



**PRODUCTS**

Division of Sierra Corporation

# TK-225 LIQUID BONDING AGENT

Meets Federal EPA's VOC Requirements

## Technical Data



PRODUCTS  
3, 7 & 9

TK-225  
Liquid Bonding Agent

### 1. PRODUCT NAME

TK-225 LIQUID BONDING AGENT

### 2. MANUFACTURER

TK PRODUCTS, DIVISION OF  
SIERRA CORPORATION  
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Minnetonka, MN 55343  
952-938-7223  
952-938-8084 (FAX)  
e-mail: tkproduct@aol.com  
Website: <http://www.tkproduct.com>

### 3. PRODUCT DESCRIPTION

TK-225 is an acrylic latex liquid bonding agent and an admix (in place of water) for cement mortar patching and resurfacing. Mixed with a cement/sand or gravel combination, it becomes an effective patching and topping mortar having excellent adhesion capabilities and resistance to abrasion, freeze/thaw cycling, industrial chemicals and de-icing salts and chemicals. The mortar produces a strong, durable patch with excellent retention of flexibility and elongation, and does not discolor after exterior exposure to heat, cold and aging.

Less water introduced into the mix produces higher density to the mortar, ready workability and less shrinkage. Improved hydration of the concrete is maintained by the barrier action of the polymers, which is particularly important on applications of thin overlays and spray coatings that do not have the moisture retention characteristics of a thicker mortar placement.

TK-225 is economical to use because of its performance, low maintenance costs, savings in material and labor cost, and further sealing and curing processes are not required.

Field and laboratory tests prove superior tensile, compressive, flexural shear bond and impact strengths over styrene-butadiene rubbers, polyvinyl acetates and unmodified mortar.

COMPARISON OF WATER MIXED MORTAR VS. TK-225		
STRENGTH	WATER	TK-225
Tensile	235	645
Compressive	2390	5715
Flexural	610	1585
Impact	6	16
Abrasion Res.	23.8%	1.15%*

\* = % weight loss; lower value higher resistance

### BASIC USES:

- 1) An admixture for mortar patching, filling cracks, floor underlayment to level floors before tiling, precast building panels and beams, pavement and bridge deck repairs, setting pipes, spray and fill coats.
- 2) A bonding agent for plaster, stucco, cement and slurry coats. Apply concrete repair to "wet" TK-225. If TK-225 is allowed to dry it will act as a bond breaker. Apply additional coat of TK-225 which will allow bonding agent to be tacky.
- 3) An admix for cement base plaster, and stucco mixes and base coats to reduce cracking and improve curing.

### Installations:

Use on many substrates including old concrete, brick, masonry, terrazzo, wood, metals, glass and others.

### Composition and Materials:

100% acrylic polymers in a water dispersion.

### Limitations:

Protect from freezing; repeated freezing and thawing can cause instability and sedimentation. Not recommended for use with air entraining additives. Apply in temperatures of 45°F. and above. Do not allow TK-225 to dry completely, prior to placing repair material.

### 4. TECHNICAL DATA

- Solids Content: 30%, nonflammable; no disagreeable odor.
- Dry Time: Normal use allow 24 to 48 hours. Heavy traffic allow 4 days.
- Viscosity: Slightly thicker than water.
- Potlife: 1-2 hours
- Set Time: 4-6 hours, (Typical sand/cement mix).
- Applicable Standards: ASTM C-190, 109, 348 and 321
- A.I.M. Category: Primers and Undercoaters
- A.I.M. Definition: Primer – A coating formulated and recommended for application to a substrate to provide a firm bond between the substrate and subsequent coatings. Undercoater – A coating formulated and recommended to provide a smooth surface for subsequent coatings.
- VOC Content Limit: 350 grams per liter

### 5. APPLICATION PROCEDURES

#### Preparation:

Remove all loose and/or crumbled material from area to receive the mortar. Sweep or airblow to remove as much dust as possible. Grease and oil stains should be removed with TK-101 Chemical Cleaner or other suitable cleaner. Rinse thoroughly; do not leave pools of water. Patch area should be free of frost.

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**Coverage:**

Approximately 300 SFPG when used as a bonding agent.

**Mixing:**

Use clean, dampened containers and clean, dry sand in the cement mix. Thoroughly premix the sand/aggregate or gravel with the cement. Blend the TK-225 into the cement mix, stirring slowly.

Typical mixes for 1 gallon TK-225: 1-3 cement mix, 45# bag packaged sand mix; graded gravel mix, 80# bag packaged sand mix. Suggested resurfacing mixes per 1 gallon TK-225.

Depth (Inches)	Sharp Masons Sand	Portland Cement
0 - 1/8	20 lbs.	20 lbs.
1/8 - 3/8	40 lbs.	20 lbs.
3/8 - 1	60 lbs.	20 lbs.

**Repair Work:**

When used as a bonding agent for patch repair or overlayment, saturate the area with TK-225 and place the mortar while the bonding agent is still in a tacky state. DO NOT allow it to dry before placing the mortar. Use a wet trowel, cleaning it frequently. DO NOT use a heavy pressure; polymer modified concrete cannot be worked as hard as a pure sand/cement mortar due to wet drag and surface skin formation. Over troweling results in floating the solids to the surface or in treating away the surface skin.

When necessary, the surface can be refinished with a trowel approximately 15 min. after initial placement. Retemper the surface with a one to one blend of water and TK-225. Sprinkle this liquid on the surface with a fine bristled brush, then trowel LIGHTLY.

On large areas, screed the mix with a narrow metal straight edge, keeping a buildup of the mortar in advance of the edge; use a short vibratory stroke to achieve the smoothest surface. Two screeds working together (first one as a rough strike off, the second to give the final surface finish) will reduce the possibility of surface skinning and will provide a smoother finish.

**Note 1:**

All polymer modifier emulsions for cement have a minimum film forming temperature. Below such temperature, the polymers will not bind together. Also, high humidity, high temperatures and windy conditions can affect the potlife and cure time; when this occurs, a small amount of water can be added to keep the mortar surface with wet burlap to retard too rapid drying and to prevent surface cracking.

**Cleanup of Equipment:**

Trowels and containers can be cleaned with water; flush sprayers with water.

**Precautions:**

TK-225 Liquid Bonding Agent contains acrylic resins and a minimal amount of ammonia.

**First Aid:**

*Ingestion:* Induce vomiting; call physician immediately. *Eye contact:* Do not rub, flush with clear water. *Skin contact:* Flush with clear water. Call physician if eye or skin irritation persists. **KEEP OUT OF REACH OF CHILDREN.**

For safety control, Material Safety Data Sheets are available from TK Distributors and the TK Office. This information should be read and understood before using the product.

**6. AVAILABILITY:**

TK-225 is packaged in 55 gallon drums, 5 gallon pails, and 1 gallon containers, and is available through TK Distributors. Contact TK Products for the nearest distributor.

**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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