

# Technical Data Sheet

## AS-4021 All Purpose Hybrid Sealant



### Physical Properties

**Appearance:**  
Soft paste

**Colours:**  
White, grey & black

**Tack-free / Skin-form time:**  
5 – 20 minutes  
(at 25 °C & 50% R.H.)

**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

#### Packaging:

Content	Quantity/ carton
290 mL cartridges	20

### Description

ALSEAL All Purpose Sealant is a single-component, high-performance sealant based on advanced MS Polymer technology. It is solvent, silicone and isocyanate free. It is excellent in UV, weather and temperature resistance. Its adhesion over a wide variety of substrates is very good, and is paintable with most types of common industrial paints.

### Features

- ◆ High strength and elastic
- ◆ Good UV resistance
- ◆ Paintable
- ◆ No isocyanate – No air bubbling
- ◆ No solvent– No shrinkage
- ◆ Bonds most substrates without primer

### Applications

Suitable for high strength sealing or bonding in construction, automotive, marine, and industrial applications. It works on various substrates like plastics, metals, rubber, natural materials (wood, polywood, leather, cloths, paperboard etc.) & inorganics (concrete, mortar, natural stone, tile, glass, porcelain etc.).

### Technical Data

Curing system	: Moisture curing
Density	: 1.49 g/mL
Maximum tensile at break (ASTM D412) (ISO 8339)	: >1.7 N/mm <sup>2</sup> : 0.60 N/mm <sup>2</sup> (6.2 kgf/cm <sup>2</sup> )
Elongation (ASTM D412)	: 290 %
Lap shear strength (ASTM D1002)	: 1.4 N/mm <sup>2</sup>
Shore A hardness (ASTM C661)	: 42
VOC content (USEPA Test Method 24)	: 52.39 g/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 before it skins.
- Uncured sealant can be cleaned up with mineral spirits.

### 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.



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## Coverage

Width	Depth	Coverage(290 ml) *
6 mm	6 mm	7.32 meter
10 mm	10 mm	2.64 meter
20 mm	10 mm	1.32 meter
25 mm	12 mm	0.88 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.

## Disclaimer

Every endeavour has been made to ensure that the information given herein is true and reliable but it is given only for the guidance of our customers. The company cannot accept any responsibility for the loss or damage that may result from the use of the information, due to the possibility of variations of processing or working conditions and of workmanship outside our control. Users are advised to confirm suitability of this product by their own tests.