



## TECHNICAL DATASHEET – THIOKOL® 2282

Revised: 2/2017

### DESCRIPTION

Thiokol 2282 is a high performance, chemical resistant flexible joint sealant. Due to its high polysulfide polymer content, it is resistant to many chemicals, shrinkage, aging, thermal stress and the effects of outdoor exposure.

### TYPICAL APPLICATION

PRIMER	Thiokol 5050 Primer @ 3-5 mils (concrete) Thiokol 5050 Primer @ 2-3 mils (steel)
BACKER ROD	Customer supplied
SEALANT	Thiokol 2282

### PERFORMANCE DATA

TENSILE STRENGTH (ASTM D - 412)	300 psi
ELONGATION (ASTM D - 412)	450-500%
HARDNESS, SHORE A (ASTM D - 2240)	50-45
JOINT MOVEMENT	±25%
VOC	0.0 lb/gal; 0.0 gm/L
VOLUME SOLIDS	100%

### APPROVALS

- MIL TT-S-00227
- ASTM C-920

### BENEFITS

- Durable elastomeric, weather tight seal for caulking joints
- Retains flexibility even with concrete movement
- Resists mild acids, alkalis and petroleum products
- Resists effects of sunlight, rain, snow, ozone, aging, shrinkage and cyclic temperature changes, even after years of service
- Contains no volatile solvents
- Fast curing

### RECOMMENDED USES

Joint caulk for:

- Secondary containment
- Rivet seams on steel tanks
- Other chemical environments

**GENERIC DESCRIPTION:** Polysulfide Sealant

**STANDARD COLORS:** Gray

**PACKAGING:** 1.5-Gallon Unit

**MIX RATIO:** 5R: 1H

### COVERAGE:

JOINT SIZE	COVERAGE PER GALLON
1/2" W x 1/4" D	154 linear ft
1/2" W x 1/2" D	77 linear ft
3/4" W x 1/2" D	51 linear ft
1" W x 1/2" D	38 linear ft
1" W x 3/4" D	25 linear ft

Coverages are theoretical only.

**THIOKOL® 2282**  
INDUSTRIAL POLYSULFIDE JOINT SEALANT,  
ULTRA CHEMICAL RESISTANT

### STORAGE & INSTALLATION

STORAGE ENVIRONMENT	Dry area, 65-80°F
APPLICATION TEMPERATURE, AMBIENT	40-95°F
APPLICATION TEMPERATURE, SUBSTRATE	Minimum 5° above dew point
SHELF LIFE	18 month
POT LIFE, @ 77°F	30 minutes
TACK FREE, @ 77°F	1 hour
FULL CURE, @ 77°F	1 day

Material cures more slowly at cooler temperatures, and working time will be substantially reduced at higher temperatures. In hot weather, material should be cooled to 65°F to 80°F prior to mixing and application to improve workability and avoid shortened pot life. The data shown above reflects typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown above may result.

Actual pot life and working time depend on ambient and material temperatures. In cooler temperatures, the useful working time may be one hour or more; working time will be substantially reduced in warm temperatures. To improve workability and avoid a shortened pot life in hot weather, the material should be cooled to 65°F to 80°F prior to mixing. The data shown above reflects typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown above should be expected.

### CONSIDERATIONS & LIMITATIONS

- Do not thin with solvents unless advised to do so by ITW Engineered Polymers.
- Confirm product performance in specific chemical environment prior to use.
- Prepare substrate according to "Surface Preparation" portion of this document.
- Always use protective clothing, gloves and goggles consistent with OSHA regulations during use. Avoid eye and skin contact. Do not ingest or inhale. Refer to Material Safety Data Sheet for detailed safety precautions.
- For industrial/commercial use. Installation by trained personnel only.

### SURFACE PREPARATION

**CONCRETE:** Apply only to clean, dry and sound concrete substrates that are free of all coatings, sealers, curing compounds, oils, greases or any other contaminants.

- New concrete should be cured a minimum of 28 days.
- Concrete that has been contaminated with chemicals or other foreign matter must be neutralized or removed.
- Remove any laitance or weak surface layers.
- Concrete should have a minimum surface tensile strength of at least 300 PSI per ASTM D-4541.
- Surface profile shall be CSP-3 to CSP-5 meeting ICRI (International Concrete Repair Institute) standard guideline #03732 for coating concrete, producing a profile equal to 60-grit sandpaper or coarser. Prepare surface by mechanical means to achieve this desired profile.

**RIVETED TANKS:** Before work begins, ensure compliance with confined space requirement procedures. Do not enter the tank before the environment is safe!

- Only prepare the surface that can be sealed before the steel begins to rust.
- Abrasive blast the rivet pattern and lap seams to a minimum of SSPC SP-10 near white to white metal cleanliness. The area should be cleaned 2-4 inches beyond the rivet pattern and lap seam.
- Remove abrasive media. Be sure the repair area is dust free.
- Immediately before installing the Thiokol<sup>®</sup> 2282, wipe down the repair area, using clean white cloths with a fast evaporating solvent such as acetone or MEK. Be sure that all weeping fuel is removed from the repair area.

**STEEL:** For immersion service, "White Metal" abrasive blast with an anchor profile of 2-4 mils in accordance with Steel Structures Painting Council Specification SP-5-63 or NACE No. 1 is required. For splash and spillage

exposure, "Near White" SP-10-63 or NACE No. 2 is required.

### INSTALLATION STEPS

- Prime concrete surface with Thiokol 5050 Primer. See data sheet for application details.
- For use as a joint sealant, install a backer rod into joint(s); the backer rod should be compressed 25%. When a backer rod is not feasible, bond breaker tape is acceptable.

**NOTE:** Ideally, the joint depth should be one half the joint width.

- Add Component B to Component A and mix at slow speed (250-300 RPM) with a 1/2" drill 2 part sealant mixing paddle until material is completely blended. Scrape down sides of container and mixing paddle periodically during mixing; thorough blending of the components is essential for maximum performance of the sealant.

**NOTE:** Typical mixing time is 3-4 minutes.

- Apply Thiokol 2282 according to the appropriate procedure, below:

#### A. EXPANSION JOINT SEALANT

Thiokol 2282 is supplied in a consistency that will gun easily with conventional caulking equipment. Fill joint completely. Non-sag sealants should be tooled with a suitable sealant spatula with a rounded tip similar to the 258 series by Albion to provide a concave finish thereby creating the desired hour-glass configuration. Spatulas should be slightly wider than the width of the expansion joint.

**NOTE:** Proper width to depth ratios must be maintained. Immediately after application, dry tool the sealant using a spatula. Use light pressure to ensure positive and complete contact of the sealant to the joint surfaces. Tooling the bead in a concave shape helps achieve the desired hour glass shape of the finished bead.

**NOTE:** Care must be taken to avoid contamination of open joints. Blocking may be required.

#### B. RIVETED SEAM SEAL ON STEEL TANKS

Prepare surface according to "Surface Preparation: Riveted Tanks" at left. Quickly apply catalyzed Thiokol 2282 by forcing the material into the lap seam and around the rivet heads with a short bristled (3/4 to 1" long) paintbrush.

**NOTE:** A minimum of 1/4" of sealant must be installed around the rivet heads and into the lap seam.

The sealant can be feathered out from these areas.

The sealant should extend 2-4 inches beyond the rivet heads and lap seams.

- For best results, clean tools and equipment with PolySpec<sup>®</sup> All Purpose Cleaner, a nonflammable and non-evaporating cleaner. Always wear gloves when using this product.

C-5R:1H / DOC 2282-TDS

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