

Technical Data Sheet

AS-4005 / AS-4005S Green MS Sealant



Physical Properties

Appearance:
Soft paste

Colours:
White, grey & black

Tack-free time:
30 – 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 Green MS Sealant is a single-component, moisture-curing, elastomeric hybrid sealant that is based on advanced MS Polymer technology. Its weathering, UV, and temperature resistance characteristics are superior. It is a green sealant formulated to meet the low VOC regulation. It is solvent and isocyanate free hence guarantee no shrinkage and no bubbling. It is also free of silicone oil, minimizing building aesthetic issues caused by oil-staining & dirt-streaking problems of silicone sealants. The adhesion on various substrates is excellent even without primer, yet it is paintable with most types of common industrial paints.

Applications

Sealing concrete joints (precast wall panels, expansion joints, control joints, FRC boards, etc.), façade cladding (metal panels, natural stones, etc.), window frame perimeter, etc. Other applications sealing anodized aluminum, masonry, porcelain, coated metal, finished wood, epoxy and polyester panels, UPVC, polystyrene, and stainless steel.

Features

- ◆ ASTM C920 compliant
- ◆ ±25% movement capability
- ◆ Good UV resistance
- ◆ Paintable
- ◆ Low static charge – Less dirt streaking
- ◆ No silicone oil – Non-staining on adjacent substrate
- ◆ No isocyanate – No blistering
- ◆ No solvent – No shrinkage
- ◆ Bonds most substrates without primer

Technical Data

Curing system	: Moisture curing
Density	: 1.53 – 1.58 g/mL
Tensile at break (ASTM D412)	: >1.0 N/mm ²
Elongation at break (ASTM D412)	: >600 %
Lap shear strength (ASTM D1002)	: >0.5 N.mm ² (Al to Al)
Shore A hardness (ASTM C661)	: 25 – 35
VOC content (USEPA Test Method 24)	: <10g/L

Usage Instructions

- Surfaces must be clean, dry and free of dirt, grease, oil or water.
- Surfaces should be cleaned with alcohol, M.E.K. or other suitable solvent. Do not use soap or detergent.
- For a neat finishing, apply masking tape and remove it before sealant skins over.
- 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.
- Tool the sealant within 15 minutes of extrusion before it skins. Tack-free in 30 minutes.
- Uncured sealant can be cleaned up with mineral spirits.
- Use approved backing material for joints over 10 mm deep.

Clean Up

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



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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:

$$X / [(Y \times Z) \times 1.1] = \text{Coverage}$$

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
- ♦ Used in trafficable joints greater than 10 mm width. For trafficable joint above 10 mm width, a steel cover plate is required.

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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