

HORNFLEX® NS / HORNFLEX® SL Two Part Polysulfide Joint Sealants

SEALANTS AND CAULKING
THERMAL AND MOISTURE PROTECTION
07920

TAMMS INDUSTRIES
MARCH 2002 (Replaces 1/01)

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1. **DESCRIPTION:** HORNFLEX sealants are two part, elastomeric, caulking and sealing compounds. HORNFLEX cures at normal temperatures to a tough elastomeric seal which will adhere tenaciously to masonry, metal and wood. HORNFLEX will withstand repeated expansion and contraction and remain resilient through daily and seasonal cyclic changes in temperature. HORNFLEX has excellent chemical, solvent, and water resistance and will withstand joint movement of up to $\pm 25\%$.

2. **USES:** HORNFLEX sealants are used for glazing, caulking, and sealing joints between similar or dissimilar materials. They are particularly effective in sealing joints subject to structural movement due to expansion and contraction resulting from temperature changes. HORNFLEX sealants are available in two types.

HORNFLEX NS is a non sag gun grade sealant designed for use in vertical and non traffic bearing horizontal joints subject to expansion resulting from temperature changes. HORNFLEX NS is used for all normal construction joints such as panel and curtain wall construction, copings, masonry joints, bridge abutments and building joints. HORNFLEX NS is formulated for use in joints subject to long term contact with water and may be used in water reservoirs, dams and foundation joints.

HORNFLEX SL is a flowable, self leveling, traffic grade sealant designed for horizontal joints in patios, plazas, floors, sidewalks, roadways and other areas exposed to pedestrian or vehicular traffic.

TYPICAL PROPERTIES:

Specific Gravity, mixed	1.6
% Solids	100
% Joint Movement	± 25
Hardness, Shore A	25-30
Pot Life Temperature Dependent	approx. 2 hrs
Tack Free	12-24 hrs
% Elongation	500-550
Tensile Strength, psi	150-200
100% Modulus, psi	50
200% Modulus, psi	80

3. **COLORS:** HORNFLEX is gray/brown in color.

4. **COMPLIANCE:** The HORNFLEX sealants exceed the requirements of ASTM C920. Hornflex NS complies with NSF Standard 61 requirements.

5. **SURFACE PREPARATION:** Surface of the joint must be clean, sound, and dry. Contaminants such as previously applied sealants, form release agents, grease, oil, etc. must be removed by scarifying, wire brushing, or sanding. All traces of asphalt or other bituminous materials must be removed. Dust should be blown out of the joint with oil free, moisture free compressed air. Protective coatings of lacquer or oil must be

removed from metal surfaces with methyl ethyl ketone or xylol. Cure new concrete or masonry surfaces for 28 days. Do not apply HORNFLEX if the temperature of the sealant, air, or substrate is below 40°F. Priming is not normally required with common building materials. A primer may be required for optimum adhesion in demanding environments, continuous immersion for example, or for certain substrates. In these cases HORNFLEX PRIMER should be used and the sealant must be applied within 8 hours after priming. A field trial is recommended to determine actual adhesion with and without a primer.

6. **JOINT DESIGN:** The minimum width of the joint should be 4 times the anticipated movement but not less than 1/4 inch. Maximum recommended width is 1.0 inch. The depth of the joint should be no more than one-half the width without exceeding the minimum/maximum limits.

In joints up to 1/2 inch wide, the sealant depth should be equal to the joint width. In joints from 1/2 inch to 1.0 inch wide, sealant depth should be 1/2 inch. For joints over 1.0 inch wide, sealant depth should be 1/2 of the width. In joints deeper than 1/2 inch, a flexible, non asphaltic or non oil impregnated backing material should be used to fill the lower part of the joint cavity. For traffic bearing areas, a round rod of synthetic rubber of the same Shore A as HORNFLEX SL (or harder) is recommended. The backing rod should be round to minimize the stress on the joint sealant.

The sealant should not adhere to the bottom of the joint or the backing material. A strip of polyethylene film may be installed as a bond breaker between the filler or the bottom of the joint and the sealant.

7. **MIXING INSTRUCTIONS:** Thorough mixing of the components is essential for maximum performance of HORNFLEX. Remove the activator (Part B) from the base material (Part A) container. Also remove the polyethylene sheet or tray. Mix Part A with a slow speed 1/2 inch drill (250-300 rpm) with a Jiffy mixing paddle. Then add Part B to Part A and mix for 3-4 minutes until the material is completely blended with a uniform color. While mixing, periodically scrape down the sides of the container and mixing paddle.

Caution. Do not mix base and activator components from one shipment with components from another.

8. **APPLICATION TECHNIQUES:** HORNFLEX sealants allow 1-2 hours of working time under normal conditions. Do not mix more than can be applied in this period. HORNFLEX NS can be applied with standard caulking equipment. Always fill the joint from the bottom up or from the inside out to avoid entrapping air. The gun nozzle should be the largest size which can be inserted to the bottom of the joint. Tooling is recommended immediately after application to ensure full contact with the joint surfaces. Dry tooling is preferred. HORNFLEX SL may be poured into the joint. It pours readily and is self leveling.

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9. **COVERAGE:** HORNFLEX coverage rates are approximate and for estimating purposes only.

Joint Width(in.)	Joint Depth(in)	Linear Feet per Gallon
1/4	1/4	308
1/4	3/8	136
3/8	3/8	102
1/2	3/8	68
1/2	1/2	77
5/8	1/2	61
3/4	1/2	51
7/8	1/2	44
1	1/2	38

10. **CLEAN-UP INSTRUCTIONS:** Clean tools and equipment immediately after application with xylene, toluene or Aromatic 100. Clean up spills and drips while still wet with the same solvents.

11. **PACKAGING:** 1.5 gallon units.
Storage: 50-90°F. Protect from moisture.
Shelf Life: 12 months in proper storage.

12. **ENVIRONMENTAL SAFETY PRECAUTIONS: Industrial Use Only.** Provide adequate ventilation. Can be irritating to eyes and skin. Wear goggles and protective clothing. In case of eye contact, flood the eyes repeatedly with water and call a physician immediately. **DO NOT RUB EYES.** In case of skin contact, wash immediately and thoroughly with soap and water. For respiratory problems, remove person to fresh air and call a physician. Disposal: Collect with absorbent material. Dispose of in accordance with current local, state and federal regulations. **READ MATERIAL SAFETY DATA SHEET BEFORE USING. FOR INDUSTRIAL USE ONLY. KEEP AWAY FROM CHILDREN AND ANIMALS.** EMERGENCY RESPONSE: CHEMTREC 1-800-424-9300; TAMMS 1-800-862-2667

13. **TECHNICAL SERVICE:** For application procedures or surface conditions not specified above, please contact:

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