



# ChemMasters

SPECIALTY CONSTRUCTION PRODUCTS

# KEMPLATE

HEAVY DUTY METALLIC AGGREGATE  
DRY SHAKE HARDENER

## P R O D U C T D A T A

### DESCRIPTION

KemPlate is a heavy duty metallic dry shake hardener formulated specifically for floors requiring abrasion resistance and durability. It is compounded with select sized iron aggregate, cementitious binders, and proprietary components which enhance placeability at high tolerances. KemPlate is recommended for ACI 302, Class 3 through 6 floors.

### USES

- Industrial floors, high traffic zones, loading docks
- High bay aisles, warehouses and distribution centers
- AGV track lines and iron armor joints
- Airline hangars, vehicle manufacturing and assembly plants

### ADVANTAGES

- Malleable aggregate withstands pin point impact loads
- Specially sized and treated aggregate for ease in placement
- Increases abrasion resistance eight to ten times more than plain concrete, three to four times more than mineral aggregate hardeners
- Dense, non-dusting surface resists liquid penetration, reduces maintenance costs
- Controlled consistency and unique gradation for improved finishing characteristics
- Available in natural and eight standard colors including light reflective for reduced energy cost and improved visibility

### RECOMMENDED EQUIPMENT

- Laser or vibrating screed
- Mechanical spreader
- Wooden bullfloat, trowelling machine equipped with float shoes and trowel blades

### COVERAGE

KemPlate is packaged in 60 pound, poly-lined bags packaged 50 per pallet. Standard application rates vary from 1 to 2.5 pounds per square feet, depending on service conditions and abrasion resistance requirements.

### TECHNICAL DATA

Compressive Strength-ASTMC109		(2 inch cubes)
	1 day	4,000 psi 28 MPa
	3 day	5,000 psi 35 MPa
	7 day	7,000 psi 48 MPa
	14 day	9,000 psi 62 MPa
	28 day	12,000 psi 83 MPa

Abrasion Resistance 800% of plain concrete

Specific Gravity 7.0

### APPLICATION

**PREJOB CONFERENCE:** ChemMasters strongly recommends scheduling a prejob conference at least two weeks prior to installation of any dry shake floors. Conference attendees should include representatives of the owner, engineering firm, ready mix concrete producer, general contractor, concrete subcontractor and ChemMasters. Topics should include a review of the concrete mix design, logistics, placement and curing procedures.

**Test Slab:** A test area of a minimum of 100 square feet is required prior to the application of any pigmented dry shake. The test slab is required to ensure that the owner is satisfied with the color when the dry shake is applied at the specified coverage rate over the concrete mix to be used on the floor.

Best results will be obtained by following the recommendations in ACI 302.1, *Guide to Floor and Slab Construction*, and the directions below. Refer to ACI Reports 305 and 306 for hot or cold weather placements. Contact ChemMasters technical service staff for additional placement recommendations.

**CONCRETE PROPERTIES:** **No calcium chloride, chloride based or air entraining admixtures are permitted.** A maximum air content of 3% is acceptable. The use of water reducers, plasticizers and nonchloride accelerators affect the amount of water available for incorporation of the dry shake hardener.



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Their use may require an adjustment in slump to maintain specified water / cement ratio and application rate. Consult ChemMasters if placement temperatures will be over 80°F (27°C) or below 40°F (4°C) or if high wind, low humidity or direct sunlight conditions exist.

**APPLICATION:** Place concrete, screed to grade and bullfloat using a wooden float. Apply 66% of the specified amount of hardener using a mechanical spreader (preferred method) or by hand. Allow initial shake application to absorb moisture and attain a uniform dark color. Float surface embedding shake, using wooden bullfloat. Repeat procedure with remaining 33% of the shake.

Do not work the slab until the concrete has stiffened sufficiently to support the weight of a finisher and finishing machine. Use float blades for initial operation. Do not use combination blades. Follow floating operation with flat trowel then raised trowel passes to produce dense surface texture for greatest durability. On natural colored dry shake, floor may be burnished with final trowel pass. Do not burnish colored dry shakes.

**CURING:** As soon as the surface will not be marred by the application, apply a high solids, membrane forming curing compound such as Polyseal, Polyseal WB or Spray-Cure & Seal 25. For colored dry shake applications, the use of Polyseal with a tint of matching color is strongly recommended. This tinted curing and sealing compound evens the natural shading that occurs with dry shake hardeners. Use clear Polyseal on patterned concrete surfaces for best results. Do not wet cure. For floors in chemical environments, consult ChemMasters for alternate curing and sealing options.

After curing compound has dried, protect the finished surface from staining and damage by other construction trades by using nonstaining paper or polyethylene sheeting. Do not use these items for curing.

#### **CLEANUP**

Clean tools and equipment with water before material dries and hardens.

#### **LIMITATIONS**

Do not apply to floors subjected to acids, corrosives, deicing salts or constant moisture.

Do not apply to floors subjected to freeze thaw cycling.

Hand or shovel distribution is discouraged, except around columns or close to walls.

#### **NOTE**

The recommendations offered in this data sheet are based on previous experience under job conditions and on accepted industry practices. They may be followed, modified or rejected by the owner, architect, engineer, contractor or their representatives as they are responsible for planning and execution of procedures appropriate for a given installation. ChemMasters can not accept authority over or responsibility for any phase of the construction.

#### **STORAGE**

Store bags in a cool dry place and on pallets. Shelf life is one year from the date of manufacture.

#### **CAUTION**

May cause eye and respiratory tract irritation. Over exposure may cause skin irritation. Do not take internally. Keep out of reach of children.

#### ***This Product is Formulated and Labeled for Industrial and Commercial Use Only***

*FOR BEST RESULTS AND SAFEST USAGE, USER IS SPECIFICALLY DIRECTED TO CONSULT THE CURRENT MATERIAL SAFETY DATA SHEET AND PACKAGE LABEL FOR THIS PRODUCT*

*We warrant our products to meet our published specifications and to be free from defects in materials and workmanship to the acceptable quality levels defined in these specifications. If acceptable quality levels are not specified, the acceptable quality levels will be those normally supplied by us for the product. We make no guarantee of the results to be obtained from the use of our products. The determination as to the adaptability of any of our products to the specific needs of the Buyer is solely Buyer's prerogative and responsibility. We are glad to offer suggestions on the use of our products. Nevertheless, there are no warranties given except such expresses warranties offered in connection with the sale of a particular product. Our liability shall be limited to replacement of, or refund of an amount not to exceed the purchase price attributed to, the goods as to which such claim is made. Our selection of one of these alternatives shall be Buyer's exclusive remedy. IN NO CASE SHALL WE BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES, EVEN IF WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, CO-CONDITIONS AND REPRESENTATIONS, EITHER EXPRESSED OR IMPLIED, WHETHER ARISING UNDER ANY STATUTE, COMMON LAW, USAGE OR TRADE, COURSE OF DEALING OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.*