x'traseal®

TECHNICAL DATA SHEET

REV: 06 DATE: 04 FEBRUARY 2020

MS-602

MS POLYMER SEALANT – LOW MODULUS

SIRIM
CERT.TO ASTM C920 : 2014a
CERT.NO : PC004057

040-036
Low Emission
Low Toxicity Adhesive / Sealant

Description:

x'traseal® MS-602 is based upon **hybrid silyl modified polyether technology**. It is a neutral, single component, low modulus with high movement capability joint sealant. It has an outstanding bond strength and primerless adhesion on various types of substrates. It can be painted with most type of paints and has superior weatherability in all climates. MS-602 is designed for use on prestige buildings. This specially formulated non-bleeding sealant technology with low static charge property can greatly reduce or minimize dirt pick up and surface streaking / staining. It's ideal for application on difficult substrate associated with modern facade construction. MS-602 is a durable, flexible, non-sagging sealant that offers excellent performance in moving joints and exhibits tenacious adhesion.

Features:

- Conform to ASTM C920 - CLASS 50 & ASTM C1248
- Permanently flexible & crack resistant
- No visible stain even on porous substrate
- Excellent UV radiation and weather resistance
- Primerless adhesion on most surfaces
- Joint movement capability up to +/- 50 %
- Free of isocyanate, solvent, acid and silicone oil
- No bubble formation within sealant
- Can be applied on damp surface
- Suitable for indoor and outdoor uses

Uses:

MS-602 is specially developed as a universal sealant for sealing joints in prefabricated buildings or concrete panels, expansion and connection joints in the building and construction industry, bonding or sealing of natural stones and aluminum sub-frames, sealing between window and door frames and movement or perimeter joints around buildings.

Due to a large variety of different coatings and substrates, we recommend preliminary compatibilty tests prior to application to achieve desirable results.

Joint design:

The specified sealant bead size should be calculated to comply with the compression and extension capabilities of the sealant in relation to the anticipated joint width die to expansion and contraction.

MS-602 has a movement accommodation factor (MAF) of 50%. The theoretical minimum joint width may be calculated

$$W = \frac{M}{MAF/100} + M$$

M = Expected Maximum Working Movement Of Joint
MAF = Movement Accommodation Factor of Sealant

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A minimum of 6mm substrate sealant bond is necessary to ensure adequate adhesion and accommodate movement. Joint depth should not less than 6mm and not greater than 10mm. Use 2:1 width to depth ratio up to 20mm in width. Backer material should be installed to prevent 3 side adhesion and to control sealant depth.

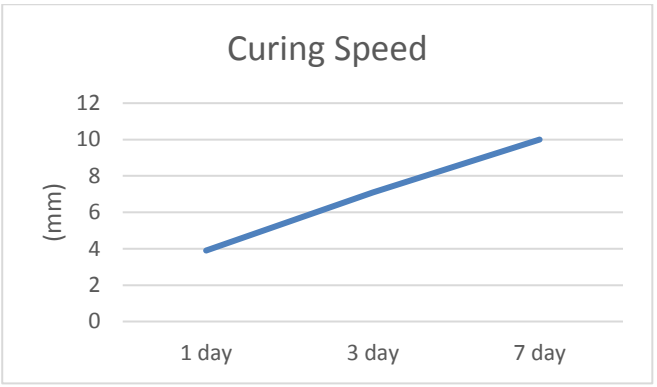
Suitable joint depth vs width:
6mm x 6mm
6mm x 12mm
10mm x 20mm

Application:

- Substrates must be clean, dry and free from grease. Remove all dirt, oil, grease, detergents and loose material.
- The joint edges can be masked with tape to prevent contamination of adjacent substrates. The tape should be removed carefully after tooling.
- Cut tip off cartridge. Cut nozzle to desired size at 45°angle. Screw nozzle onto cartridge. Place cartridge into caulking gun.
- Extrude the sealant firmly into joint to ensure complete contact with joint faces.
- Tool as required within the tooling time to achieve smooth surface.

Curing time:

MS-602 will skin forming in approximately 15 minutes and it will cure to a depth of 10 mm in 7 days. Longer curing time may be necessary in dry and low humidity area.



Paintability

MS-602 is paintable with water based paints, however due to large number of paints and varnishes available we strongly suggest a compatibility test before application. Paints based on alkyd resins may have extended drying time.

Note: MS-602 has larger movement capability than a normal paint film. Cracking of paint film may occur with movement in joint.

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Chemical resistance:

Good resistance to water, diluted inorganic acids and alkalis.

Poor resistance to concentrated acids and alkaline solutions, organic solvents, and halogenated hydrocarbons.

Clean up

Excess sealant can be removed with mineral spirit and cleaning solvent before cured. After curing, MS-602 may only be removed mechanically.

Limitations:

MS-602 is not suitable for the following applications:

- PE, PP, PMMA, PTFE, plastics containing softeners, and bituminous substrates
- Structural glazing
- Totally confined spaces where there is no atmospheric humidity, which is needed for proper curing
- Under water applications
- Heavy trafficable surface / joints
- Exposure to aggressive solvents or chemicals
- Food contact

Packaging:

290 ml cartridges / 24 per carton
600 ml sausages / 20 per carton

Color:

White, grey and black, other colors upon request.

Shelf life:

9 months for cartridge packaging & 12 months for sausage packaging (unopened) in a cool and dry storage place at temperatures between +5°c and +30°c.

Quantity estimation

Number of 600ml sausage

$$= \frac{JOINT\ WIDTH\ (MM)\ X\ JOINT\ DEPTH\ (MM)\ X\ JOINT\ LENGTH\ (M)\ X\ 1.15}{600}$$

Number of 290ml cartridge

$$= \frac{JOINT\ WIDTH\ (MM)\ X\ JOINT\ DEPTH\ (MM)\ X\ JOINT\ LENGTH\ (M)\ X\ 1.15}{290}$$

** With 15% wastage estimation*

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Specification:

Properties	Value	Method
Curing system	Neutral	-
Appearance	Non-sagging paste	Visual
Smell	Odorless	Visual
Joint movement capability	+/- 50 %	ASTM C719
Rheological (flow) properties I) vertical displacement: Ii) horizontal displacement	0 mm sag No deformation	ASTM C639
Specific gravity	1.48 +/- 0.02 (white & grey) 1.47+/- 0.02 (black)	ASTM D1475
Hardness (Shore A)	25 approx.	ASTM D2240
Staining	No staining	ASTM C510 & ASTM C1248
Color change	No color change	ASTM C510
Elongation at break	1100% approx.	ASTM D412
Tensile at break	0.90 MPa	ASTM D412
Secant modulus @ 23°c at 100% elongation	0.21 MPa	ASTM D412
Application temp.	5°c to 40°c	-
Service temp.	-40°c to 100°c	-
Lap shear strength (AL. To AL.)	0.6 MPa	ASTM C961

Caution:

Read and understand material safety data sheet of this product before handling or using.

This information is provided in good faith and is believed accurate based on a review of current composition and information supplied by vendors. No warranty is expressed or implied. Liability is expressly disclaimed.

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