

STS ST88 FR ACRYLIC MASTIC

TECHNICAL DATA SHEET



General Product Description

STS ST88 is a one part fire stopping gun grade joint sealant. It is emulsion acrylic based and gives a firm yet flexible seal to joints in a variety of fire rated structures. It will not support combustion and when subjected to heat, chars and intumesces preventing the spread of smoke and fire through the joint.

In ensuring that flame and intumescent properties are maintained, most currently available sealants sacrifice sealing performance. ST88 has been formulated to give improved sealing and application performance coupled with excellent fire-stopping properties. It is also designed for sealing joints, voids and irregular holes in fire walls, floors, partitions and other structures and for maintaining their integrity when sealing around pipes and cables that penetrate them. It is also ideally suited for internal perimeter pointing of fire-rated door and window frames.

ST88 is a 4 hour rated intumescent sealant formulated with fillers that provide noise reduction. The sealant has undergone test to BS476: Part 20:1987, BS476: Part 22:1987 and BSEN 1366-3 with additional guidelines from BS EN 1366-4 for fire protection joints and testing in accordance with BS EN ISO 140-3:1995 for acoustic performance.

Properties

- Fire rated in both horizontal & vertical joints
- No priming required for most construction substrates
- Joint movement capability of 12.5%
- For use in joints up to 50 mm wide
- Excellent slump resistance
- 12 months shelf life
- Fast cure - tack free within an hour
- Easy to apply and tool off
- Halogen free
- Paintable
- Excellent adhesion to most common building substrates
- Reduces sound transmission in joints

Application Instructions

All surfaces must be clean and sound, free from dirt, grease. The surfaces may be damp but not running wet. Use mechanical abrasion to clean porous surfaces before application to remove loose material.

For internal cracks in plaster etc. the shoulders of the crack should be widened to a minimum of 3mm to 4mm to ensure adequate penetration and performance. For internal sealing around door and window frames and skirting boards a 10mm fillet is recommended.

Particular attention should be paid to BS6093 (1993) - codes of practice for design of joints and jointing in building construction when preparing a specification for a particular joint. In order to obtain maximum performance as a sealant the width of the joint should be twice the depth, and the use of backing material is strongly recommended e.g. polyethylene backer rod, mineral wool.

Preparation

Prepare joint by cleaning and priming if necessary. Cut nozzle to the desired angle and gun firmly into the joint to give a good solid fill. Strike off the sealant flush with the joint sides within five minutes of application, before surface skinning occurs. A small amount of shrinkage will occur on curing. If a flush finish is required, fill the joint slightly proud of the surface to allow for shrinkage.

Properties

Joint size in mm	3x6	6x6	9x6	12x6	20x10	7x7 fillet	10x10 fillet
Linear Metres / Cartridge	17.2	8.6	5.7	4.3	1.5	12.6	6.2

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Emission data (indoor air quality)

Compound	Emission rate after 3 days	Emission rate after 4 weeks
TVOC	14 µg/m ³	< 5 µg/m ³
TSVOC	< 5	< 5 µg/m ³
VOC w/o NIK or CLI	7.4	< 5 µg/m ³
R Value	0.0089	0
Formaldehyde	< 3 µg/m ³	< 3 µg/m ³
Acetaldehyde	< 3 µg/m ³	< 3 µg/m ³
Sum for+ace	< 5 µg/m ³	-
Carcinogenic	< 1 µg/m ³	< 1 µg/m ³

Typical Fire Rating

The following fire ratings have been achieved in controlled test work*

Joint Substrates	Orientation	Joint Integrity (minutes)	Insulation (minutes)
Masonry/Masonry	Wall Joint	240	240
Masonry/Masonry	Floor Joint	240	180
Gypsum Drywall	Wall Joint	120	120
Gypsum Drywall	Penetration	120	120
Concrete Floor	Penetration	240	240

The above results show typical integrity levels of the product in a fire situation, however, each joint situation will have different characteristics and therefore different fire ratings. In general it has been found that a greater depth of sealant will provide greater integrity and that the use of a double seal i.e. sealant applied at both external faces of a joint will increase values further*

Technical Data

Form	Ready to use thixotropic paste
Specific Gravity	1.60 - 1.64
Flash point	None
Tack Free Time	60 minutes maximum
Skin Time	20 minutes maximum
Solids Content	80% minimum
Movement Accommodation	Low to medium 12.5% butt joints
Shelf life	Up to 12 months when stored in unopened cartridges under cool dry conditions. Avoid temperatures above 30°C & below 5°C
Service temperature	-20 to +70°C
Application temperature	+5 to +30°C
Compatibility	Can be used in contact with most building and decorating materials
Classification	Sealant ISO 11600 - F - 12,5P
Acoustic Rating	40(-3;-8)dB Rw(C;CTr) BS EN ISO 717-1:1997

Health and Safety

Wash the material from the skin while still wet. Material in contact with eyes should be washed out immediately with water. Seek medical advice if discomfort persists. More detailed information can be found in the relevant STS Safety Data Sheet.

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