



# VULCANOX II

## *Two-Part, Elastomeric Urethane Joint Sealant*

### 1. Product Description

a. **Basic Use:** Vulcanox II is a two part, catalyzed, elastomeric, urethane joint sealant used to seal and caulk both moving and non-moving joints and cracks. Vulcanox II is used in both interior and exterior applications when a rapid cure sealant is required. Vulcanox II is used as a concrete joint filler for expansion joints or control joints. It can also be used to seal around windows and door frames and to seal joints in masonry and flashing. It may be applied to wood, concrete, masonry, metal, stone and firmly bonded painted surfaces.

b. **Features/Benefits:**

- Two component, catalyzed system cures faster than most one-part sealants.
- Gun grade and self-leveling (pourable) consistencies permit vertical and horizontal applications.
- Two-part sealant consisting of base urethane and activator permits application in colder weather.
- Excellent weathering properties are unaffected by exposure to sun, wind, rain, snow, ice, hail, acid rain and ozone.
- Remains flexible at temperatures as low as -40°F (-40°C).
- Easy to use with commonly found caulking tools and equipment.
- Elastomeric sealant absorbs  $\pm 25\%$  movement.
- Priming is not required on most substrates, lowering installation cost.
- 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.
- Excellent adhesive properties allow for use in totally submersible applications.
- Offers good resistance to chemical attack.

c. **Typical Applications:** Parking garage joints, joints in precast concrete, tilt-up construction joints, poured concrete expansion and control joints, reflecting ponds, swimming pools. Also, construction joints for control, expansion, isolation joints in floors and pavements, and perimeter caulking around windows and door frames.

d. **Limitations:** Vulcanox II should only be installed when substrate and ambient temperatures are above 40°F (4°C). Do not use where movement greater than  $\pm 25\%$  is expected. Allow Vulcanox II to cure for one week before total water immersion. Do not apply over wet or damp substrates.

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

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

### 2. Packaging

Vulcanox II is packaged in 1.5-gal. (5.7 liter) units. Each unit yields 347 cu. in. (5,678 cc).

### 3. Estimating/Coverage

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

### 4. Technical Data

a. **Applicable Standards:**

- ASTM C 920, Type M, Grade NS & P, Class 25.
- Federal Specification No. TT-S-00227E, 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  $\pm 2$ .

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 II will be subjected to water submersion. A solvent wipe of the joint surfaces is recommended in all applications.
- d. Mixing: Open the steel pail and remove the activator container and the polyethylene liner. Scrape all material into the pail. Pull open the top on the activator can and pour the entire contents into the pail with the binder. Then open the colorant container and pour the contents into the pail. Use a power drill and Metco Jiffy Mixing blade and mix thoroughly for at least two minutes at revolution speeds that will not entrap air bubbles.
- e. Application: Vulcanox II is applied by simply caulking or pouring the sealant into properly prepared joint or cracks. Continue caulking until the joint is filled with sealant and tool as required. Vulcanox II should be caulked into place when the joint is at the mid-point of its anticipated contraction and expansion movement.

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

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

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

i. Maintenance: Vulcanox II 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 II may be reapplied to itself.

## 6. Availability

Vulcanox II 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 II 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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