

# TK-290 TRI-SILOXANE BRIDGE DECK SEALER

Meets Federal EPA's VOC Requirements

## Technical Data



Division of Sierra Corporation  
ISO 9001:2000 Certified

TK-290 TRI-SILOXANE BRIDGE DECK SEALER  
Concrete Masonry Water Repellent

3,7&9  
PRODUCTS



### 1. PRODUCT NAME

TK-290 TRI-SILOXANE BRIDGE DECK SEALER

### 2. MANUFACTURER

TK PRODUCTS  
DIVISION OF SIERRA CORPORATION  
11400 West 47th Street  
Minnetonka, MN 55343  
952-938-7223  
952-938-8084 (FAX)  
E-mail: [tksales@tkproduct.com](mailto:tksales@tkproduct.com)  
Website: <http://www.tkproduct.com>

### 3. PRODUCT DESCRIPTION

TK-290 TRI-SILOXANE BDS 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 TRI-SILOXANE BDS 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 TRI-SILOXANE BDS can be used to protect and seal any clean and dry cementitious surface, above ground, vertical or 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 TRI-SILOXANE is not suitable for use on gypsum.

### TYPICAL PROPERTIES:

TK-290 TRI-SILOXANE BDS 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
- Use only on dry surfaces
- Dries tack free
- Provides early water repellency
- Exhibits droplet effect
- Suitable for alkaline & neutral substrates
- Will not etch glass

### LIMITATIONS:

TK-290 TRI-SILOXANE BDS 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 PREPARATION:

All surfaces to be treated must be clean and structurally sound. Thoroughly clean surfaces to remove all grease, oil, form oils, or other contaminants.

#### OLD CONCRETE:

Remove unsound concrete and repair deteriorated areas and cracks. Use compressed air to clean the surface before application.

#### NEW CONCRETE:

Water cure fresh concrete. As a standard procedure, fresh concrete should be allowed to thoroughly cure before applying TK-290 TRI-SILOXANE.

Best results are obtained by applying TK-290 TRI-SILOXANE on dry substrates. A test patch should always be applied to determine proper results and coverage rates.

Before using this product, read the Material Safety Data Sheet for complete safety information. Material Safety Data Sheets are available from TK Distributors, the TK Office, or the TK Website.

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**APPLICATION:**

TK-290 TRI-SILOXANE BDS should be used directly from the container. Do not dilute. Application can be made with a roller, brush, or an industrial sprayer.

When applying TK-290 TRI-SILOXANE BDS, the surface must stay moist briefly to assure complete coverage and saturation. Any puddles should be broomed out.

For vertical surfaces, apply a light spray to break the surface tension of the wall. Follow immediately with a flood coat. Apply horizontally, with plenty of over lap and enough material to cause a 6 to 8 inch run-down. Fully saturate all mortar joints.

**COVERAGE RATE\* :**

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

Surface Type	SQ.FT./GAL
Bridge Decks/Ramps	100-200
Smooth Concrete	125-225
Resealing Bridge Decks/Ramps	150-250
Exposed Aggregate	100-200
Concrete Block	40-100
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.

**FIRST AID:**

*Ingestion:* Do not induce vomiting. GET MEDICAL HELP. *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. Use with adequate ventilation.

**PRECAUTIONS:**

TK-290 TRI-SILOXANE BDS 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 flame. All safety precautions must be adhered to at all times. Only apply in well ventilated areas, do not smoke in the area, and turn off all pilot lights. Wear protective goggles, gloves, and respirator.

**MAINTENANCE:**

If wear patterns do occur, TK-290 TRI-SILOXANE BDS can be reapplied to the affected area(s).

**6. AVAILABILITY**

TK-290 TRI-SILOXANE BDS is available through TK Distributors. Contact TK Products for the nearest distributor. Packaged in 55-gallon drums, 5-gallon pails, and one gallon cans.

**7. CONDITIONS OF SALE/ LIMITED WARRANTY**

TK Products, division of the Sierra Corporation, warrants that its products conform to the label descriptions, are free from manufacturing defects, and are fit for the ordinary purposes for which such goods are used. Inasmuch as the use of TK Products' product by others and other factors affecting product performance are beyond TK Products' control, TK Products does not guarantee the results to be obtained. There are no warranties except as stated herein, either express or implied, including implied warranties of merchantability or fitness for a particular purpose. SHOULD ANY TK PRODUCTS' PRODUCT FAIL TO GIVE SATISFACTORY RESULTS, TK PRODUCTS WILL REPLACE THE PRODUCT, OR AT ITS OPTION, REFUND THE PURCHASE PRICE. THIS IS THE SOLE AND EXCLUSIVE REMEDY FOR ANY FAILURE OF TK PRODUCTS' PRODUCTS TO PERFORM AS WARRANTED AND SHALL ALSO CONSTITUTE LIQUIDATED DAMAGES IN CASE OF LOSS. UNDER NO CIRCUMSTANCES SHALL THE BUYER BE ENTITLED TO ANY OTHER REMEDY OR DAMAGES. REMEDIES FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE SPECIFICALLY EXCLUDED. TK Products does not authorize any person to assume for it any other liability in connection with the sale or use of its products unless specifically authorized by TK Products in writing.

**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

**TK DISCLAIMER:**

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**FOR INDUSTRIAL USE ONLY**

11/06