



VULCANOX I

One Part, Elastomeric Urethane Joint Sealant

1. Product Description

a. **Basic Use:** Vulcanox I is a one part, elastomeric, urethane, joint sealant used to seal and caulk both moving and non-moving joints and cracks. It is used in both interior and exterior applications. Vulcanox I is used to seal around windows and door frames, as well as joints in concrete, masonry and flashing. It may be applied to wood, concrete, masonry, metal, stone and firmly bonded painted surfaces.

b. **Features/Benefits:**

- Gun grade and self-leveling (pourable) consistencies permit vertical and horizontal applications.
- Excellent weathering properties are unaffected by exposure to sun, wind, rain, snow, ice, hail, acid rain and ozone.
- Elastomeric sealant absorbs $\pm 25\%$ movement.
- Remains flexible at temperatures as low as -40°F (-40°C).
- Easy to use with commonly found caulking tools and equipment.
- Excellent adhesive properties allow for use in totally submersible applications.
- Priming is not required on most substrates, lowering installation cost.
- Offers good resistance to chemical attack.
- Resilient surface offers excellent resistance to sharp objects, stones, sticks and vandalism.
- May be used as an adhesive between materials having different coefficients of thermal expansion.

c. **Typical Applications:** Perimeter caulking around windows and door frames; parking garage joints, joints in precast concrete, tilt-up construction joints, reflecting ponds, swimming pools; control joints, construction joints, expansion joints and isolation joints in floor and pavements.

d. **Limitations:** Vulcanox I should only be installed when substrate and ambient temperatures are above 50°F (10°C). Do not use where movement greater than $\pm 25\%$ is expected. Allow Vulcanox I to cure for one week before total water immersion. Do not apply over wet or damp substrates.

e. **Composition:** Vulcanox I is a one-part, high-performance polyurethane sealant. It is available in pourable and gun grade consistencies.

f. **Color/Appearance:** Vulcanox I is available in aluminum stone, limestone and white.

2. Packaging

Vulcanox I is packaged in standard units as shown below:

<i>Gun Grade</i>	<i>Pourable</i>
<i>11-oz. (.33 liter) cartridge (30 per case)</i>	<i>30-oz. (.89 liter) cartridge (10 per case)</i>
<i>1-1/2-gal. (5.7 liter) pails</i>	<i>2-gal. (7.6 liter) pails</i>

3. Estimating/Coverage

<i>Joint Size</i>		<i>Vulcanox Sealant</i>	<i>Vulcanox Primer</i>
<i>Width</i>	<i>Depth</i>	<i>Lineal ft. (m) per gal./ (liter)</i>	<i>Lineal ft. (m) per qt./ (liter)</i>
<i>1/4 in. x 1/4 in. (6.4 mm x 6.4 mm)</i>		<i>310 (95)</i>	<i>1,200 (366)</i>
<i>1/2 in. x 1/4 in. (6.4 mm x 6.4 mm)</i>		<i>154 (47)</i>	<i>1,200 (366)</i>
<i>1/2 in. x 1/2 in. (12.7 mm x 12.7 mm)</i>		<i>77 (23)</i>	<i>600 (183)</i>
<i>1.0 in. x 1/2 in. (25.4 mm x 12.7 mm)</i>		<i>38 (12)</i>	<i>600 (183)</i>

4. Technical Data

a. **Applicable Standards:**

- ASTM C 920, Type S, Grade NS & P, Class 25
- Federal Specification No. TT-S-00230C, Type I & II, Class A.

b. **Tensile Strength:** ASTM D 412, 150 psi (1 MPa).

c. **Elongation:** ASTM D 412, 700% (Ultimate).

d. **Hardness:** ASTM D 2240, Shore A 40 ± 2 .

e. **Shrinkage:** nil

f. **Compression Set:** ASTM D 395, 3% Method B.

g. **Weatherometer:** Atlas Twin Arc, no elastomeric property change after 300 hours.

h. **Low Temperature Flexibility:** ASTM D 746, -60°F (-51°C).

i. Service Temperature: -40° to 225°F (-40° to 107°C).

j. Expected Life: 20 years

5. Directions for Use

a. Design Considerations: Joint width should be at least 4 times the total expected movement. A width to depth ratio of 2 to 1 is recommended for most applications. Minimum joint width is 1/4 in. (6.4 mm).

b. Surface Preparation: Joint surfaces must be physically sound, thoroughly clean, free of oil, wax, loose paint, rust, scale and other deleterious material. Grinding, wire brushing or sand blasting may be required to expose a sound and clean bonding surface. Install backer rod or bond breaking tape to the appropriate depth to achieve at 2 to 1 (width to depth) ratio.

c. Priming: Most substrates do not require a primer. Primer/adhesion tests are recommended when substrates are extremely smooth or when Vulcanox I will be subjected to water submersion. A solvent wipe of the joint surfaces is recommended in all applications.

d. Application: Vulcanox I is applied by simply caulking or pouring the sealant into properly prepared joints or cracks. Continue caulking until the joint is filled with sealant and tool as required. Vulcanox I should be caulked into place when the joint is at the mid-point of its anticipated contraction and expansion movement.

e. Working Time/Pot Life: All Vulcanox I should be installed within 1 hour after opening container.

f. Cure Time: Vulcanox I will be tack free in 30 hours when applied at 72°F (22°C) and the relative humidity is 60% (min.).

g. Clean Up: DL Solvent should be used for cleaning tools and equipment.

h. Maintenance: Vulcanox I surfaces should be cleaned with Waterzall Concentrate and water solution. Waterzall may also be used at full concentrate strength to remove built-up deposits and stains. Vulcanox I may be reapplied to itself.

6. Availability

Vulcanox I is normally available immediately from your local distributor or it will be shipped within 5 working days upon receipt of order. Please contact your local Metalcrete representative or call Metalcrete directly for more information.

7. Warranty

Vulcanox I is manufactured in strict accordance with the quality control standards of Metalcrete Industries. It is guaranteed to perform as indicated on this data sheet when applied by competent applicators.

8. Technical Service

Metalcrete technical service representatives are available to provide on-site assistance with a minimum three day notice.



Metalcrete Industries

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