

Sealants and Adhesives

FIRE RESISTANT

Neutral silicone sealant with high fire resistance.



- High adhesion to smooth and porous substrates
- High resistance to UV rays
- Low elastic modulus

• Suitable for applications subject to fire regulations up to EI 240

• MEKO FREE formulation



APPLICATION AREAS

Silicone Fire Resistant is used for linear wall joints and fire doors. In areas where fire safety regulations must be met, it is used on mineral substrates with the same or higher density or thickness than in the test procedure. Silicone Fire Resistant adheres to a wide variety of substrates. It is composed of silicones only and therefore provides an excellent sealon porous substrates. Silicone Fire Resistant resists atmospheric agents and ultraviolet rays, in fact, years after installation, there are no traces of surface micro-cracks or chalking.

MAXIMUM ATTAINABLE THICKNESSES

The tested joints cover the following geometries (see official Tecnalia classification reports no. 100863-001-3 dated 17.07.23 and CSI no. 0141\DC\RFM\22_3 dated 19.07.23). The wall is made of autoclaved aerated concrete with a density of 550 kg/m3 and a thickness of 120 mm. The certifications can be extended to:

• substrates with a thickness greater than or equal to 12 cm

 \bullet substrates with a density greater than or equal to 550 kg/m 3

• joints with lower thicknesses and greater depths than those tested

,	Width x depth of joint	Orientation	Joint class		
A1	10×10 mm vertical	В	EI180	E240	V – X – W 10

A6	10×10 mm vertical	А	EI60	E240	V – X – W 10
A2	20×10 mm vertical	В	EI120	E240	V – X – W 20
A7	20×10 mm vertical	А	EI45	E240	V – X – W 20
A3	30×20 mm vertical	В	EI180	E240	V – X – W 30
A8	30×20 mm vertical	А	EI90	E240	V – X – W 30
A4	40×20 mm vertical	В	EI120	E240	V – X – W 40
A9	40×20 mm vertical	А	EI60	E240	V – X – W 40
A5	50×30 mm vertical	В	EI180	E240	V – X – W 50
A10	50×30 mm vertical	А	EI120	E240	V – X – W 50
E1	30×20 mm horizontal	В	EI240	E240	T – X – W 30
E3	30×20 mm horizontal	А	EI120	E240	T – X – W 30
E2	40×20 mm horizontal	В	EI240	E240	T – X – W 40
E4	40×20 mm horizontal	А	EI120	E240	T – X – W 40
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LEGEND

A: Sealing only on the side not exposed to fire.

B: Sealing on both sides.

V: Vertical support construction

T: Horizontal supporting construction

X: Movement not applied

W: Joint width range (mm)

Fire Resistant having also been tested in a horizontal construction (horizontal oven), according to EN 1366-4 it can be used both on wall and ceiling joints and on horizontal joints in walls.

Note: For more details on joints, see the official classification reports cited, available on request.

For all geometries, sealing was carried out by positioning the joint both horizontally and vertically and configuring it both symmetrically (i.e. sealing both sides of the wall) and asymmetrically (sealing only the side not exposed to fire).

Polyurethane foam was used as the joint backing material.

Note: The REI classification according to Circular MI.SA. (Ministry of the Interior – Fire Prevention Services) 14 September 1961, no. 91 has been replaced by the one given in Ministerial Decree 16 February 2007, which states that for "through-hole sealing and sealing systems", tested according to EN 1366-4, the characteristic "R", i.e. load-bearing capacity, is not relevant.

FEATURES

Silicone Fire Resistant is a silicone sealant designed for use in fire barrier systems. It has been specially formulated to withstand the high temperatures developed during a fire and to provide a perfect seal preventing the passage of smoke and fumes. These tests showed that joints sealed with Silicone Fire Resistant as described in the table on the next page prevent the passage of flame, smoke and gas and guarantee thermal insulation for up to 240 minutes (Class El 240). Silicone Fire Resistant does not contain non-silicone plasticizers or flammable solvents. Neutral curing is caused by atmospheric humidity. It is neutral curing and does not therefore, produce unpleasant odours. It is composed of silicones only and therefore provides an excellent seal on porous substrates. In addition, Fire Resistant is certified as a non-structural joint sealant for façade elements, both indoors and outdoors, even in cold climates (F-EXT-INT-CC) according to EN 15651-1, and is certified by the GEV as EC 1 for its very low emission.

INSTRUCTIONS FOR USE

Joint sizing: Certified joints must follow the geometry given in the official product classification reports.

1. The joint flanks must be solid, clean and degreased. In the case of particularly critical substrates, the use of Primer Silicone pre-coating is recommended. Deep expansion joints must be buffered with suitable polyurethane foam preforms before sealing.

- 2. Tape along the sides of the joint.
- 3. Insert the cartridge into the cartridge gun, open it, screw on the nozzle and cut off the tip to obtain a sufficient opening.
- 4. Inject plenty of sealant into the joint cavity.
- 5. Smooth with a spatula moistened with Smooth within 5 minutes of application, exerting pressure to eliminate air pockets.
- 6. Remove adhesive tape

Sealing can be done on both sides of the wall or only on the side not exposed to fire in the event of a fire (see tables on previous page). Certified joints must in any case follow the geometry given in the official product classification reports.

TECHNICAL SPECIFICATIONS

PARAMETER AND TEST METHOD	VALUE
Density (ISO 1183-1)	1,482 g/ml
Application temperature	+5 °C to +40 °C
Skin-over time at 23 °C (MIT 33*)	approx. 80 minutes
Hardening rate from the outside to the inside at 23 °C (MIT 32*)	approx. 2 mm in 24 hours
Standard operating temperature	-50 °C to +150 °C
Shore A hardness (DIN 53505)	approx. 30
Elongation at break (DIN 53504 – S3)	460 %
Tensile strength at break (DIN 53504 -S3)	0,72 N/mm²
Modulus of elasticity at 100 % (DIN 53504 -S3)	0,38 N/mm²
Elongation at break (EN ISO 8339/A – aluminium substrate – A _{up} at 23 °C)	270 %
Tensile strength at break (EN ISO 8339/A – aluminium substrate – A _{up} at 23 °C)	0,27 N/mm²
Modulus of elasticity at 100 % (EN ISO 8339/A – aluminium substrate – A _{up} at 23 °C)	0,22 N/mm²
Elongation at break (EN ISO 8339/A – aluminium substrate – A _{up} at -30 °C)	270 %
Tensile strength at break (EN ISO 8339/A – aluminium substrate – A _{up} at -30 °C)	0,74 N/mm²
Modulus of elasticity at 100 % (EN ISO 8339/A – aluminium substrate – A _{up} at -30 °C)	0,53 N/mm²
Maximum operating elongation	25 %
Fire resistance class (EN 13501-2)	up to El 240
Fire reaction class (EN 13501-1)	B-s2,d0
Resistance to acids	very high
Alkali resistance	very high
Odor after cross-linking	odorless

* Torggler Internal Methods are available on request.	
Color	Grey 7045
Packaging	cartridge
Packaging size	24x310 ml

CONSUMPTION

ESTIMATED CONSUMPTION		
JOINT THICKNESS X DEPTH (MM)	CONSUMPTION PER METER	METERS COVERED WITH ONE CARTRIDGE
10×10	100 ml	3,1
20×10	200 ml	1,55
30×20	600 ml	0,51
40×20	800 ml	0,38
50×30	1500 ml	0,20

STORAGE

Store Silicone Fire Resistant in a cool, dry place. Stored in these conditions the product will keep for at least 12 months. Partly used cartridges can be stored for approx. 3 months provided they are tightly closed.

CERTIFICATIONS

The declarations of performance (DoP) are available upon request.

LEGEN	FOR CLASSIFICATION ACCORDING TO EN 15651
F	Sealant for non-structural joints for the building trade, on facades. (F = facade elements)
INT	Sealant for internal use only.
EXT- INT	Sealant for internal and external use.
CC	Sealant tested for cold climates. (CC = cold climate - testing done at -30 $^{\circ}$ C)
G	Sealant for non-structural joints on glazing and door and window frames. (G = glazing)
S	Sealant for non-structural joints in bathroom installations. (S = sanitary joints)
XS	Sealant for joints in bathroom installations with improved performance.
PW	Sealant for non-structural joints on pedestrian walkways. (PW = pedestrian walkways)

The information contained in this document is reported on the basis of our experience and knowledge; therefore, any recommendations and suggestions made are without any guarantee and must be verified before using the product by those who intend to use it, who assume all responsibility that may result from its use since the conditions of use are not under our direct control. In case of doubt, it is always advisable to make preliminary tests and/or ask for the intervention of our technicians. Torggler reserves the right to modify, replace and/or delete the items, as well as to change the product data in this document without prior notice; in this case the indications given here may no longer be valid. Always refer to the latest version of the data sheet, available at www.torggler.com. Version 01.07.2024.

Pallet