

## Dow Corning Firestop 700



### Features and Benefits

- Meets BS 476 Part 22
- Excellent un-primed adhesion to most porous and non-porous construction substrates
- Non-slump
- Joint movement capability  $\pm 50\%$
- Neutral cure
- Halogen-free
- A fire rating of up to 4 hours can be achieved
- Widely tested to many European specifications
- Tack-free in 1.5 hours
- Excellent weathering characteristics, including resistance to ozone, UV radiation and temperature extremes
- Long service life

### Application

- Sealing of expansion joints and pipe and cable penetrations in fire rated structures
- For the provision of fire rated systems where expansion joints or penetration seals are required in curtain walling, building façades or partition walls

### Masking

- Areas adjacent to the joints should be masked with tape to prevent contamination of the substrates and to ensure a neat sealant line
- Masking tape should be removed immediately after tooling

### Usage Life and Storage

- When stored in cool, dry conditions below 30°C (86°F) in the original unopened containers, Dow Corning Firestop 700 Sealant has a usable life of 12 months from the date of production

### Finishing

- The joint should be tooled within 5 minutes of application to ensure good contact between the sealant and the substrate
- Tooling of the sealant also gives a smooth, professional finish

### Packing

- 310ml cartridges packed in boxes of 12

### Description

Dow Corning Firestop 700 Silicone Sealant is a low modulus, one-part, neutral curing, fire-rated silicone sealant. It has excellent unprimed adhesion to a range of common construction substrates including stone, steel, masonry, brick, wood, etc. It is ideal for weather-sealing of curtain walling, building façades and expansion joints where a fire rating is required. It is also suitable for use in penetration sealing systems where pipes and cables pass through fire rated structures.

### Limitations

- Should not be used against substrates that bleed oils, plasticisers or solvent
- Not intended for use as the structural seal in any application
- This product is neither tested nor represented as suitable for medical or pharmaceutical uses

**Consult Dow Corning's Technical Service Department for further advice in specific applications.**

This technical data sheet replaces all previous editions. The data on this sheet have been compiled according to the last laboratory report. Technical characteristics can be changed or adapted. We are not responsible for any incomplete information. Before use, one needs to ensure that the product is suitable for his application. Therefore tests are necessary. Our general conditions apply.

# Dow Corning Firestop 700

## Joint Design

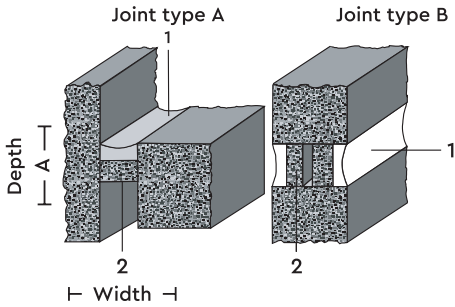


Figure 1: Typical joint configurations

### Legend

- Dow Corning® Firestop 700 Silicone Sealant
- Backing material
- When designing joints using Dow Corning Firestop 700 Sealant, the minimum width should be 6mm
- For joints between 6–12mm wide, a seal depth of 10mm is recommended
- Attainment of specific fire ratings is dependent on the joint configuration (Detailed information is given in Table 2)
- Expansion joint types that have been tested are shown in Figure 1. The type of joint selected will depend on fire requirements for the project and aesthetics of the building

### Penetration Design

- Dow Corning Firestop 700 Sealant has been developed for use in small penetration seal applications where it should be used in conjunction with specified backing material
- Dow Corning Firestop 700 Sealant can also be used Ref. no. 62-0905C-012 in conjunction with other Firestop products such as Dow Corning® Firestop 800 Self-Levelling Silicone Sealant or larger penetrations, Dow Corning® Firestop 3-6548 Silicone RTV Foam should be used
- Attainment of specific fire ratings is dependent on the joint configuration

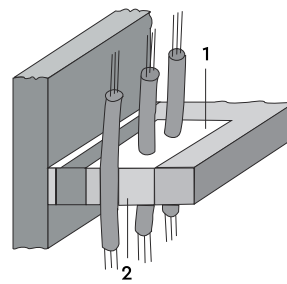


Figure 2: Cable penetration

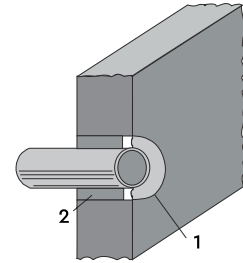


Figure 3: Pipe penetration

### Legend

- Dow Corning® Firestop 700 Silicone Sealant
- Backing material

### Fire Ratings

- Fire test data is available illustrating that Dow Corning Firestop 700 Sealant can achieve up to a 4 hour fire rating at specified joint and penetration configurations
- The test data provides a good indication of the expected performance of the sealant in fire situations
- Users should satisfy themselves that specific applications for which Dow Corning Firestop 700 Sealant is proposed are suitable and testing of a particular system may be required
- To achieve any specific fire rating, all substrates being used in the system must have at least an equivalent fire rating

### Adhesion

- Dow Corning Firestop 700 Sealant has excellent adhesion to most common construction substrates
- Cement or concrete should be primed with Dow Corning® Primer for optimum adhesion
- Dow Corning will carry out specific adhesion and compatibility testing on individual substrates to ensure that correct recommendations can be made

If there is any doubt concerning any aspect of the use of Dow Corning Firestop 700 Sealant, users are strongly advised to contact Dow Corning's Technical Services Department.

This technical data sheet replaces all previous editions. The data on this sheet have been compiled according to the last laboratory report. Technical characteristics can be changed or adapted. We are not responsible for any incomplete information. Before use, one needs to ensure that the product is suitable for his application. Therefore tests are necessary. Our general conditions apply.

# Dow Corning Firestop 700

## Test Method

Property (As supplied)	Unit	Value
Slump	mm	Max. 1
Working time	minutes	15
Application temperature	°C/°F	°C (+5 to +40) °F (+41 to +104)
Tack-free time (23°C or 73°F, 50% R.H)	Hours	1.5
Cure rate (+23°C/+73°F, 50% R.H) 1 day	mm	After 1 day: 2
Joint movement capability	%	±50

## Back Up Materials

- Backer materials have been evaluated in various joint designs, these being closed-cell polyethylene foam backer rod, ceramic fiber and mineral wool
- In penetration sealing applications, mineral wool has been evaluated
- Depending on the fire rating required and the joint/penetration design, the most suitable system can be selected by referring to the rating tables

## Substrate Preparation

- Ensure that all surfaces are clean, dry, sound and free from frost
- Clean all joints of release agents, water repellents, laitance, dust, dirt, old sealants and other contaminants which could impair adhesion
- Metal surfaces should be cleaned and degreased by wiping with a suitable solvent using an oil and lint-free cloth

**Note:** When using any solvent, always provide adequate ventilation. Avoid heat, sparks and open flames. Observe and follow all precautions listed on solvent container label or Product Safety Data Sheet.

Dow Corning Firestop 700 Sealant should not be applied to surfaces that are below 5°C (41°F) as it is impossible to guarantee a dry, frost-free surface at these temperatures.

For further advice on cleaning specific substrates please contact Dow Corning's Technical Services Department.

## Handling Precautions

- Product safety information required for safe use is not included. Before handling, read product and safety data sheets and container labels for safe use, physical and health hazard information

## Health and Safety

- To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Health, Environment and Regulatory Affairs specialists available in each area

This technical data sheet replaces all previous editions. The data on this sheet have been compiled according to the last laboratory report. Technical characteristics can be changed or adapted. We are not responsible for any incomplete information. Before use, one needs to ensure that the product is suitable for his application. Therefore tests are necessary. Our general conditions apply.

# Dow Corning Firestop 700

**Table 1**

**Estimating Sealant Requirements**

Width		6mm	10mm	15mm	20mm	25mm
Depth	10mm	5.2	3.1	2.1	1.0	-
	15mm	-	2.1	1.4	1.0	0.8
	20mm	-	1.6	1.0	0.8	0.6

**Table 2**

**Fire rating Test Reports J82973/1 and J86464/1**

Width		Depth	Backer		Joint Configuration	Rating	Sealant position
6mm	x	10mm	25mm	CF	A	2 hours	NFS
10mm	x	10mm		PE	A	1 hour	NFS
10mm	x	10mm	25mm	MW	A	2 hours	NFS
10mm	x	10mm (Double joint)		PE	B	3 hours	FS + NFS
10mm	x	10mm (Double joint)	25mm	MW	B	4 hours	FS + NFS
10mm	x	15mm	25mm	MW	A	3 hours	NFS
10mm	x	20mm	25mm	CF	A	4 hours	NFS
15mm	x	10mm	25mm	MW	A	2 hours	NFS
15mm	x	15mm	25mm	CF	A	3 hours	NFS
15mm	x	15mm (Double joint)	25mm	CF	B	4 hours	FS + NFS
15mm	x	20mm	25mm	CF	A	4 hours	NFS
20mm	x	10mm	25mm	MW	A	2 hours	NFS
20mm	x	15mm	25mm	CF	A	3 hours	NFS
20mm	x	20mm		PE	A	2 hours	NFS
20mm	x	20mm	25mm	CF	A	4 hours	NFS
20mm	x	20mm (Double joint)		PE	B	4 hours	FS + NFS
25mm	x	15mm	25mm	CF	A	3 hours	NFS
25mm	x	20mm	25mm	CF	A	4 hours	NFS
10mm	x	10mm		PE	A	2 hours	FS
10mm	x	10mm	25mm	MW	A	2 hours	FS
20mm	x	10mm		PE	A	1 hours	FS
25mm	x	10mm	25mm	MW	A	2 hours	FS
25mm	x	20mm		PE	A	2 hours	FS

This technical data sheet replaces all previous editions. The data on this sheet have been compiled according to the last laboratory report. Technical characteristics can be changed or adapted. We are not responsible for any incomplete information. Before use, one needs to ensure that the product is suitable for his application. Therefore tests are necessary. Our general conditions apply.

# Dow Corning Firestop 700

**Table 3**

**Fire rating Test Report J82973/2**

Penetration Size		Services	Penetration design		Insulating rating	Integrity rating
150mm	x	150mm	100mm Ø steel pipe	10mm FS 700 + 75mm mineral wool	1 hour	4 hours
150mm	x	150mm	25mm Ø steel pipe	10mm FS 700 + 75mm mineral wool	2.5 hours	4 hours
150mm	x	150mm	25mm Ø cable	20mm FS 700 + 25mm mineral wool	1 hour	2 hours
150mm	x	150mm	25mm Ø steel pipe	20mm FS 700 + 75mm mineral wool	4 hours	4 hours
150mm	x	150mm	1.25mm cable, 4×12.5mm cable	10mm FS 700 + 75mm mineral wool	1.5 hours	4 hours
150mm	x	150mm	1.25mm cable, 4×12.5mm cable	20mm FS 700 + 75mm mineral wool	4 hours	4 hours
150mm	x	150mm	None	10mm FS 700 + 75mm mineral wool	1.5 hours	4 hours
150mm	x	150mm	None	20mm FS 700 + 50mm mineral wool	1.5 hours	4 hours
50mm	Ø	150mm	25mm cable	20mm FS 700 + 25mm mineral wool	4 hours	4 hours
50mm	Ø	150mm	None	20mm FS 700 + 25mm mineral wool	4 hours	4 hours

**Table 4**

**Fire rating Test Report 86K40074B**

Substrate	Penetration Size	Penetrate	Sealant depth	Backing material	Sealant position	Fire rating
Gypsum board lightweight wall	Sleeve 160mm Ø, galvanised steel 0.8mm thick	Two cables EKKJ 3×10×10mm <sup>2</sup> 1KV Cu Core	12mm	114mm CF	NFS	60 minutes
Gypsum board lightweight wall	Sleeve 160mm Ø, galvanised steel 0.8mm thick	Two cables EKKJ 3×10×10mm <sup>2</sup> 1KV Cu Core	2 × 12mm	102mm CF	FS + NFS	60 minutes
Gypsum board lightweight wall	450mm Ø, galvanised steel 0.8mm thick	Ventilation Duct 400mm Ø	2 × 12mm	98mm CF	FS + NFS	60 minutes
Gypsum board to concrete	300mm wide joint	None	12mm	110mm	FS or NFS	60 minutes
Concrete floor	400 × 400mm	48.3mm Ø Mild steel pipe 2.6mm thick	12mm	138mm CF	NFS	60 minutes

This technical data sheet replaces all previous editions. The data on this sheet have been compiled according to the last laboratory report. Technical characteristics can be changed or adapted. We are not responsible for any incomplete information. Before use, one needs to ensure that the product is suitable for his application. Therefore tests are necessary. Our general conditions apply.

## Dow Corning Firestop 700

**Table 5**

**Fire rating Test Report 86.27492**

Substrate	Penetration Size	Penetrate	Sealant depth	Backing material	Sealant position	Fire rating
Concrete	333mm x 200mm 2 x type	Cables 2 x type 88-448/88 Cu 1 x type 88-224/4 Cu	12mm	110mm CF	NFS	60 minutes insulation >120 integrity
Concrete	333mm x 200mm	Cables 1 x type 88-448/88 Cu 1 x type 88-224/4 Cu	12mm	110mm CF	NFS	60 minutes insulation >120 integrity
Concrete	200mm Ø	NB80 Mild steel pipe 60mm Ø	12mm	110mm CF	NFS	60 minutes insulation >120 integrity

### Key

FS: Fireside of test furnace

NFS: Non-fireside of test furnace

CF: Ceramic fiber, aluminum silicate blanket of 128kg/m<sup>3</sup> nominal density

MW: Mineral wool of 100kg/m<sup>3</sup> nominal density

PE: Closed-cell polyethylene foam of 35kg/m<sup>3</sup> nominal density

Ø: Outside diameter

### Technical Specifications and Standards

Dow Corning Firestop 700 Sealant has been tested to BS 476 Part 22/1987 in expansion joint configurations, Fulmer Yarsley Test

Report No. J82973/1 and SGS Test Report No. J86464/1

It also has been tested to BS.476 Part 22/1987 (ISO 834) in pipe and cable penetration systems, Fulmer Yarsley Test Report No. J82973/2 It meets ISO 11600-F&G-25LM

Dow Corning Firestop 700 Silicone Sealant has been tested and approved for use according to the following European standards:

Centre Scientifique du Bâtiment (CSTB) Test:M1. One hour fire rating on pipe and power cable penetrations Report No. 88.27492

It meets the requirements of DIN 4102 as a class B1 material and SNJF category 1 sealants

It meets the requirements of DIN 18545, T2 and Class E of DIN 18540, T2, ISO 11600-F&G-25LM

This technical data sheet replaces all previous editions. The data on this sheet have been compiled according to the last laboratory report. Technical characteristics can be changed or adapted. We are not responsible for any incomplete information. Before use, one needs to ensure that the product is suitable for his application. Therefore tests are necessary. Our general conditions apply.