construction details:



C.1.1.1

Nullifire 'M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300' Silicone Linear Joint Seals in Rigid Floors 150 mm thick (min.) –

Depth Sealant	Backing	Substrates	Seal Orientation	Classification
2:1 Ratio 2= width 1= depth	PE Backing Rod	AAC-AAC	Unexposed face	E240 EI120 – H – X – F – W 12-30
				E240 EI60– H – X – F – W 31-50
		AAC-Steel		E240 EI30– H – X – F – W 12-30
				E120 EI30– H – X – F – W 31-50

*AAC- Aerated Concrete



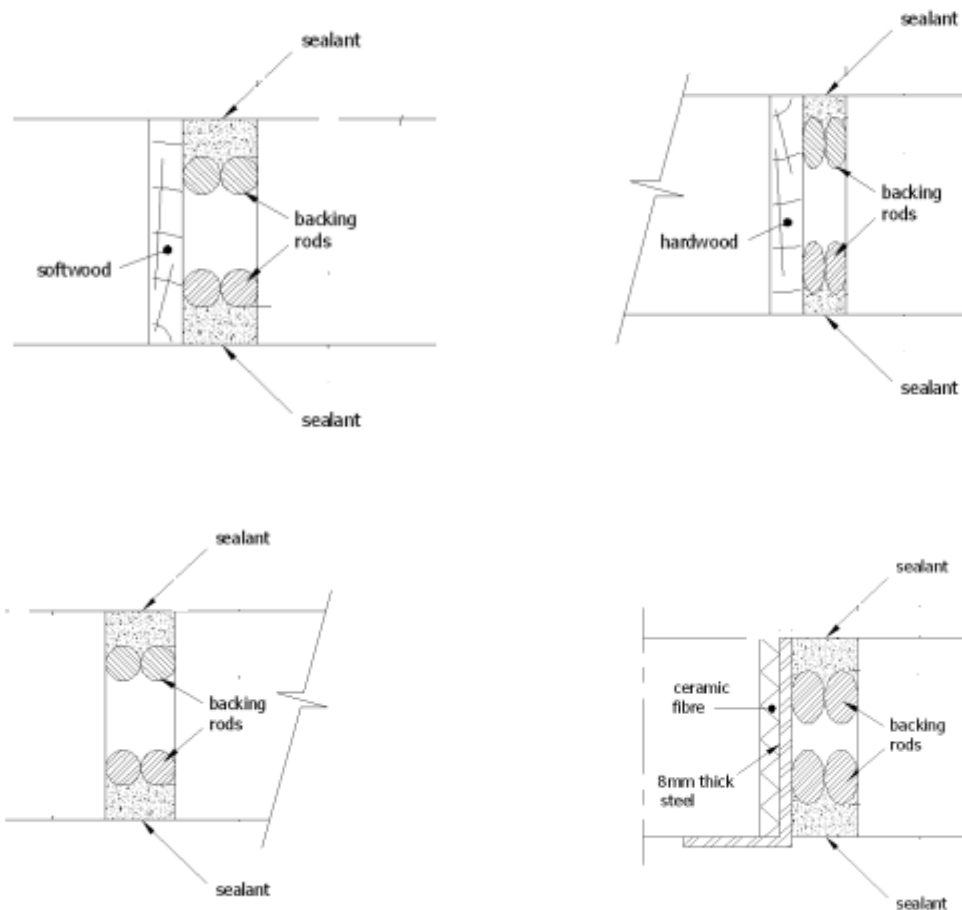
C.2 Rigid floor constructions according to 1.2.1 with wall thickness of minimum 150 mm

C.2.1 Linear joint or gap seal, vertically orientated with sealant to the unexposed and exposed face

Construction details:

Hardwood density:- minimum 680kg/m^3 , fixing centres 300mm.

Softwood density:- minimum 410kg/m^3 , fixing centres 300mm



C.2.1.1

Nullifire `M703 Solvent Free, Fire Resistant Silicone Sealant – FS703 – B733 – BF300’ Silicone Linear Joint Seals in Walls 150 mm thick (min.) –				
Depth Sealant	Backing	Substrates	Seal Orientation	Classification
2:1 Ratio 2= width 1= depth	PE Backing Rod	AAC-AAC	Both faces	E 240 EI240 – V – X – F – W 12-50
		AAC-Softwood		EI120 – V – X – F – W 12
				EI120 – V – X – F – W 13-49
				EI240 – V – X – F – W 50
				EI120– V – X – F – W 12-29
		AAC-Hardwood		EI240 – V – X – F – W 30-50
				E240 EI60 – V – X – F – W 12-29
		AAC-Steel		E240 EI90 – V – X – F – W 30-49
				E240 EI120 – V – X – F – W 50

*AAC- Aerated Concrete

