

DESCRIPTION

Gem-Kote™ 400 is a solvent-based MMA (methyl methacrylate) sealer designed especially for professional use as a seal coat over acrylic spray and trowel cementitious coating systems, acid stains and as a general sealer for concrete for areas requiring a VOC (Volatile Organic Compounds) content of 400 g/l or less. Because of its versatility, it is often used as a stand-alone sealer in either clear, or an unlimited array of colors. It has excellent penetrating qualities, and provides excellent weather resistance.

Because it is an acrylic, it exhibits outstanding abrasion and UV (ultra-violet) resistance, while maintaining excellent flexural properties to allow for concrete expansion and contraction. It is designed to dramatically reduce fluid penetration, while maintaining superb breathable film properties. It is a quick drying formula, reducing recoat time, expediting installation and minimizing downtime.

WHERE TO USE

- Schools
- Apartments
- Offices
- Restaurants
- Horizontal and vertical
- Interior and exterior
- Freshly placed and finished concrete
- Aged concrete

ADVANTAGES

- Good Working Time
- Multiple VOC Formulas
- Low Water Pickup
- Early Block Resistance
- Quick Drying
- Excellent Weatherability

TYPICAL DATA FOR GEM-KOTE™ 400

(Material and Curing Conditions at 73°F unless noted, 50% R.H.)

COLOR: Clear, transparent **VISCOSITY (1):** approx 400 cps.
pH: 8.2-8.7 (ASTM E-70) **CONSISTENCY:** Water

TACK-FREE TIME

Substrate Temperature 70°F+ **To Touch** **To Recoat**
 30 mins 1.5 Hours

VOC Content

< 400 g/l

Film Clarity

Clear

Adhesion

225 to 350 g/mil (on glass)1

Stain Resistance (One Hour Exposure)

Ketchup	Excellent (no effect)
Mustard	Excellent (no effect)
"Kool-Aid"	Excellent (no effect)
Grape Juice	Excellent (no effect)
Coffee	Excellent (no effect)
Chocolate Syrup	Excellent (no effect)
Tincture of Iodine	Fair
Coal Tar	Poor
Used Motor Oil	Excellent (no effect)

Chemical Resistance (One Hour Exposure with no evaporation)

Used Motor Oil	Excellent (no effect)
DI Water	Excellent (no effect)
10% Sodium Hydroxide	Excellent (no effect)
10% Sodium Chloride	Excellent (no effect)
10% Calcium Chloride	Excellent (no effect)
3% Trisodium Phosphate	Excellent (no effect)
10% Ammonia	Excellent (no effect)
10% Hydrochloric Acid	Excellent (no effect)
Brake Fluid	Poor
100 proof Alcohol	Good
Methyl Alcohol	Good
Gasoline	Excellent (no effect)
Skydrol	Poor

Water Blushing Resistance on Black Pigmented Concrete
 48 hr in Fog Box No noticeable effect

Water Blushing Resistance on Black Pigmented Concrete
 6 months Clear when wet with no visual defects

PACKAGING

5-gal pails (18.925 L)
 55 – gal drums (208.17 L) (Special order only)

SURFACE PREPARATION

Concrete and other substrates must be clean, sound, and free of dust, grease, waxes, coatings, curing compounds and all contaminants. Concrete surfaces should be etched with a solution of 1 part Muriatic Acid to 4 or 5 parts water, and washed with high pressure water using a minimum of 3000 psi @ 3 or more gallons per minute. If use of acids and/or copious amounts of water are not possible, the surface should be thoroughly scrubbed, preferably using a buffer type machine with a mild low-suds soap or TSP (Tri-Sodium Phosphate) solution. After scrubbing, rinse the area with clean water and vacuum or mop to remove all water residue. The surface must be allowed to dry completely.

PRECONDITIONING POLYMER

For best results, pre-condition Gem-Kote™ 400 by storing it in the area to be applied, or at a temperature similar to the ambient conditions for the installation. Using cold material may dramatically extend dry times. For best results, store material at room temperature at all times.

COVERAGE

Ft²/gal per coat (m²/L per coat)

Curing only:

200 – 400 (4.9 – 9.8)

Second coat (dust-proof/seal):

400 – 600 (9.8 – 14.7)

Maintenance applications:

200 – 300 (4.9 – 7.4)

NOTE: Spray applications will typically yield double the above material coverage estimations

Coverage varies with application method, porosity, and density of concrete. For curing only, 1 coat may be sufficient; 2 coats, however, will give best results. To seal and dustproof, 2 coats are required.

MIXING

No mixing is required; however, if material has been stored for a long period of time, a gentle stirring is advisable. Mix in a manner that will not introduce extensive air.

DO NOT MIX AT HIGH SPEED!

APPLICATION METHODS

1. Apply a continuous, uniform film by low-pressure spray or short-nap (3/8"-1/2") roller. Low pressure solvent resistant hand-pump sprayer is recommended for best results.

2. For curing, only 1 coat is necessary. Apply evenly as soon as possible after final finishing. To seal and dustproof, 2 coats must be applied at the recommended rates after standard 28 day cure. Apply the second application when the first coat is dry.

3. Gem-Kote™ 400 applied below 50° F (4 to 10° C) may retain a white appearance for extended periods, depending on temperature variations. This condition should be temporary. This is an indicator of trapped moisture. If this occurs, apply another coat to remove this white film. Warmer temperatures will allow the material to dry without this film.

LIMITATIONS

- Not to be used on surfaces to receive concrete overlays or additional toppings, coatings, sealers, or ceramic tile (without proper surface preparation).

- Do not use in areas that require resistance to solvents.

- Do not subject to rain or water until Gem-Kote™ 400 dries hard.

- Do not apply in extremely humid conditions (>70-80%RH)

•DO NOT APPLY AT TEMPERATURES ABOVE 80°F!

DRYING TIMES

At 77° F (25° C) and 50% relative humidity. The drying time of water-based materials is directly influenced by temperature and relative humidity. Low concrete or air temperatures or high relative humidity will extend drying times.

Light foot traffic: 4 hours

Normal traffic: Overnight

Maximum hardness: 7 days

MAINTENANCE

For maximum life expectancy, routinely sweep and wash floors with appropriate cleaners and detergents. All chemicals or abrasive grit should be removed as soon as possible.

IMPORTANT INFORMATION

Use of safety goggles, chemical-resistant gloves, adequate ventilation and NIOSH/MSHA approved respirator is recommended.

CLEAN UP

In case of spills wear suitable protective equipment, contain spill, collect with absorbent material, place in suitable container. Clean all tools with soap and warm water. Dispose according to applicable local, state, and federal regulations.

FIRST AID

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. For respiratory problems, remove person to fresh air. Contact Physician Immediately. Wash clothing before re-use.

Consult Material Safety Data Sheet for More Information

KEEP OUT OF REACH OF CHILDREN

KEEP CONTAINERS TIGHTLY CLOSED

SHELF LIFE 1 year
(in original unopened container)



Additional Technical Data

Moisture Retention, Test ASTM C309

Gem-Kote™ 400 (at 200 ft² per gallon), kg/m²..... 0.21
Test requirement, not to exceed, kg/m²..... 0.55

Moisture Retention, Test ASTM C309

Gem-Kote™ 400 (at 300 ft² per gallon), kg/m²..... 0.32
Test requirement, not to exceed, kg/m².....Less than 0.4

Gasoline Resistance

15-minute exposure (ponding)..... Slight dulling

Tg°C..... 50

Tukon Hardness

30 minutes at 180°F 9.3
30 minutes at 300°F..... 13.7

Pencil Hardness

30 minutes at 180°F..... F
30 minutes at 300°F..... H

Flexibility, 1/8, 1/4, 1/2 inch mandrels* 6,5,4

Spray conditions

Viscosity, No. 2 Zhan cup, sec.....19

Abrasion resistance

(mg lost, CS-17 wheel, 1000 g load, 1000 cycles)..... 160

*The degree of cracking at the bend over each mandrel is rated on a 0 (no failure) to 10 (complete flaking) scale.

LIMITED WARRANTY - "Concrete Coatings Incorporated warrants its products to be free of manufacturing defects, to be of good quality, and that they will meet Concrete Coatings Incorporated current published physical properties when applied in accordance with Concrete Coatings Incorporated written directions and tested in accordance with ACI, ASTM and Concrete Coatings Incorporated Standards. Product proved to be defective will be replaced. **There are no other warranties by Concrete Coatings Incorporated of any nature whatsoever, expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product.** Concrete Coatings Incorporated shall not be liable for damages of any sort, including remote or consequential damages, resulting from any claimed breach of any warranty, whether expressed or implied, from any other cause whatsoever. Concrete Coatings Incorporated will not be responsible for use of this product in a manner to infringe on any patent held by others."

RECOMMENDED FOR PROFESSIONAL USE ONLY