SIMSEAL®

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SIMFLEX® 11FC

HIGH MODULUS ONE-COMPONENT MS SEALANT

Description

Simflex® 11FC High Performance MS Sealant is a high modulus sealant based on advanced MS Polymer technology. It is a single-component sealant with superior weathering, UV, and temperature resistance.
Specially formulated to achieve low VOC, Simflex® 11FC is able to comply with the SCAQMD rule 1168 (Architectural Sealant). It also gives good primer-less adhesion on most substrates.
Unlike polyurethane sealants, Simflex® 11FC is solvent-free 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.

Properties

- High modulus
- High strength structural bonding
- Good UV resistance
- Paintable
- Isocyanate-free – No air bubbling
- Solvent-free – No shrinkage
- Primerless bonding to most substrates

Technical Data

PROPERTY	VALUE	
Curing System:	Moisture curing	
Specific gravity:	1.44 g/mL	
Maximum tensile strength:	2.2 N/mm²	ASTM D 412
	0.70 N/mm² (7.6 kgf/cm²)	ISO 8339
Elongation at Break:	190 %	ASTM D 412
Lap shear strength:	2.1 N/mm²	ASTM D1002
Shore A hardness:	56	ASTM C661
Low VOC compliance:	Yes	SCAQMD Rule 1168
VOC content:	24.22 g/L	USEPA Method 24

Applicable Tests / Standards

Simflex 11FC meets the requirements of:

- Low VOC - USEPA Method 24 under SCAQMD Rule 1168

Application

Suitable for high strength sealing and bonding in construction, automotive, marine, and industrial applications It is specially formulated for structural joint that will be subjected to dynamic stresses. Ideal for bonding of plastics (nylon, PVC, ABS, polycarbonate, etc.), metals (stainless steel, aluminum, steel, copper, etc.), rubber (natural rubber, synthetic rubber, EPDM, etc.), natural materials (wood, plywood, leather, cloths, paperboard, etc.) and inorganic substrates (concrete, mortar, natural stone, tile, glass, porcelain, etc.)

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.
- Simprime is recommended especially for porous substrates such as concrete for excellent adhesion.

Packaging

600 ml sausages

BASE

One-component MS Polymer

PHYSICAL STATE

Soft paste

TACK-FREE/ SKIN-FORM TIME

4 – 15 minutes (at 25 °C & 50% R.H.)

PACKAGING

290 mL/cartridge (20 cartridges/carton)

SHELF LIFE

12 months

STORAGE

Store in a dry and cool place with temperature below 30 °C

APPLICATION TEMPERATURE

5 °C – 40 °C

SERVICE TEMPERATURE

-30 °C – 90 °C

WHITE GREY BLACK

1300 SILICONE
info@simseal.com.au
www.simseal.com.au

Application Direction

Two-cloth Method

1. Use a clean, lint-free, and absorbent cloth.
2. Pour an appropriate amount of solvent onto the cloth.
3. DO NOT dip the cloth into the solvent container as it could contaminate the cleaning solvent.
4. Wipe vigorously to remove any contaminant and check if there is any contaminant picked up.
5. Continuously wipe the surface until no contaminant is picked up.
6. Always rotate the cloth to make sure a clean area of the cloth is used to wipe the surface.
7. Immediately wipe the surface with solvent with a separate clean cloth. This will ensure that the surface to be free of any dirt or contaminant left by the first wipe.
8. Make sure that the surface is dried off completely before applying primer or sealant.

Choice of solvent

- The choice also solvent or cleaning agents used to clean the surface will affect the adhesion of sealant.
- Detergents and soap solutions should not be used as they will leave a film on the surface.
- On the other hand, oil-based solvents (mineral spirits, turpentine, kerosene, etc.) would leave oily stains on the substrates.
- 50% solution of isopropyl alcohol (IPA) and water is generally recommended to wipe minor surface contaminants.
- For tougher stains, use ketones such as acetone or methylethylketone (MEK).
- For oil and grease, MEK and toluene is recommended.
- Always test the solvent or cleaning agent on an inconspicuous area of the substrate, to make sure it will not damage the substrate.

Application

1. Surfaces must be clean, dry and free of dirt, grease, oil or water.
2. Surfaces should be cleaned with alcohol, M.E.K. or other suitable solvent. Do not use soap or detergent.
3. For a neat finishing, apply masking tape and remove it before sealant skins over.
4. Cut the tip off and puncture the internal foil seal with the nozzle. Cut the nozzle at 45° angle to desired bead-width and apply the sealant to substrate with a cartridge gun.
5. Tool the sealant before it skins.
6. Uncured sealant can be cleaned up with mineral spirits.

Limitations

Not recommended for the following applications:

- Below waterline or permanent water immersion.
- Outdoor sealing/bonding adjacent to glass substrates.
- Polyethylene, polypropylene, polytetrafluoroethylene (Teflon), neoprene, and bituminous surfaces.
- Overcoated with
  - Alkyd resin paint - cure inhibition to the paint
  - Chlorinated paint - staining issue
  - Oil based paint - not compatible
- Used in trafficable joints greater than 10 mm width. For trafficable joint above 10 mm width, a steel cover plate is required.

Clean Up

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

Caution

May cause an allergic skin reaction. Causes serious eye irritation. Harmful to aquatic life with long lasting effects. Avoid release to the environment. Wear protective gloves and eye protection. IF ON SKIN: Wash with soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If skin irritation or a rash occurs: Get medical advice/attention. If eye irritation persists get medical advice/attention. Contains aminosilane. May produce an allergic reaction. Safety data sheet available on request.

Legal Notes

Simseal® has made every effort to ensure accurate information but cannot be held liable for any losses or damages arising from its use, due to uncontrollable variations in processing and workmanship. Users should verify the product's suitability through their own testing.