



Division of Sierra Corporation

# TK-290 WDOT TRI-SILOXANE

Meets Federal EPA's Requirements

## Technical Data

### 1. PRODUCT NAME

TK-290 WDOT TRI-SILOXANE

### 2. MANUFACTURER

TK PRODUCTS, DIVISION  
OF SIERRA CORPORATION

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Minnetonka, MN 55343

952-938-7223

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### 3. PRODUCT DESCRIPTION

TK-290 WDOT TRI-SILOXANE is a low viscosity oligomeric organosiloxane concrete water repellent, which achieves maximum hydrolysis under the influence of atmosphere moisture and polymerizes to a polysiloxane, which is tack free and hydrophobic in nature. Through this reaction, the siloxane groups are chemically bonded to the concrete, which eliminates the ever present moisture that had previously engulfed the cementitious surface, thus eliminating spalling, freeze damage, and rebar corrosion.

Therefore TK-290 WDOT TRI-SILOXANE is chemically bonded within the substrate, not just physically bonded like other surface penetrating sealers.

This formulation is ready-to-use, colorless, breathable, non-staining, non-yellowing, deep penetrating, concrete and masonry water repellent.

#### Basic Uses:

TK-290 WDOT TRI-SILOXANE can be used to protect and seal any clean and dry cementitious surface, above ground vertical and horizontal. It protects the surface against damaging effects of water intrusion, acid rain, deicing chemicals, freeze/thaw exposure, airborne dirt, smog, industrial fumes, and most other atmospheric chemicals.

#### Applications Include:

- A. Parking structures
  - B. Bridge decks
  - C. Piers and pilings
  - D. Precast concrete
  - E. Poured concrete walls
  - F. Natural and synthetic stone
- TK-290 WDOT TRI-SILOXANE is not suitable for use on gypsum.

#### Typical Properties:

TK-290 WDOT TRI-SILOXANE has been carefully designed for use on above grade exterior surfaces and is characterized by the following properties:

- Excellent penetration.
- High alkali resistance.
- Low volatility.
- Useful on both dry and damp surfaces.
- Dries tack free.
- Provides early water repellency.
- Exhibits droplet effect.
- Suitable for alkaline & neutral substrates.

#### Limitations:

TK-290 WDOT TRI-SILOXANE should not be used below grade, or under hydrostatic pressure. A test patch should always be applied to determine compatibility with substrate and application coverage rate. Do not apply if rain is expected within 4-6 hours of application.

### 4. TECHNICAL DATA

- Density 6.72 lbs.
- Flash Point 105°F.
- Passes: NCHRP 244 for:
  - Water absorption
  - % Water vapor transmission
  - % Reduction in chloride intrusion
- ASTM C-666 Relative dynamic modulus of elasticity.
- ASTM C-672 Scaling resistance 75 cycle is a +0 rating.
- AASHTO T259 – Resistance of Concrete to Chloride Ion Penetration

-Test Results given upon request.

-A.I.M. Category: Waterproofing Sealer and Treatment - maximum VOC 600g/l. This product exceeds the maximum VOC limit. There will be an EPA exceedance fee charged at the time of purchase.

A.I.M. Definition: A coating formulated and recommended for application to a porous substrate for the primary purpose of preventing the penetration of water.

### 5. APPLICATION PROCEDURES AND INSTRUCTIONS

#### Surface Preparations:

All surfaces to be treated must be clean and structurally sound. Clean surfaces to thoroughly remove all grease, oil, form oils or other contaminants. **Old Concrete:** Remove unsound concrete and repair deteriorated areas and cracks. Surfaces may need to be mechanically abraded to get maximum penetration. **New Concrete:** Water cure fresh concrete. As a standard procedure fresh concrete should be allowed to thoroughly cure before applying TK-290 WDOT TRI-SILOXANE.

Best results are obtained by applying TK-290 WDOT TRI-SILOXANE on dry substrates but good results may also be obtained on slightly damp surfaces. A test patch should be applied to determine proper results and coverage rates.

#### Application:

TK-290 WDOT TRI-SILOXANE should be used as packed, no diluting in anyway. To insure surface is frost free, it is recommended that the substrate surface temperature be 40° F. or above. Application can be by roller or spray equipment.

Apply TK-290 WDOT TRI-SILOXANE to the surface in a uniform manner in sufficient quantity to completely wet out the substrate.



PRODUCTS  
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**Coverage Rate\*:**

Recommended coverage rate for TK-290 WDOT TRI-SILOXANE is 125 square feet per gallon on most concrete substrates. Very porous surfaces may require 2 coats of TK-290 WDOT TRI-SILOXANE.

**TK-290 WDOT TRI-SILOXANE**

<b>Surface Type</b>	<b>SF/G</b>
Bridge Decks/Ramps	100-200
Smooth Concrete	125-225
Resealing Bridge	
Decks/Ramps	150-250
Exposed Aggregate	100-200
Concrete Block	50-100
Brick, Stone	60-200

\*Coverage rates are provided as a guideline only. The texture and absorption characteristics of the surface will determine actual coverage rates.

**Clean Up:**

Clean up tools with TK-00 solvent or xylene.

**Precautions:**

TK-290 WDOT TRI-SILOXANE will react with water vapor. To insure maximum effectiveness, keep containers tightly sealed when not in use. DO NOT use or store near heat or open flames. All safety precautions must be adhered to at all times. Only apply in well ventilated areas, no smoking, turn off all pilot lights. Wear protective goggles, gloves and respirators.

**Maintenance:**

If wear patterns do occur TK-290 WDOT TRI-SILOXANE can be reapplied to the affected area.

**First Aid:**

*Inhalation:* Remove person to fresh air, give artificial respiration if not breathing. GET MEDICAL HELP. *Eye and Skin Contact:* Wash with large quantities of clean water for 15 minutes. *Ingestion:* Do not induce vomiting. GET MEDICAL HELP. Use with adequate ventilation.

**6. AVAILABILITY**

TK-290 WDOT TRI-SILOXANE is avail-able through TK Distributors. Contact TK PRODUCTS for nearest distributor. Packaged in: 55 gallon drums, 5 gallon pails, and one gallon cans.

**7. LIMITED WARRANTY**

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**8. TECHNICAL SERVICES**

The TK office offers assistance with specifications, performance test data and field services.

**9. FILING SYSTEMS**

Information Handling Services  
PO BOX 1213  
Englewood, CO 80150  
Information Marketing Services  
13271 Northend  
Oak Park, MI 48237

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