



VITAL TECHNICAL SDN. BHD.

Technical Data Sheet

VT-621
All Purpose MS Sealant



Issuance date: 14/02/11

Revision date: 21/10/2024

Revision No.: 24-02

VT-621 All Purpose MS Sealant

Medium Modulus One-Component MS Sealant



BASE

One-component
MS Polymer

PHYSICAL STATE

Soft paste

STANDARD COLORS

(B10) Black
(G10) Grey
(W10) White

TACK-FREE/ SKIN-FORM TIME

5 – 20 minutes
(at 25 °C & 50% R.H.)

PACKAGING

290 mL/cartridge
(20 cartridges/carton)
600 mL/sausage
(20 cartridges/carton)

SHELF LIFE

12 months (cartridge)
15 months (sausage)

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

DESCRIPTION



VT-621 All Purpose MS Sealant is a single-component, high-performance sealant based on advanced MS Polymer technology. It is solvent, silicone oil 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.

TECHNICAL DATA

Curing system	: Moisture curing	
Specific gravity	: 1.49 g/mL	
Ultimate tensile strength	: 1.7 N/mm ²	ASTM D 412
	: 0.60 N/mm ² (6.2 kgf/cm ²)	ISO 8339
Elongation at break	: 290 %	ASTM D 412
Lap shear strength	: 1.4 N/mm ²	ASTM D1002
Initial grab strength	: 50 kg/m ²	
Shore A hardness	: 42	ASTM C661
Low VOC compliance	: Yes	SCAQMD Rule #1168
VOC content	: 52.39 g/L	USEPA Method 24

FEATURES

- High strength and elastic
- Good UV resistance
- Paintable
- Silicone oil-free – non-staining
- Isocyanate-free – No air bubbling
- Solvent-free – No shrinkage
- Primerless bonding to most substrates

APPLICABLE TESTS / STANDARDS

- VT-621 meets the requirements of:
- ASTM C920, Type S, Grade NS, Class 25, Use T1, M & A
 - Low VOC - USEPA Method 24 under SCAQMD Rule 1168

APPLICATION

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, plywood, leather, cloths, paperboard etc.) & inorganics (concrete, mortar, natural stone, tile, glass, porcelain etc.).
Can be used on trafficable joints, meets the ASTM C920 Use T1 requirements.

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. (Refer application direction)
- 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

Two-cloth Method

- Use a clean, lint-free, and absorbent cloth.
- Pour an appropriate amount of solvent onto the cloth.
- DO NOT dip the cloth into the solvent container as it could contaminate the cleaning solvent.
- Wipe vigorously to remove any contaminant and check if there is any contaminant picked up.
- Continuously wipe the surface until no contaminant is picked up.
- Always rotate the cloth to make sure a clean area of the cloth is used to wipe the surface.
- 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.
- Make sure that the surface is dried off completely before applying primer or sealant.

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.

(Scan to learn how
to use)



Visit product page:
<https://vitaltechnical.com/product/vt-621-all-purpose-ms-sealant/>



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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.

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) *
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 (or sausage)

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 for trafficable joints up to 35 mm width. A steel cover plate is required for joints subjected to high abrasion and heavy traffic.

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.

LEGAL NOTES

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.