



## TK-TRI-SILANE 590-1 MS

### Deep Penetrating Water Repellent

Item No. TK-590-1 MS

#### PRODUCT DESCRIPTION

TK-TRI-SILANE 590-1 MS is a one component, deep penetrating water repellent consisting of silane in mineral spirits for protecting concrete and masonry. Through the process of hydrolysis, TK-TRI-SILANE 590-1 MS chemically bonds with the surface to form a protective barrier that is far superior to traditional penetrating water repellents.

#### Features:

- Forms a chemical, and permanent, bond with the substrate to provide ultimate protection against damage due to water and deicing chemical intrusion, acid rain, freeze/thaw exposure, airborne dirt, smog, industrial fumes and most other atmospheric chemicals.
- Penetrates up to 1/4" and eliminates surface moisture which can lead to spalling, freeze damage and rebar corrosion.
- Outperforms typical water repellents which can only bond physically with the surface and thus provide marginal protection.
- The coating is colorless, non-staining and non-yellowing.

#### USES:

Suitable for vertical or horizontal use on exterior above-grade concrete, burnish block, CMU, single wythe, masonry or cementitious surfaces. Applications include parking structures, bridge decks, piers and pilings, bridge seats and commercial/warehousing floors.

#### APPLICATION PROCEDURES:

##### PREPARATION:

Before using this product, read the Safety Data Sheet for complete safety information.

All surfaces to be treated must be clean and structurally sound. Thoroughly clean surfaces to remove all grease, oils, form oils or other contaminants. Best results are obtained by applying TK-TRI-SILANE 590-1 MS to dry surfaces. It is recommended that surface temperatures be 40°F or above at the time of application to ensure that surfaces are frost-free.

*Existing Concrete preparation - Unsound concrete should be removed and cracks or deteriorated areas repaired prior to application. Surfaces may need to be mechanically abraded to achieve maximum penetration.*

*New Concrete preparation - Water cure fresh concrete and as a standard procedure, allow to thoroughly cure before applying this product.*

**A test patch should always be performed to determine proper results and coverage rates prior to application.**

##### MIXING:

The material is ready for use and requires no mixing. Do not dilute.

##### APPLICATION:

Apply by roller, brush, squeegee or industrial spray equipment in a uniform manner and in sufficient quantity to completely wet out the substrate. Ensure complete coverage and saturation by maintaining surface moisture briefly. Any puddles should be broomed out. When applying to vertical surfaces, apply a light spray to break the surface tension of the wall and follow immediately with a flood coat. Apply horizontally with plenty of overlap and enough material to create a 6-8" rundown. Fully saturate all mortar joints.

##### CLEAN UP:

Clean tools, equipment and spills with TK-00 XYLENE\*.

#### TECHNICAL DATA

Composition and Materials:	100% reactive alkylalkoxy silane in mineral spirits.
% Actives:	40%
Weight per gallon:	6.9 lbs.
Viscosity:	16-18 sec. Zahn #2
Flash Point:	102°F
VOC Content:	< 600 g/l
A.I.M. Category:	Waterproofing Sealers and Treatments Maximum VOC 600 g/l

#### APPLICABLE STANDARDS

- ASTM 672-98: Scaling Resistance to Deicing Chemicals
- ASTM 642-75: Water Absorption
- AASHTO T-259/260: Chloride Penetration
- NCHRP #244, Series II & IV: Chloride Ion Intrusion

#### TYPICAL PROPERTIES

TK-590-40 is characterized by the following properties:

- Chemically bonds with concrete
- Very low viscosity
- Allows the substrate to breath and prevents structure damage due to trapped water
- High penetration
- Does not darken, stain or add gloss to the substrate

*continued on next page...*

## **COVERAGE:**

The recommended coverage rate for most concrete substrates is 150 square feet per gallon. Very porous surfaces may require two coats.

Surface	Coverage
Bridge decks/ramps	150-250 square feet/gallon
Resealing bridge decks/ramps:	150-300 square feet/gallon
Smooth concrete	150-225 square feet/gallon
Exposed aggregate:	100-200 square feet/gallon
Concrete block:	50-100 square feet/gallon
Brick/stone:	60-200 square feet/gallon

*Coverage rates are provided as a guideline only. Many factors including surface texture, porosity and weather conditions will determine actual coverage rates.*

## **MAINTENANCE:**

If wear patterns occur, TK-TRI-SILANE 590-I MS may be reapplied to affected areas.

## **LIMITATIONS:**

- Do not use below-grade or under hydrostatic pressure.
- Do not apply if rain is expected within 4-6 hours of application.
- Typical usable temperature range is 20°F to 90°F, however the product will work at colder temperatures.
- Use with adequate ventilation.

## **FIRST AID:**

- Consult this product's safety data sheet for additional health and safety information. Safety Data Sheets are available through TK distributors, the TK office and the TK website.

## **AVAILABILITY:**

TK-TRI-SILANE 590-I MS is available through TK Distributors. Contact TK Products for the nearest distributor.

Packaged in 55-gallon drums, 5-gallon pails and 1-gallon cans.

**FOR PROFESSIONAL USE ONLY**

## **NOTES:**

\*TK-00 XYLENE must be purchased separately

04/15 Last Rev. 12/14

## **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.

## **TK DISCLAIMER:**

Every effort has been made to ensure the accuracy of the above information and to avoid infringement of any patent or copyright. The information is based on field tests by government and private agencies, as well as lab tests, and on technical data from raw material manufacturers. The person(s) specifying or requesting the use of these products is responsible for assuring their suitability for a specific use, as well as the proper application of the products. Where there is any question as to the suitability of a particular product, a small test patch is recommended. See also CONDITIONS OF SALE/ LIMITED WARRANTY (Section 7) above.



## **TK Products**

11400 West 47th Street Minnetonka, MN 55343  
800-441-2129 toll free | 952-938-8084 fax | [www.tkproducts.com](http://www.tkproducts.com)

Page 2 of 2  
TK-TRI-SILANE 590-I MS