# PRODUCT DATA
# WEARCOAT 100

Coatings For Industry, Inc. • 319 Township Line Road, Souderton, PA 18964 / 215-723-0919

## Description
Two package aliphatic urethane, polyester type, finish coating for exterior applications.

## Color
Available in standard full gloss colors and clear. Special colors and gloss can be matched upon request.

## Packaging
One and five gallon kits, premeasured for easy blending at jobsite.

## Uses
WEARCOAT 100 has non-yellowing, non-chalking properties combined with excellent abrasion, chemical, solvent and good heat resistance properties. It provides excellent gloss retention and will continue to retain a high gloss through many years of service.

It is suggested, therefore, as a high performance finish coat in the following areas:

- Chemical Process Industries
- Water and Waste Treatment
- Pulp and Paper Mills
- Mass Transit Vehicles
- Marine Environments
- Bridges and Structural Steel
- Industrial/Commercial Floors
- Anti-Graffiti
- Locomotives and Railcars
- Galvanized Steel Building Panels
- High Performance Architectural
- Heavy-Duty Maintenance in Hostile Environments
- Cementitous Substrates

WEARCOAT 100 can be applied over a wide variety of properly prepared and primed substrates including structural steel, cold rolled steel, aluminum, concrete, plastics and galvanized steel. In some cases it is self priming, but it is generally used as a topcoat over URETHABOND 104, URETHABOND 109, WEARCOAT 497, WEARCOAT 499, WEARCOAT 490, WEARCOAT 495 and WEARCOAT 480.

## Technical Data

| | |
|---|---|
| Volume Solids: | 65% |
| Dry Film Thickness, minimum: | 4.0 mils per coat |
| maximum: | 6.0 mils per coat |
| Theoretical coverage @ 5 mils DFT: | Approximately 200 sq. ft./gallon(may vary slightly with color) |
| Drying Time @ 70° F., 50% R.H.: | To touch – 2-4 hours<br>To recoat - 4 hours<br>Mar free - 12 hours<br>Max. hardness - 7 days |
| Pot Life @ 70° F., 50% R.H.: | 4 hours |
| Primer: | Urethabond 104, Wearcoat 490 |
| Minimum application temperature: | 25° F. or within 10° of dew point |
| Service temperature range: | -40° F. to +250° F. |
| Method of application: | Brush, roll, or spray |
| Thinner: | CFI 711 Thinner |
| Cleanup Solvent: | CFI 704 or CFI 711 |
| Shelf Life: | Part A (polyol): 2 years, if unopened<br>Part B (hardner): 1 year, if unopened |
| Mix Ratio: | 2 parts A to 1 part B by volume |

***NOTE:** Although this coating composition is not a fire-retardant product, it will not support combustion and will self-extinguish when the source of fire is removed.*

## Test Data

Salt Spray 5% (ASTM B 117)
2 coats of URETHABOND 104 over rusty steel and 1 coat of WEARCOAT 100, two component urethane finish coat applied with an "X" scribed through center plate. After 14,000 hours exposure only slight undercutting at spots along "X" was noted and this was less than 1/32" undercut. Total film thickness 8.0 mils approximate.

Tabor Abrasion (CS-17, 1000 gms.)
1000 Cycles 15 mg.
Pencil Hardness 2 H
Flexibility (ASTM D-5222) Pass 1/8" mandrel bend
MEK Double Rubs, 48 hr. cure Pass 100
Gardner Impact 160 in. lbs, direct and reverse

## CHEMICAL RESISTANCE

| | | | |
|---|---|---|---|
| Hydrochloric Acid 5% | Excellent | Oxalic Acid 10% | Excellent |
| Hydrochloric Acid 10% | Excellent | Citric Acid 10% | Excellent |
| Sulphuric Acid 5% | Excellent | Lactic Acid 85% | Good |
| Sulphuric Acid 10% | Excellent | Oxalic Acid | Good |
| Sulphuric Acid 30% | Good | Oleic Acid | Excellent |
| Nitric Acid 5% | Excellent | Maleic Acid 10% | Excellent |
| Nitric Acid 10% | Excellent | Gasoline | Excellent |
| Phosphoric Acid 10% | Good | Toluene | Excellent |
| Phosphoric Acid 50% | Good | Xylene | Excellent |
| Caustic Soda 10% | Excellent | Methanol | Excellent |
| Caustic Soda 40% | Excellent | Ethanol | Excellent |
| Ammonia 5% | Fair | Ethylene Glycol | Excellent |
| Ammonia 10% | Fair | Ethyl Acetate | Excellent |
| Sodium Bicarbonate 10% | Excellent | Acetone | Excellent |
| Sodium Chloride Solution 5% | Excellent | Methyl Ethyl Ketone | Excellent |
| Sodium Chloride Solution 10% | Excellent | Methyl Isobutyl Ketone | Excellent |
| Ammonium Chlorate 30% | Excellent | Perchloroethylene | Excellent |
| Formic Acid 10% | Good | Tricresyl Phosphate | Excellent |
| Acetic Acid 10% | Good | Tricresyl Phosphate | Excellent |
| Methylene Chloride | Poor | Skydrol A500 | Excellent |
| MIL-E-23699 Hydraulic Oil | Excellent | JP-4 Jet Fuel | Excellent |

**RATING SYSTEM - TESTS WERE RUN IN TOTAL IMMERSION AND FOLLOWING RATES GIVEN: Excellent -** 3 months with no blistering or coating degradation. **Very Good -** 2 months with no blistering or coating degradation. **Good -** 1 month with no blistering or coating degradation. **Fair -** 1/2 month with no blistering or coating degradation. **Poor -** Less than 1/2 month.

## Surface Preparation

New metal surfaces should be cleaned of oil, grease and dirt. To obtain optimum results, the metal should be sandblasted and URETHABOND 104 primer applied, then topcoated with WEARCOAT 100. If metal surface is rusted and sandblasting is not practical from an application or cost standpoint, URETHABOND 104 can be applied directly over rust which is tightly adherent. Although this situation is not as ideal as sandblasting, excellent results have been obtained (See CFI Bulletin 104.1). When painting over previously painted surfaces a spot test should be made to check for lifting, or incompatibility with the old coating. Dirt and loose paint should be removed by suitable method and spot primed before application of finish coat. It is extremely important that this surface is free of all moisture prior to coating application or blistering of paint film may occur. See also the Product Information Bulletins on the above primers.

## SUGGESTED SPRAY EQUIPMENT SETTINGS

| Equipment | Gun | Fluid Tip Or Nozzle | Gun Pressure | Fluid Needle Or Temp. | Air Cap or Pattern |
|---|---|---|---|---|---|
| **Normal Spray** | | | | | |
| De Vilbiss | MBC 510/ JGA 502 | E or FF | | E or FF | 765 |
| Binks | 18 | 66 or 63C | | 65 or 63A | 63PB |
| **Airless** | | | | | |
| De Vilbiss 4711 | JGA-5026 | JAC-31 | 2000-2200 psi | Ambient | 12-14 in. |
| Binks 98 Series | 39/43 | 9-1860 | 2000-2200 psi | Ambient | 12-14 in. |
| Grayco Hydra-Spray | Std. | 163-617 | 2000-2200 psi | Ambient | 12-14 in. |
| Nordson | Std. | 20C09 | 2000-2200 psi | Ambient | 16-18 in. |
| Spraying Systems Gunjet | 25A | 650050TC | 2000-2200 psi | Ambient | 12-14 in. |

*Use DRY air source and properly maintained moisture traps on all equipement. Clean equipment IMMEDIATELY after use with CFI 704 cleanup solvents.*

Concrete floors should be primed with WEARCOAT 1020 or WEARCOAT 490 after sandblasting or acid etching. (Refer to CFI Bulletin G-3).

### Application

WEARCOAT 100 can be applied immediately after mixing the two components. However, thorough mixing of the two components is important. Mechanical mixing is preferred at slow speed to avoid air entrapment. This coating may be applied by spray (air or airless), brush or roller (close nap) as outlined in CFI Bulletin G-2. If application is by spray method suitable protective vapor/particulate respirators should be worn by all personnel in the area. In poorly ventilated enclosed areas or when airborne concentrations exceed TLV (ceiling) for HDI, a fresh air supplied mask should be worn. In all cases, observe OSHA/NIOSH regulations for respirator use (29 CFR 1910.134) whenever a respirator is used. Spray equipment must be equipped with properly working vapor traps and air supply must be dry.

### PRECAUTIONS

WARNING: Flammable

Contains Aliphatic Polyisocyanate Prepolymer Hexamethylene Diisocyanate. Use only with adequate ventilation.

Good industrial hygiene practice dictates that when isocyanate based coatings are spray applied, some form of respiratory protection should be worn. During the spray application of organic solvent containing coating systems, the use of a supplied-air (either positive pressure or continuous flow type) respirator is mandatory when one or more of the following conditions exist:

- The airborne isocyanate concentrations are not known: or
- The airborne isocyanate monomer concentrations exceed 0.05 ppm (10 times the TLV); or
- The airborne polyisocyanate (polmeric, oligomeric) concentrations exceed 5 mg/m3 averaged over 8 hours or 10 mg/m3 averaged over 15 minutes (10 times the MGL); or
- No airborne solvent concentration exceeds its odor threshold; or
- Spraying is performed in a confined space (see OSHA confined space standard 29 CFR 1910.146)

Individuals with chronic respiratory problems or prior respiratory reactions to isocyanates must not be exposed to vapors or spray mist containing isocyanates. If affected by inhalation, vapor or spray mist, remove to fresh air. If breathing difficulty persists or occurs later, consult a physician and have label information available. *(Read MSDS prior to product use.)*

**LIMITED WARRANTY :** All statements, technical information and recommendations contained herein are based on tests the manufacturer believes to be reliable, but the accuracy or completeness thereof is not guaranteed, and the following is made in lieu of all warranties, express or implied:

Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective at the time the sealed container is first opened, and in no event beyond the shelf date printed on the label. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, user shall determine the suitability of the product for his intended use, and user assumes all risk and liability whatsoever in connection therewith.

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