SOLIDFLEX MS SEALANT

Low Modulus One-Component MS Sealant

BENEFITS

>ASTM C920 (Class 25) Compliant: Ensures high performance in movement capability and durability.

>Excellent UV and Weather Resistance: Suitable for outdoor applications and long-term exposure.

>Paintable: Allows for aesthetic finishes after application.

>Low VOC Compliant: Environmentally friendly and safer for indoor use.

DESCRIPTION

SOLIDFLEX MS SEALANT is a general-purpose sealant based on advanced MS Polymer technology. It is a single-component elastomeric sealant with excellent adhesion property on various substrates like concrete. After curing, the sealant is permanently elastic and has a movement capability of ±50%.

It is able to comply with the stringent requirements of ASTM C920 as well as the SCAQMD rule #1168 (Architectural Sealant) for low VOC. Unlike polyurethane sealants, **SOLIDFLEX MS SEALANT** is solvent-less and isocyanate-free; ensuring that the cured sealant will not shrink or have bubbling issues. It is also free of silicone oil, minimising building aesthetic issues caused by oil-staining and dirt-streaking problems often associated with silicone sealants.

PHYSICAL & TECHNICAL DATA

Property	**Value**
Colors	White/ Grey/ Black/ Teak
Appearance	Non-sagging paste (before cure)
Consistency	Elastic rubber (after cure)
Density (Mixed)	1.53 – 1.68 g/mL
Compressive Strength	Not specified
Water Resistance	Excellent
Curing Time	Skin-form time 20–60 minutes at 25°C & 50% R.H.
Cure depth (24 hours) at 23 °C, 50% humidity	Approx. 3 mm
Operating Temperature	-20°C to +80°C

Property	**Value**
Curing system	Moisture curing
Elongation	>500 % (ASTM D412)
Tensile Strength	>1.0 N/mm² (ASTM D412)
Movement capability	±50 % (ASTM C719)
Shore A hardness	25 – 35 (ASTM C661)
Elastic recovery	>70 % (ISO 7389)
Slump	<1mm (ASTM D2202)
Low VOC compliant	Yes; <10 g/L (USEPA Method 24)

APPLICATION

Recommended for sealing concrete joints like precast wall panel joints, expansion joints, control joints, connection joints, etc. It is also ideal for window frame perimeter sealing especially when the sealant needs to be painted. Other recommended applications include sealing of GRC panel systems, anodized aluminium, masonry, porcelain, coated metal, finished wood, epoxy and polyester panels, UPVC, polystyrene, and stainless steel.

Disclaimer : *The image of product in the brochure is not necessary the same as actual.*

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HOW TO USE

Preparation

- Substrate surface must be dry and clean; free of dirt, grease, oil, or standing water.
- Use the two-cloth method to clean if surface is dirty.
- For a neat finishing, use masking tapes and remove it within the working time.
- 602 Primer is recommended for porous substrates such as concrete for excellent adhesion.
- For sealant designs with depths of over 10 mm, use approved backing materials.

Application Direction for Cartridges:

- Cut the cartridge tip carefully.
- Cut the nozzle into an appropriate diameter at an angle of approximately 45° to 60°.
- Use a caulking gun and extrude the sealant with a single bead.
- Tool the sealant bead with a clean and dry tool before the sealant skins for a smooth finishing.

Application Direction for Sausages:

- Cut the tip of the sausage carefully and slip it into the caulking gun.
- Cut the nozzle into an appropriate diameter at an angle of approximately 45° to 60°.
- Place the nozzle into the caulking gun and screw tight.
- Extrude the sealant with a single bead.
- Tool the sealant bead with a clean and dry tool before the sealant skins for a smooth finishing.

CLEANING

- Wet sealants can be cleaned up with acetone or mineral spirits.
- Cured sealants can only be removed mechanically.

JOINT DESIGN

- Joint dimension should be designed by taking into consideration the movement capability of the sealant and the anticipated joint movement
- Generally the joint width-to-depth ratio is 2:1 for joint width ≥12 mm, or 1:1 for joint width <12 mm
- Joint width: minimum = 6 mm, maximum =35 mm *
- Joint depth: minimum = 6 mm, maximum = 12 mm

* Sealing joints with larger joint width is possible but sealant may sag in vertical applications.

LIMITATIONS

Not recommended for the following applications:

- Below waterline or permanent water immersion.
- Outdoor sealing/bonding adjacent to glass substrates.
- Polyethylene, polypropylene, polytetrafluoro ethylene (Teflon), neoprene, and bituminous surfaces.
- Overcoated with:
  Alkyd resin paint - cure inhibition to the paint
  Chlorinated paint - staining issue
  Oil based paint - not compatible

COVERAGE

Width	*Depth*	*Coverage (290 ml) **	*Coverage (600 ml) **
6 mm	*6 mm*	*7.32 m*	*15.15 m*
10 mm	*10 mm*	*2.64 m*	*5.45 m*
20 mm	*10 mm*	*1.32 m*	*2.73 m*
25 mm	*12 mm*	*0.88 m*	*1.82 m*

* The coverage figures shown above are approximate lineal meter run based on 10% wastage assumption. Actual coverage may vary.

Calculation formula:
X / [(Y x Z) x 1.1] = Coverage
X = volume of cartridge (or sausage) in ml,
Y = joint width in cm, Z = joint depth in cm,
1.1 = 10% wastage assumption,
Coverage = lineal meter run in cm per cartridge (or sausage)

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SHELF LIFE & STORAGE

SOLIDFLEX MS SEALANT has a shelf life of **9 months when stored in a cartridge** and **12 months when stored in a sausage pack**. It should be kept in a **dry and cool environment with temperatures below 30°C** to maintain its quality. The recommended application temperature ranges from **5°C to 40°C**. Once cured, the sealant can withstand service temperatures ranging from **-20°C to 90°C**.

TECHNICAL SERVICES

While new advance and changes will take place but one thing will never change is quality and meeting special needs of our customers. Our technical personnel and experts are available to provide additional information and technical assistance. We are eager to work with you in development of new product and resolve your problem.

QUALITY ASSURANCE

SOLID manufactures the entire range of construction chemical under compliance of SIRIM and other international standards (ASTM, BS, GBI, LEED).

Disclaimer : *The information provided in the data sheets is based on both current development of work and years of field experience. Efforts are made to ensure that the information is reliable, however, we cannot accept the responsibility for any work carried out with our materials as we have no control over methods of application, site conditions etc. In view of continuing research and development (R&D) undertaken in our laboratories, we advise customers to ensure that the data sheets provided are not superseded by an updated publication. All products are sold are subject to our standard condition of sale, which is available on request. Field services, where provided, does not constitute supervisory responsibility. For additional information, please contact our local SOLID representative.*

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