ChemMasters
SPECIALTY CONSTRUCTION PRODUCTS

DURAGUARD 310CRU

CHEMICAL RESISTANT URETHANE

P R O D U C T D A T A

DESCRIPTION

Duraguard 310CRU is a two component, aliphatic polyurethane coating. It may be used as a topcoat over epoxy and epoxy novalac systems to improve chemical, ultraviolet light and graffiti resistance.

USES

- Concrete topcoat for D.O.T. applications including median barriers, sound barriers, bridge walls, etc.
- Coatings and toppings requiring ultraviolet light protection
- Floors subjected to harsh chemicals or a high degree of abrasion
- Airports and hangars, vehicular showrooms and repair bays, machine shops, manufacturing and assembly facilities, chemical and food processing plants
- Hospitals, long term care facilities, retail outlets, stadiums, convention centers and arenas

ADVANTAGES

- Optimum chemical and graffiti resistant coating for use inside or out
- Passes NCHRP 244 testing to protect concrete from chloride ion penetration when used in conjuction with Safe-Cure & Seal EPX
- Excellent abrasion resistance when used as a top coat for high build, trowel applied or self-leveling toppings
- Superior resistance to staining and deterioration caused by foodstuffs, acids, alkalies, hydrocarbons
- Exceptional color retention and stability with high gloss finish

TECHNICAL DATA

- USDA approved for incidental contact in federally inspected meat and poultry plants

CHEMICAL RESISTANCE

	Rating*	Comments
Alkalies		
Ammonium Hydroxide	R	
Sodium Hydroxide	R	
Sodium Chloride	R	
Calcium Chloride	R	
Trisodium Phosphate	R	
Alcohols		
Ethyl Alcohol	R	
Isopropyl Alcohol	R	
Methyl Alcohol	R	Softening, staining
Brake Fluids		
Auto	C	Staining
Hyjet #3	R	
Skydrol 500 A & B	R	
Inorganic Acids		
Chromic 10%	R	
Hydrochloric 31%	R	
Nitric 70%	N/R	Staining, removal
Phosphoric 35%	R	
Phosphoric 80%	R	Slight Softening
Sulfuric 30%	R	
Sulfuric 50% and up	C	Softening, staining
Organic Acids		
Acetic 5%	R	
Acetic 20%	R	
Glacial Acetic	C	Softening
Solvents & Ketones		
Gasoline	R	
A-1 Jet Fuel	R	
Toluol	R	
Methylene Chloride	C	Softening
Trichloroethylene	C	Softening
Perchloroethylene	C	Softening
Butyl Cellusolve	R	
Acetone	C	Slight Softening
MEK	R	
PM Acetate	R	
Miscellaneous		
Beer	R	
Cola	R	
Milk	R	
Mustard	R	
Bleach	R	

*Ratings: R - Recommended
N/R - Not Recommended
C - Consult ChemMasters Technical Services

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Technical Data continued

• V.O.C. Content:	327-348 gm/L
• Solids:	66-72%
• ASTM Type V, aliphatic polyurethane coating	
• ACI 302, Table 1.1, Class 1, 2, 3, 4, and 5 floors	
• Ohio D.O.T. pre approved as topcoat for epoxy/urethane system for bridges and barrier walls	
• Abrasion Resistance - Taber 1000g/1000cycles CS-17 wheels:	25 grams
• Gel Time, 150 ml/0.5 cup mass	90 minutes
• Drying times	
Tack Free Time	5 hours @ 70ºF
Moderate Foot Traffic	12-24 hours
General Traffic	48 hours
Heavy Wheel Traffic	7 days

Recommended System Components

Duraguard 310CRU is not to applied directly to concrete. A primer must first be applied to the concrete prior to Duraguard 310CRU application. Use Safe-Cure & Seal EPX, Duraguard 100WB or Duraguard 100 as a primer. Duraguard 310CRU may be used as a top coat for all epoxy high build, trowel down or self-leveling toppings.

Estimated Coverage Rates

	Dry mil	Ft.²/Gal.	M.²/L
Duraguard 310 CRU	3.7 mils	300	8.2

D.O.T. or other specified coverage rates will supercede the above recommendation.

Directions

Concrete surface preparation and priming : Consult technical data sheet of the selected primer for directions.

Mixing

Duraguard 310 CRU must be mixed before application at the following mix ratios:

Clear	2 Parts A Resin:1 Part B Hardener
Colors	3 Parts A Resin:1 Part B Hardener

Pour all of the Part B Hardener into the Part A Resin and mix thoroughly for 3 minutes or until a uniform color results. Use within 90 minutes of mixing. For best results, ambient and surface temperatures should be between 50º - 90ºF.

Note: Disperse mixed material rapidly. If product is left in mixing container in a large mass, the working time is drastically reduced.

Application: For horizontal applications, pour the mixed Duraguard 310CRU onto the primed area to be coated in small quantities. Spread material evenly using a short nap, solvent resistant roller. Pour out only an amount that you can continue to reach with the roller. For vertical applications, apply material with brushes, solvent resistant rollers or airless spray equipment with 30:1 pressure and 0.40 fan tip nozzles. If sprayers are used, flush hoses with solvent prior to spraying Duraguard 310CRU

Recoat: Duraguard 310CRU can be recoated as soon as it is tack free. If recoating is delayed over 24 hours after the material is tack free, lightly sand or screen the cured Duraguard 310CRU prior to recoating.

Cleanup: Clean tools and equipment before the material dries and sets with xylene, xylol, glycol ether or PM cetate.

Limitations

- Duraguard 310CRU must be used over a clean dry substrate that has been properly primed. Duraguard 310CRU is not designed for use in areas of water immersion.
- When using strong caustic or solvent based cleaners as part of a regular maintenance program, consult ChemMasters Technical Services department for additional recommendations.
- Do not apply Duraguard 310CRU if temperature is below 50ºF (10°C) or if relative humidity is above 90%. Temperature at time of application must be 5° higher than the dew point. For additional data on good coating practice, consult SSPC and/or NACE.
- Avoid applying any polymer coating in direct sunlight during times of extreme heat. This can cause wrinkling, pinholes and blistering.

Storage

Store unmixed material in cool, dry place out of direct sunlight or heat, 75°F (24°C) or lower, in tightly closed containers. Shelf life is 12 months from date of manufacture.

Cautions

Combustible liquid: Keep away from heat and open flames. Use with adequate ventilation. May cause skin, eye and respiratory tract 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

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