Technical Data Sheet

# DOWSIL™ FIRESTOP 400 Sealant

One-part intumescent acrylic rubber

## Features & Benefits

- A fire rating of up to 2 hours can be achieved
- Class 2 surface spread of flame classification
- Mean toxicity index 2.0
- Good unprimed adhesion to most common construction substrates
- Easy to use, one-component sealant

## Applications

- For internal perimeter pointing around door and window frames, where the integrity of fire walls need to be maintained, and in the small joints formed where fire rated partition sections meet.

## Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

| Property | Unit | Result |
|---|---|---|
| **As supplied** | | |
| Physical form | | Non-slumping paste |
| Slump | mm | 0.5 |
| Tack-free time | minutes | 30–45 |
| UV resistance | | Good |
| Joint movement capability | % | ±7.5 |

## Description

DOWSIL™ FIRESTOP 400 Sealant is a one-part, fire rated intumescent acrylic sealant designed for internal perimeter pointing of fire rated door and window frames, where the integrity of fire walls or partitions need to be maintained. It has good adhesion to a wide variety of substrates without the use of primer. It has intumescent qualities which enable the material to swell under heat conditions producing a fire and smoke resistant seal. DOWSIL™ FIRESTOP 400 Sealant does not emit halogenated byproducts under fire conditions.

## Technical Specifications and Standards

DOWSIL™ FIRESTOP 400 Sealant has been tested to BS 476 Part 22/1987 in joint configurations SGS (UK) Ltd. Test report No. J89325/1.

DOWSIL™ FIRESTOP 400 Sealant meets Class 2 of BS 476 Part 7/1987 for surface spread of flame, SGS (UK) Ltd. Test report No. J90327/2. DOWSIL™ FIRESTOP 400 Sealant has a mean toxicity index of 2.0 when tested according to NES713, SGS (UK) Ltd. Test report No. J90726/2.





Form No. 10-0910-01 F

## Fire Ratings

Fire test data is available showing that DOWSIL™ FIRESTOP 400 Sealant can achieve up to a 2 hour fire rating at specified joint configurations. The fire ratings achieved have been tested according to BS 476 Part 22/1987 and are specific to the conditions of testing. They do, however, provide a good indication of the expected performance of the sealant in fire situations. DOWSIL™ FIRESTOP 400 Sealant has been tested to BS 476 Part 7/1987 in accordance with the flame spread classification given in this standard. Results show the material has a Class 2 surface.

Users should satisfy themselves that DOWSIL™ FIRESTOP 400 Sealant is suitable for their specific application. Testing of a particular system may be required. To achieve a specific fire rating, all substrates being used in the system must have an equivalent fire rating.

## Joint Design

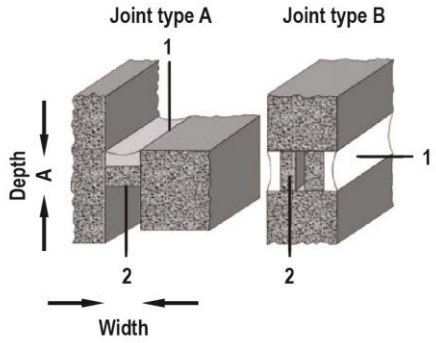


**Figure 1:** Test joint configurations

Legend
1. DOWSIL™ FIRESTOP 400 Sealant
2. Backing material

When designing joints using DOWSIL™ FIRESTOP 400 Sealant, the minimum width should be 6 mm. Attainment of specific fire ratings is dependent on the joint configuration. Detailed information is given in Table 1.

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.

For additional information or assistance, please contact your local technical services department.

**Table 1:** Fire rating.
All tests were carried out with sealant on fire side of furnace.

| Width | Depth | Backing material | Joint type | Integrity rating |
|---|---|---|---|---|
| Joint Size | | | | |
| 6 mm | x 6 mm | PE Foam | A | 1 hour |
| 10 mm | x 6 mm | PE Foam | A | 1 hour |
| 10 mm | x 10 mm | PE Foam | A | 2 hours |
| 15 mm | x 15 mm | PE Foam | A | 2 hours |
| 20 mm | x 15 mm | PE Foam | A | 1 hour |
| 20 mm | x 10 mm | 25 mm Mineral wool | A | 2 hours |
| 10 mm | x 6 mm | 25 mm Mineral wool | A | 2 hours |
| 10 mm | x 10 mm | 25 mm Mineral wool | A | 2 hours |
| 6 mm | x 6 mm | PE Foam | B | 2 hours |
| 10 mm | x 10 mm | PE Foam | B | 2 hours |
| 20 mm | x 10 mm | PE Foam | B | 2 hours |

- PE Foam = Closed-cell polyethylene backer rod (Nominal density 35 kg/m³)
- Mineral Wool = Nominal density 100 kg/m³
- When specifying DOWSIL FIRESTOP 400 Sealant in situations where wooden door or window frames require sealing, note should be taken of the burn rates of the timber used.
- Depending on the fire rating required and the wood used, a double joint (joint type B) may be required.

## Joint Design (Cont.)

### Joint Preparation

#### Cleaning

Ensure that all surfaces are clean, dry, sound and free from frost. Clean all joints of loose dust, dirt, laitance, old sealants and other contaminants which could impair adhesion.

Surfaces should be cleaned and degreased by wiping with a solvent, such as DOWSIL™ R-40 Universal Cleaner, using a lint- and oil-free cloth.

Note: When using any cleaning 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.

It is recommended that DOWSIL™ FIRESTOP 400 Sealant is not applied to surfaces that are below 5°C (41°F) as it is impossible to guarantee a frost-free surface at these temperatures.

#### Adhesion

DOWSIL™ FIRESTOP 400 Sealant has excellent adhesion to most common construction substrates. If in doubt, or if unusual substrates are involved, please contact your local technical services department.

## Joint Design (Cont.)

**Back-up materials**
Closed-cell polyethylene foam backer rod or mineral wool should be used as specified in the fire test data.

**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.

**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.

**Clean-up**
Uncured material can be removed by wiping with a dampened cloth. Cured material can be carefully removed by abrasion or other mechanical means.

## Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

## Usable Life and Storage

When stored between 5°C (41°F) and 23°C (73.4°F) in the original unopened containers, DOWSIL™ FIRESTOP 400 Sealant has a usable life of 12 months from the date of production.

## Packaging Information

United Kingdom: DOWSIL™ FIRESTOP 400 Sealant is available in 380 ml cartridge, (packed in boxes of 20) in white and grey.

## Limitations

DOWSIL™ FIRESTOP 400 Sealant is not recommended for external applications and has not been tested for use as a penetration seal.

It should not be applied to building materials that bleed oils, plasticisers or solvents. It is recommended to consult your local technical services department for further advice in specific applications.

All acrylic based sealants are susceptible to a degree of shrinkage. This should be taken into account when applying the material.

DOWSIL™ FIRESTOP 400 Sealant is not intended to be commercialized in the United States.

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

## Health And Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, consumer.dow.com or consult your local Dow representative.

**Table 2:** Estimating sealant requirements.

Linear meters per 380 ml cartridge.

| Width | | 6 mm | 10 mm | 15 mm | 20 mm |
|---|---|---|---|---|---|
| **Depth** | **6 mm** | 0.5 | 6.3 | – | – |
| | **10 mm** | – | 3.8 | 2.0 | 1.9 |
| | **15 mm** | – | 2.5 | 1.6 | 1.2 |

Linear meters per 310 ml cartridge.

| Width | | 6 mm | 10 mm | 15 mm | 20 mm |
|---|---|---|---|---|---|
| **Depth** | **6 mm** | 8.6 | 5.1 | – | – |
| | **10 mm** | – | 3.1 | 2.5 | 1.5 |
| | **15 mm** | – | 2.0 | 1.3 | 1.0 |

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