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SE 1000

# STRUCTURE GUARD™ TECHNICAL DATA SHEET

Rev. 11-2018



A VORTEX COMPANY

## REPAIR MATERIALS

### Typical Performance Characteristics

- Color: Light Bluegreen
- Finish: Very Smooth (Manning Coefficient: .009)
- Flash Point > 250°F (121°C)
- Ratio: 2A to 1B by volume

### CHEMICAL RESISTANCE

- Deionized Water
- Methanol
- Ethanol
- Toluene
- Xylene
- Butyl Cellosolve
- MEK
- 10% Lactic Acid
- 10% Acetic Acid
- 70% Sulfuric Acid
- 50% Sodium Hydroxide
- Bleach
- 1,1,1 Trichloroethane
- 10% Nitric Acid
- 30% Nitric Acid

### CORROSION RESISTANT EPOXY PROTECTIVE COATING

#### DESCRIPTION

Structure Guard™ is a 100% solid, high-build epoxy coating formulated to provide long-term corrosion protection and structural enhancement for manholes, pump stations, treatment plants or any wastewater infrastructure subject to high levels of corrosion and/or abrasion. Structure Guard sets fast for a quick return-to-service in the most aggressive and turbulent environments. It finishes smooth to enhance flow and is utilized as an interior or exterior pipe lining.

#### FEATURES AND BENEFITS

- 100% Solids, No VOCs
- Spray applied at 200 mils in a single pass
- Excellent corrosion and abrasion resistance

#### APPLICATION SYSTEMS

- Heated Plural Airless Spray Units
- Minimum Output 5000 psi
- Product Hose: Min. - Optimum I.D. 0.375 - 0.5 inch

#### CURE TIME (at 70°F or 21°C)

- Re-coat Window — 2 hours
- Immersion (Aqueous) Service — 1.5 hours

#### POT LIFE

- 40°F (4°C) 20 minutes
- 75°F (24°C) 10 minutes
- 92°F (33°C) 5 minutes

#### PACKAGING

Structure Guard is available in 5 gallon pails and 55 gallon drums.

**TYPICAL COATING REQUIREMENTS**

With Structure Guard™, only 1 coat is needed to attain finished thickness. If additional coats are called for they must be applied before the previous coat has completely cross-linked, typically for 2 hours @ 72°F (higher temperatures/humidity will shorten this window). If re-coating is needed, brush blast before applying the next coat. Before re-coating, clean and dry surface thoroughly to remove all contamination, including amine blush or condensation. Small areas may be abraded by sanding or wire brushing.

The same requirements apply when overlapping seams of adjacent coating sections to create a continuous protective film. If the coating surface to be overlapped at the seam cannot be brush blasted, use a non-impact means, such as power brushing or sanding, to create adequate mechanical profile.

**YIELD**

Structure Guard will yield theoretical coverage of 20 sq. ft per gallon @ 80 mils thickness. Actual surface coverage will depend on substrate porosity and roughness. A wet film thickness gauge may be used to determine actual coating thickness.

**SURFACE PREPARATION**

Coating performance is largely determined by the degree of surface preparation. MORE IS BETTER.

EXISTING CONCRETE AND MASONRY substrates must be prepared in a manner that provides a uniform, sound, clean, neutralized surface with sufficient profile suitable for the specified coating. The substrate must be free of all contaminants, such as oil, grease, rust, scale or deposits and have a surface profile equivalent to a CSP3 to CSP5 in accordance with ICRI Technical Guideline No. 03732. This

can generally be achieved by abrasive blasting, shot blasting, high pressure water cleaning, water jetting, acid etch, hot water/steam cleaning or a combination of methods.

NEW CONCRETE AND MASONRY SUBSTRATES must be sandblasted, or hydro blasted at 700psi 4gpm, to achieve a CSP4.

STEEL surfaces may require “Solvent Cleaning” (SSPC-SP 1) to remove oil, grease and other soluble contaminants. Chemical contaminants may be removed according to SSPCSP 12/NACE No. 5. Identification of the contaminants, along with their concentrations, may be obtained from laboratory and field tests as described in SSPC-TU 4 “Field Methods for Retrieval and Analysis of Soluble Salts on Substrates”. Surfaces to be coated should then be prepared according to SSPC-SP 5/NACE No.1 “White Blast Cleaning” for immersion service or SSPC-SP 10/NACE No. 2. “Near White Blast Cleaning” for all other service. In certain situations, an alternate procedure may be to used such as high (>5,000 psi) or ultrahigh (>10,000 psi) pressure water cleaning or water cleaning with sand injection. The resulting anchor profile shall be 2.5-5.0 mils and be relative to the coating thickness specified.

**WARRANTY**

Quadex™ warrants its products to be free of defects in material and workmanship. Within one year from purchase, if any Quadex product is proven defective, Quadex will replace said product or refund its purchase price, at Quadex’s sole discretion. Quadex’s obligation shall be limited solely to such replacement or refund. There are no other warranties by Quadex, expressed or implied. There is no warranty if Quadex products are used contrary to Quadex’s written directions.

**PHYSICAL PROPERTIES**

Tensile Strength	ASTM D638	8,700 psi
Tensile Elongation	ASTM D638	2.2%
Tensile Modulus	ASTM D638	500,000 psi
Flexural Strength	ASTM D790	15,400 psi
Flexural Modulus	ASTM D790	507,000 psi
Compressive Strength	ASTM D695	13,300 psi
Compressive Modulus	ASTM D695	535,000 psi
Adhesion to Concrete	ASTM D4541	>2000 psi (substrate failure)
Adhesion to Blasted Steel	ASTM D4541	>3000 psi

*Physical properties were evaluated on compounds cured for 5 days at 25°C / 50% relative humidity.*