



ChemMasters

SPECIALTY CONSTRUCTION PRODUCTS

DURAGUARD 420

HIGH BUILD METHYL METHACRYLATE
COATING



PRODUCT DATA

DESCRIPTION

Duraguard 420 is a two-component, high build, Methyl Methacrylate (MMA) coating. It is comprised of an MMA resin and a catalyst. An accelerator is available for use in cold temperatures.

USES

- Interior, horizontal concrete surfaces
- Surfaces subject to high levels of abrasion, impact loading
- Industrial, commercial and warehousing applications
- Manufacturing and assembly plants, loading docks
- Food or chemical processing plants, canneries, wineries and breweries

ADVANTAGES

- Rapid curing and recoat window for minimal downtime
- Excellent resistant to deterioration or discoloration from ultraviolet light (UV) exposure
- Superior resistance to alcohols, petroleum products and aromatic solvents
- Withstands service temperatures from 33°F/0.5°C to 215°F/102°C
- Pigmented formulation may be used outside in areas not subjected to freeze/thaw cycling

TECHNICAL DATA

- Complies with National Volatile Organic Compound Emission Standards for Architectural Coatings, Federal EPA Regulation 40 CFR Part 59

V.O.C. Content: 0 gm/L

- USDA approved for incidental contact at federally inspected meat, fish and poultry plants

Density 8.09-8.42 lbs./gal 0.97-1.01 g/cm³

Viscosity (ASTM D-2393)
clear: 80-90 cps colors:200-300 cps

Solids	100%
Water Absorption (ASTM D-570)	<0.1%
Compressive Strength (ASTM C 109) 7500 psi	52MPa
Tensile Strength (ASTM C 307) 2100 psi	14 MPa
Flexural Strength (ASTM C 348) 3100 psi	21 MPa

CHEMICAL RESISTANCE

Distilled water	R	Salt water	R
Alkalies			
Ammonia 10%	R	Caustic Soda 50%	R
Potassium Hydroxide 50%	R		
Acids			
Acetic Acid 10%	R	Acetic Acid 30%	R
Chromic Acid 40%	R	Citric Acid 30%	R
Formic Acid 10%	R	Formic Acid 30%	C
Hydrochloric concentrate	R	Lactic Acid 30%	R
Nitric Acid 10%	R	Nitric Acid 30%	C
Oxalic Acid 10%	R	Phosphoric Acid 40%	R
Sulfuric Acid 50%	R		

Salts/Salt Solutions

Ammonium Chloride	R	Ammonium Sulfate	R
Calcium Chloride	R	Potassium Chloride	R
Sodium Chloride	R	Sodium Carbonate	R
Sodium Hypochlorite	R	Sodium Sulfate	R

Petrochemicals

Crude Oil	R	Diesel Fuel	R
Gasoline, high octane	R	Kerosene	R
Mineral Oil	R	Parafin Oil	R
Petroleum	R	White Spirits	R

Solvents

Acetone	N/R	Benzene	C
Ethanol 30%	R	n-Heptane	R
Isopropyl Alcohol	C	Perchloroethylene	R
Phenols	R	Styrene	R
Turpentine	R	Toluene	C
Xylene	C		

Miscellaneous

Vegetable Oils	R	Animal Fats	R
Fruit Juices	R	Vegetable Juices	R
Wine	R		

Key: R= Recommended, C= Consult ChemMasters technical service staff.

Application Temperature -20°-+95°F -18°-+35°C



ChemMasters

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TECHNICAL DATA CONTINUED

Pot Life clear 10-40 minutes colors 20-40 minutes

Cure Time clear 20-60 minutes colors 30-90 minutes

PACKAGING

Duraguard 420 is available in 2 U.S. gallon/7.6 Liter or 5 gallon/19 liter units which are shipped 36 per pallet, shrink wrapped. Duraguard 400 catalyst and cold weather accelerator are each packed in 1 U.S. gallon/3.8 liter cans. Catalyst must be ordered separately.

ESTIMATING GUIDE

PRIMER:	Duraguard 400	15 mils		
		100 Ft. ² /gal	2.5 M ² /L	
TOPCOAT:	Duraguard 420	15 mils		
		100 Ft. ² /gal	2.5 M ² /L	

DIRECTIONS

SURFACE PREPARATION: This is the most critical step in any coating application. All concrete must be a minimum of 28 days old and mechanically or chemically profiled. For complete surface assessment and preparation guidelines, refer to ChemMasters Technical Bulletin, *Floor Preparation Guide*, or contact ChemMasters technical service staff.

PRIMING: Prime prepared substrate with Duraguard 400. Follow data sheet directions for mixing and application. Allow whole floor to dry, 1-2 hours, before topcoating.

MIXING: Duraguard 420 must be thoroughly mixed before application. Based on minimum surface temperature, add the appropriate amount of catalyst for each gallon/liter of resin.

50°F	8 oz	10°C	0.24 L
70°F	4 oz	21°C	0.12 L
90°F	2 oz	33°C	0.06 L

Mix for 3 minutes using a mechanical drill equipped with a jiffler type mixing prop. Take care not to incorporate excess air into the mix. Blend until a uniform color is obtained.

For cooler applications, contact ChemMasters for proper catalyst adjustments and the possible addition of an accelerator.

APPLICATION: Pour the mixed Duraguard 420 onto the prepared concrete, spread with a serrated squeegee at 15 mils, then backroll into place with a short nap, solvent resistant roller.

RECOAT: Duraguard 420 can be recoated once the whole floor is dry to the touch, usually within one to two hours after placement.

CLEANUP

Clean tools and equipment before material dries and sets with xylene or xylo.

LIMITATIONS

- Duraguard 420 is not designed for application in direct sunlight. The topping may blister or pinhole due to out gassing of air in the concrete and high substrate temperatures.
- Duraguard 420 is exothermic, generating a large amount of heat when initially mixed. Do not mix more than 2 gallons of Duraguard 420 at a time. A large mass of material can ignite. Immediately after mixing pour all of the material onto the floor to dissipate the heat.
- Exposure to excessive heat may cause premature gelling and reduce the working time.
- Duraguard 420 is extremely fast setting. Floors must be completely prepared and ready before material is mixed.
- Good ventilation of the repair area is strongly recommended to aid in the thorough cure of Duraguard 420.

STORAGE

Store factory sealed containers of unmixed material at 50°-75°F/10°-24°C temperatures away from direct sunlight and sources of heat. Temperatures in excess of 75°F/24°C cause premature aging of the material. Shelf life of properly stored material is one year from date of manufacture.

CAUTION

FLAMMABLE LIQUID: Keep away from heat or open flames. Use with adequate ventilation. May cause skin, eye and respiratory tract irritation. Do not take internally. Keep out of reach of children.

ORGANIC PEROXIDE: Keep away from all sources of heat including sunlight. Causes eye, skin and respiratory tract irritation. May cause allergic skin reaction. Do not take internally. Keep out of reach of children.

All label precautions and MSDS must be fully understood before using this product.

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.