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Waterproofing Supplies

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TECHNICAL DATASHEET

Fyreguard Modified Silicone MS20

One-part low modulus construction sealant
Free of solvent and isocyanates
ISO 11600 F 25 LM certified

Description

Fyreguard Modified Silicone MS20 is a one-part Silyl-Terminated Polymer permanently elastic construction sealant. It is a low modulus sealant with excellent adhesive properties and resistance to ageing and weathering. Suitable for sealing of expansion and construction joints in vertical and horizontal applications. It is especially formulated for movement and connection joints on porous and non-porous substrates, where excellent weather ability and highest UV resistance are required

Approvals/ standards

- EN 15651-1 Type F EXT-INT CC
- EN 15651-4 Type PW EXT-INT CC
- ISO 11600 Type F, class 25, sub-class LM

Areas of Application

Fyreguard Modified Silicone MS20 is suitable for joint sealing of movement and connection joints between the same or different substrates i. e. for concrete, steel and other metals, brick etc
Typical applications are vertical and horizontal dilatation joints, connection joints, metal roof sealing, window and door perimeter joints, facade and metal cladding joints applications.

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Advantages

- Environmental friendly – Free of isocyanates and solvents
- No Hazard symbol required
- No bubble formation - Odorless
- Permanently elastic over a wide range of temperatures
- Accommodates joint movement of +/- 25%
- Excellent resistance to ageing and weathering; color stable and non-yellowing
- Silicone-free; overpaintable
- Excellent primerless adhesion on all typical construction materials and substrates
- Easy to gun with excellent tooling consistency
- Non-sag - Exceptional thixotropy

Technical data

Appearance	Thixotropic paste
Colour	White, Grey
Chemical nature	SiMP - Silyl Terminated Polymer
Curing Mechanism	Moisture-curing
Curing through volume [mm] (after 1 day at 23°C and 50% r.h.)	> 2.0
Shore A hardness [N/mm^2]	15-20
Density [g/cc]	1,49 ± 0,02
Tack-free time [min] (23°C and 50% r.h.)	70-120
Elastic modulus at 100% [N/mm^2] (ISO 37 DIN 53504)	< 0,35
Tensile strength [N/mm^2] (ISO 37 DIN 53504)	≥ 1,0
Elongation [%] (ISO 37 DIN 53504)	≥ 550
Application temperature [°C]	from +5 to +40
Temperature Resistance [°C]	-40/+100, with brief points at +150

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Application

Surface preparation
Pre-test substrates for adhesion. Cleaners and/or primers may be required to achieve optimal adhesion. As a rule, the substrates must be prepared in accordance with the Fyreguard instructions; technical guidance regarding adhesion on specific surfaces may be obtained by submitting substrate samples for analysis to our laboratories. Surfaces must be clean, dry, free of water, oil, grease or rust and of sound quality. Remove all loose particles or residues with a jet of compressed air, sandpaper or hard brush. Glass, metal and other non-porous surfaces must be free of any coatings and wiped clean with solvent.

Fit sausage into applicator gun and extrude the adhesive/sealant carefully preventing air entrapment. Once opened, packs should be used up within a relatively short time.
The optimum operating temperature for both substrate and sealant is between 15°C and 25°C.

Chemical Resistance
Long term resistance to fresh water, seawater, limewater, caustic solutions and cleaning agents. Short term resistance to Petrol, grease and mineral oil. Not resistant to organic acids, concentrated mineral acids or solvents. This information is offered for general guidance only. Advice on specific applications will be given on request.

For sealing purposes
In order to guarantee free movement of the sealant in joints, it is imperative that the sealant does not adhere to the bottom of the joint, therefore for correct joint caulking, a closed-cell polyethylene bead (joint backing rod) is to be placed at the proper depth. Apply appropriate primer if required to joint sides and observe the waiting time to avoid that any trapped solvent can form bubbles in the uncured sealant due to rising temperatures. Firmly extrude sealant and apply in the joint making sure that it is in full contact with the sides of the joint and with the backing rod at the bottom. Keep the nozzle in the sealant, continue on with a steady flow of sealant preceding the nozzle to avoid air entrapment. Avoid overlapping of sealant to eliminate entrapment of air. Sealant should be tooled to a smooth finish ensuring a full contact to the sides and back up material into the joint, this will also contribute in breaking the air bubbles which may be formed inside the sealant. Masking tape should be used where sharp exact joint lines or exceptionally neat lines are required. Remove the tape whilst the sealant is still soft.

The joint width must be designed to suit the movement capability of the sealant. In general the joint width must be > 10 mm and < 35 mm. A width to depth ratio of 2 : 1 must be observed. Minimum joint width for perimeter joints around windows: 10 mm

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Finishing indications and limitations
Tooling and finishing must be carried out within the tack-free time of the sealant.
Fyreguard Modified Silicone MS20 can be over-painted. The paint must be tested for compatibility by carrying out preliminary trials. Attention must be observed with the use of alkyd-resin since they may interfere with the curing process of the sealant and reduce the drying time of the paint itself. It should be understood that the hardness and film thickness of the paint may impair the elasticity of the sealant and lead to cracking of the paint film.
Avoid exposure to high levels of chlorine (avoid sealing joints in chlorinated swimming pools). Avoid contact with alcohol and other solvent cleaners during cure. When applying sealant, avoid air-entrapment. Since system is moisture-cured, permit sufficient exposure to air. Bonded elements may require additional holding or support during curing period.
Do not use Fyreguard Modified Silicone MS20 on bituminous substrates, natural rubber, EPDM rubber or on building materials which might bleed oils, plasticizers or solvents which could attack the sealant.

Cleaning of equipment
Clean tools with acetone or alcohol immediately after use. Cured material can only be removed mechanically.

Personal protective measures
Keep out of reach of children. If skin contact occurs, remove immediately and wash with soap and water

Packaging
Alu- sausage 600 ml. 20 bags per box

Storage
Fyreguard Modified Silicone MS20 can be stored for 12 months in its original packing (unopened container) at 5°- 25°C in a cool, dry place. The storage temperature should not exceed 25°C for extended periods of time. Keep away from wet areas, direct sunlight and heat sources.

General Information
The information contained in this technical data sheet is to the best of our knowledge correct, being based on our knowledge and experience to date and cannot be used as a guarantee, due to the various different materials present on the market and the fact that the application conditions are not under our direct control and supervision. Fyreguard, however, guarantees constant product quality. Fyreguard, has the right to modify or up-date this technical data sheet according to requirements. Customers are kindly requested to verify that they are in possession of the latest version.

ALWAYS CONSULT THE MATERIAL SAFETY DATA SHEET BEFORE USING THE PRODUCT.