

## KOSTER MPE-F

### Fast curing Multi Purpose Epoxy for Chip and Quartz Floors

Technical guideline / Article number 6.062  
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#### Description:

KOSTER MPE-F is a fast curing unique versatile modified cycloaliphatic multi purpose epoxy. KOSTER MPE-F is a clear two component thermo-setting, low odor, 100% solids epoxy designed as an all-purpose coating system for various conditions and substrates. It can be used in low temperatures down to 40° F as well as for quicker turnaround times under standard conditions. The material is suited for embedding chip and quartz as well as for finish top coats. It is part of the KOSTER QF and CF resinous floor coating system.

#### Material Properties:

- Yellowing resistant
- Thermal shock resistant
- Good chemical resistance
- Excellent adhesion
- Extended working time
- Fast curing
- Wet Substrate Curable
- Low TeMPE-Ferature Curable
- One System Build-up
- Antimicrobial
- Pigmented
- High Gloss

#### Appropriate Applications:

- Laboratories
- Garages
- Pharmaceutical Plants
- Clean rooms
- Kitchens
- Hospitals
- Laundries
- Kennels

#### Testing for Moisture and/or Contaminants:

It is the owner or the owner's representative's responsibility to examine the substrate for contaminants and moisture. Testing for contaminants is not required but recommended by KOSTER.

Limits for moisture vapor transmission for epoxy floor systems are:

- 3 lbs./1,000 sq. ft./24 hour using the calcium chloride test per ASTM F-1869 or
- 75% relative humidity using In-situ Relative Humidity Testing per ASTM F-2170.

Contact the KOSTER American technical team for additional details and guidelines concerning testing.

#### Technical data:

Property	Data
Percentage solids by weight	100%
Mix Ratio (by volume)	A (resin) : B (hardener) 2 parts : 1 part
Viscosity at 70° F	450 cps
Pot life at 70° F	approx. 20 min
Dry Time at 70°F	approx. 4 h
Working Time at 70°F	approx. 10 min
Volatile Organic Compound (VOC)	Nil

#### Physical Properties:

Property	Test Method	Result
Hardness (Shore D)	ASTM D-2240	75-80
Compressive Strength	ASTM D-695	17,000 psi
Tensile Strength	ASTM D-638	4000 psi
Tensile Elongation	ASTM D-638	7.5%
Adhesion to Concrete	ASTM D-4541	400 psi, Concrete Failure
Impact Resistance	ASTM D-2794	>160
Water Absorption	ASTM D-570	0.04%
Flame Spread/NFPA 101 (3 mils over cement board)	ASTM E-84	Not Tested
Abrasion Resistance CS17 Wheel 1000 GM Load 1000 Cycles	ASTM D-4060	30 mg loss
Coefficient of Friction Wet (James Friction Tester) Dry	ASTM D-2047	0.7 0.8
Gloss (60 Degrees)	ASTM D-523	100
Thermo Cycling		Not Tested

#### Surface Preparation:

Substrates must be sound, solid, profiled and free of materials or contaminants that may act as bond breakers. The substrate must be primed with KOSTER ES. Refer to the respective data sheet.

#### Mixing:

Mix 2 parts (by volume) of A component (resin) with 1 part (by volume) of B component (hardener). For a 1.5 gal mix, measure 0.5 gal of B component (hardener) and 1 gal of A component (resin). Pour

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the B component (hardener) into a clean mixing bucket, making sure no material remains in the measuring bucket. Add the A component into the B component making sure no material remains in the measuring bucket. Use an electrical mixer (800-1000 RPM) and a "Jiffy-type" mixing paddle to mix the material. Mix for 2 minutes. Pour the fully mixed material onto the substrate immediately after mixing.

## Application:

### General:

KOSTER MPE-F can be applied by roller or squeegee.

Over textured floor: apply material using flat squeegee, then back roll and cross roll.

Over smooth floor: apply material using flat squeegee or dip and roll or brush apply; follow up by back rolling and then cross rolling.

### Instructions for KOSTER Chip or Quartz floor:

Standard installation procedure is a double broadcast application with a top coat:

1. Apply a coat of mixed KOSTER MPE-F at approx. 100 ft<sup>2</sup>/gal with a flat squeegee. Then back roll and cross roll with a 3/8" epoxy rated non-shed roller. Along edges, the material can be brush applied.
2. Broadcast chip or quartz into the fresh, wet KOSTER MPE-F coat. Wearing spiked shoes, walk on the wet epoxy holding a suited container and broadcast chip or quartz into the fresh coating until the floor appears dry. This will require approx. 0.5 lb/ft<sup>2</sup>. Throw the aggregate up into the air so that it falls vertically onto the floor. It may take 15 to 30 seconds for the quartz to be absorbed by the epoxy. Do not broadcast into the edge that will be joined into the next section. Leave a 2 ft wide wet edge without broadcast to permit overlapping when proceeding onto next section. Do not walk on the broadcast chip or quartz with spiked shoes. Be sure to keep contaminants out of the chip or quartz. Allow to cure.
3. Sweep off the excess chip or quartz using a stiff, clean, dry broom with synthetic bristles.
4. Lightly sand the chip or quartz surface in order to remove high spots e. g. using a handsander. Sweep or vacuum the floor removing all loose particles.
5. For second broadcast, mix additional material and repeat steps 1. through 4.
6. Sweep or vacuum the floor again.
7. Install a seal coat over the chip or quartz broadcast:

- To achieve a rough surface: Apply a urethane seal / top coat made of KOSTER UTC if the top coat has to be UV-stable and abrasion resistant. Alternatively, apply KOSTER MPE-F as top coat.
- To achieve a smooth surface: Apply another coat of KOSTER MPE-F (without broadcast). Use a flat squeegee to spread the material. Then back roll and cross roll with a 3/8" epoxy rated non-shed roller. Along edges, the material can be brush applied. The thicker this layer is, the smoother the surface will be. Follow up, by applying a urethane seal/top coat made of KOSTER UTC.

## Coverage:

Coverage 10 mils : 160 ft<sup>2</sup>/gal

## Chemical Resistance:

Well-rounded acids, bases, and cleaners

## Packaging:

The A and B component of KOSTER MPE-F are packaged in 1 gal canisters, 2.5 gal canisters and in 55 gal drums. The mixing ration of 2 parts A to 1 part B by volume leads to the following kits:

3 gal kit → consists out of two 1 gal A (resin) canisters and one 1 gal B (hardener) canister

7.5 gal kit → consists out of two 2.5 gal A (resin) canisters and one 2.5 gal B (hardener) canister

165 gal kit → consists out of two 55 gal A (resin) drums and one 55 gal B (hardener) drum

## Storage:

Between 50° F - 90° F

## Shelf Life:

1 year in original sealed container

## Clean Up:

Immediately with Xylene (or similar) after use

## Disposal:

Dispose of in accordance with current local, state and federal regulations. Collect with absorbent material.

## Limitations:

This product is best suited for application in temperatures between 60°F and 90°F.

Epoxy inherently yellows, require a UV stable topcoat. Some light colors may require multiple coats for adequate hiding power. Certain colors appear white when scratched.

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Slight batch-to-batch color variations may occur. When ordering to match a previous color, inquire if the same batch number or quality control number is still available.

## **Safety Precautions:**

Follow Safety Data Sheet and the Hazardous Materials Identification System labeling guide for proper personal protective equipment to use when handling this product. Use only as directed. KEEP OUT OF REACH OF CHILDREN.

## **Cleaning of finished surface:**

This product is considered to be a low maintenance coating system, however, certain textures and service environments require specific procedures.

## **Warranties:**

KOSTER warrants that its product shall be in accordance with the specifications published in the current revision of the products data sheet. KOSTER covenants that in the event any of its products fail to meet their published specifications, KOSTER shall replace those products proved to be defective. KOSTER shall not be responsible for any incidental or consequential damages due to the breach of its warranties. Notwithstanding the foregoing, KOSTER's sole liability hereunder shall not exceed the cost of the defective product originally purchased. EXCEPT AS SET FORTH ABOVE, KOSTER MAKES NO OTHER WARRANTIES EXPRESS OR IMPE-FLIED AND MAKES NO WARRANTY AS TO THE MERCHANTABILITY OR FITNESS OF THE PRODUCT FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The user must determine if the product is suited for the intended use and the user must bear the risks and liabilities associated with it.