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Technical Data Sheet

AS-4001 / AS-4001S
MS Construction Sealant

Physical Properties

Appearance:
Non-sagging paste
(before cure)

Elastic rubber
(after cure)

Colours:
White, grey & black

Tack-free time:
20 – 60 minutes

Application temperature:
5 °C to 40 °C

Service temperature:
-20 °C to 90 °C

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

Shelf life:
9 months (cartridge)
12 months (sausage)

Packaging:

Content	Quantity/ carton
290 mL cartridges	20
600 mL sausages	20

Description

ALSEAL MS Construction Sealant is a single-component, high-performance hybrid sealant based on advanced MS Polymer technology. It is formulated to meet the stringent requirements of various joint sealing applications.
Unlike Polyurethane sealants, its weathering resistance property is much better, therefore it has longer service lifetime. Also, its solvent-less and isocyanate-free formulation ensures 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. The adhesion of the sealant on a wide variety of substrates is great, and it is paintable with most types of common industrial paints.

Features

- Good Environmental Choice Australia (GECA) certified
- ASTM C920 (Class 50) compliant
- ISO 11600 (F Class 25 LM) compliant
- Better weathering resistance than PU sealants
- Paintable
- Low static charge – Less dirt streaking
- No silicone oil – Non-staining on adjacent substrates
- No isocyanate – No blistering
- No solvent – No shrinkage
- Bonds most substrates without primer

Applications

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.

Technical Data

Curing system	: Moisture curing
Density	: 1.54 g/mL
Maximum tensile at break (ASTM D412)	: 1.1 N/mm²
Elongation (ASTM D412)	: 600 %
Shore A hardness (ASTM C661)	: 33
Joint movement capability (ASTM C719)	: ±50 %
Elastic recovery (ISO 7389)	: > 70 %
Slump (ASTM D2202)	: < 1mm
VOC content (USEPA Test Method 24)	: < 10g/L
Cure depth (24 hours) at 23° C, 50% humidity	: Approx. 3 mm

Usage Instructions

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. 602 Primer is recommended for porous substrates such as concrete for excellent adhesion.
5. 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.
6. Tool the sealant before it skins.
7. Uncured sealant can be cleaned up with mineral spirits.
8. Use approved backing material for joints over 10 mm deep.

AS-4001 MS Construction Sealant

Clean Up

- 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.

Coverage

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

* 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

Limitation

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

Caution

Keep out of reach of children. Contains aminosilane. May produce an allergic reaction. Safety data sheet available on request. For further health and safety information, consult the latest safety data sheet.

Warranty Information

Alseal Marketing provides material warranty for a duration of 5 years if the product is used within its shelf life and in compliance with industrial standard application procedures. We disclaims liability for any consequential or incidental loss or damages caused by incorrect usage. The material warranty only covers the replacement of the product without the other costs incurred, if the failure is proven to be directly related to the product within the warranty period. Material warranty will only be available once customer submits all the necessary documents and information, and an official material warranty letter is issued by Alseal Marketing. Any claim of warranty shall be made directly to Alseal Marketing in writing. Alseal Marketing shall hold no responsibility until site inspection by representatives of Alseal Marketing to confirm the alleged failure has been carried out.

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