POLYARMOR® Urethane 80-150

Low VOC Urethane Topcoat

POLYARMOR® URETHANE 80-150 is a High Solids two component aliphatic clear or pigmented gloss urethane applied over an epoxy primer or used to recoat and existing epoxy or urethane floor. Added abrasion resistance is obtained with the optional High Wear additive and produces a satin finish.

APPLICATION CHARACTERISTICS

STORAGE: Materials should be stored in original un-opened containers indoors between 65°F (18°C) and 90°F (32°C) and at or below 50% RH.

SHELF LIFE: Un-opened containers 1 year from date of manufacture.

PACKAGING KITS/ PART NUMBERS:
Volume Mix Ratio: .25A:1B:.0625C
POLYARMOR® URETHANE 80-150 Clear 1.25 gallons
POLYARMOR® URETHANE 80-150-A/Q, POLYARMOR® URETHANE 80-000-B/1,

POLYARMOR® URETHANE 80-150 Pigmented 2.75 gallons
POLYARMOR® URETHANE 80-150-A/HG, POLYARMOR® URETHANE 80-000-B/2, CP-U####/Q
(Option: SM-240/1 (15 lb) High Wear additive)

OPTIONS:
Color Pack: 0 VOC Color packs designated as **CP-U####** can be used with **POLYARMOR® URETHANE 80-150**. Many standard and custom colors are available; please refer to the price list for available colors. It is important to have a color consistent floor in a similar color before application of **POLYARMOR® URETHANE 80-150** or multiple coats may be required. Some deep base colors may require multiple coats or double color pack to obtain full hide.
Traction: #36 glass beads or other suitable angular aggregate can incorporated with POLYARMOR® URETHANE 80-150 to impart improved traction in slip hazard areas.
High Wear and Finish: High Ware additive **SM-240** can be added at a rate of 7.5 Lb (.5 gallon) per 1.25 gallon mix to impart a high wear resistant and satin surface finish.

LIMITATIONS:
Contamination and surface defects (fisheyes): If contaminates of oils, silicones, mold release agents and/or others are present, **POLYARMOR® URETHANE 80-150** may fisheye or crawl away from the surface. Surface contaminates should be removes with a suitable detergent prior to application. Solvent cleaning of silicone contaminates may make the situation worse; please contact the lab for additional recommendations.

APPLICATION:

MIXING: Premix all components at slow speed prior to mixing together. Use a Jiffy® ES mix blade attach to a slow speed drill (using a paint stick to mix is not adequate). Mix only enough material at one time not to exceed the pot life. Note: Once this materials is opened and mixed it can't be resealed for later use.
COLORS: Premix designated color pack (if used) CP-U####. The color pack should be added last to the mixed coating POLYARMOR® URETHANE 80-150-A/ POLYARMOR® URETHANE 80-000-B.
HIGH WEAR FILLER: The optional SM-240 should be added last at rate of 7.5 pounds of SM-240 to 1.25 gallons of resin.
MIX: Mix all components together for 2-3 minutes. DO NOT THIN!
APPLY POLYARMOR® URETHANE 80-150: at a rate of 4 mils (400 sq. ft. per gallon) to the floor surface using a notched squeegee or application tray. Back roll the wet coating using a ¼ inch nap mohair roller. Care should be taken to overlap and cross lap, but not over roll the coating introducing air into the surface.
SPREADING RATE: Material applied too heavy may blister or gas and can be soft during curing. Too little material may produce a non-uniform look. The best practice is to measure and grid the floor to be sure of proper application rate.
CURING (DRYING): Allow the coating to cure (dry) for a minimum 24 hours after application at 75°F (24°C) and 50% RH before opening the floor to light traffic, allow more time for low temperatures and low humidity or for heavier traffic. Full coating properties may take up to 14 days to develop.

TECHNICAL SUPPORT

For application questions, please contact your VISURON TECHNOLOGIES, INC. salesman or technical service.

DISPOSAL

Dispose in accordance with federal, state, and local regulations.

USES

Suited for show room floors, aircraft hangers, productions areas, warehouses and other places where chemical resistance and light stability are important. When using the optional High Wear additive the coating is ideal for loading docks, main traffic aisles and areas that call for a satin appearance.

ADVANTAGES

- Light stable, high-gloss finish provides light reflectivity
- Resists Skydrol®, jet fuels and other industrial chemicals
- Designed to withstand industrial traffic. Optional High Wear additive adds 2 times floor life over standard urethanes and adds 4 times floor life over epoxies
- Complies with VOC regulations for Industrial Maintenance Coatings in the OTC & CA* (*excluding SCAQMD)

MATERIAL PROPERTIES*:

Properties	Test Method	Results
Flash Point	ASTM D3278	187 °F (86°C)
Volume Solids (mixed)	ASTM D2369	85-90%
Mixed Viscosity	ASTM D2196	400 cPs
Dry Time	ASTM D5895	Tack Free 6 hr Dry 12-16 hr Full Cure 7 -14 days
VOC-Volatile Organic Compound	ASTM D3960	< 150 g/l Clear & Pigmented < 100 g/l with SM-240

CURED PROPERTIES*:

Properties	Test Method	Results
Abrasion Resistance Tabor CS-17, mg loss/1000 cycles/1000g mass	ASTM D4060	18 mg
Coefficient if Friction - COF James Test	ASTM D2047	0.55 0.65(w/SM-240)
Tensile Strength	ASTM D2370	9000 psi
Elongation	ASTM D2370	5%
Impact	ASTM D2794	140 in.lbs Direct & Reverse
Hardness (Pencil)	ASTM D3363	3H
Dry Film Thickness	at 4 mils WFT	3.6 mils

*Properties and results are based on laboratory testing at 72°F (22° C) %50 RH, theoretical calculations and estimates. Typical properties, as stated, are to be considered as representative of current production and should not be treated as specifications.

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RECOMMENDED APPLICATION

4 mils
400 sq. ft. per gallon at 4 mils WFT.
9.8 sq. m, per liter at 100 microns.

One kit (1.25 gallons) of mixed POLYARMOR® URETHANE 80-150 (clear) will cover 500 sq. ft. (46.5 sq. m) at 4 mils WFT (100 microns).

One kit (2..50 gallons) of mixed POLYARMOR® URETHANE 80-150 (clear) will cover 1000 sq. ft. (93.0 sq. m) at 4 mils WFT (100 microns).

One kit (2.75 gallons) of mixed POLYARMOR® URETHANE 80-150 (pigmented) will cover 1100 sq. ft. (102.1 sq. m) at 4 mils WFT (100 microns).

CHEMICAL RESISTANCE*:

POLYARMOR® URETHANE 80-150 Clear	1 Day	7 Days
ACIDS, INORGANIC		
10% Hydrochloric	G	G
30% Hydrochloric	G	F
10% Nitric	G	F
50% Phosphoric	G	F
37% Sulfuric	F	P
ACIDS, ORGANIC		
10% Acetic	G	F
10 % Citric	G	G
Oleic	E	E
ALKALIES		
10% Ammonium Hydroxide	E	E
50% Sodium Hydroxide	E	E
SOLVENTS		
Ethylene Glycol	G	G
Isopropanol	G	G
Methanol	P	P
d-Limonene	E	E
Jet Fuel	E	E
Gasoline	E	E
Mineral Spirits	E	E
Xylene	E	E
Methylene Chloride	P	P
MEK	G	G
PMA	G	G
MISCELLANEOUS		
20% Ammonium Nitrate	E	E
Brake Fluid	E	E
Bleach	E	E
Motor Oil	E	E
Skydrol®500B	E	E
Skydrol®LD4	E	E
20% Sodium Chloride	E	E
10% TSP	E	E

*Based on spot testing of the clear coating after 14 days of cure. Pigmented versions may see reduced chemical resistance and staining.
Legend: E- Excellent (Not Effected) - Recommended
G-Good (Limited Negative Effect) - Short Term Exposure
F-Fair (Moderate Negative Effect) - Not recommended
P-Poor (Unsatisfactory) - No Resistance to Exposure

INSPECTION AND APPLICATION:

Caution! Follow all precautions and instructions prior to installation.

CHECK THE SUBSTRATE CONCRETE: Substrate concrete must be free of curing membrane, silicate surface hardener, paint, or sealer and be structurally sound. If you suspect the concrete has been treated or sealed, prepare substrate for complete removal of treatment.
CHECK FOR MOISTURE: Concrete must be dry before applications of this floor coating. Test concrete for moisture vapor transmission (MVT) using calcium chloride testing ASTM F1869 or in-situ RH testing ASTM F2170. Do not exceed a maximum result of 3 pounds per 1000 sq. ft. over 24 hours or a value below 70% RH (internal concrete humidity).
EXCLUSION: Testing for MVT is critical, however it does not guarantee against future problems. If there is no vapor barrier or the vapor barrier is damaged, this to can contribute to floor failure. Contamination to concrete from oils, chemicals, excessive salts or Alkali Silica Reaction (ASR) may also contribute to floor failure.
CHECK THE TEMPERATURE AND HUMIDITY: During the application and cure of the coating, the substrate temperature, material temperature and room conditions should be maintained between 65°F (18°C) and 90°F (32°C). Relative Humidity (RH) should be limited to 30-80%. DO NOT apply coatings unless the floor temperature is more than five degree over the dew point.

APPLICATION EQUIPMENT

Protective equipment and clothing as called for in the MSDS.
Jiffy® Mixer Blade model ES.
Clean container to mix materials in.
Low speed high torque drill motor.
High quality short nap roller covers ¼ inch mohair.
Application Squeegee or application trays.
Disc sanding equipment with 80-100 mesh sanding screens.
Vacuum equipment.

PREPARATION

Surface dirt, grease, oil and contaminates must be removed by detergent scrubbing and rinsing with clean (clear) water.
JOINTS: All non moving joints (control joints) can be filled with semi-rigid joint compounds such as POLYARMOR® SEALENT 25-000 or POLYARMOR® SEALENT 45-000. Construction joints may need to be re-built and re-cut and then filled with a semi-rigid joint filler. Isolation or expansion joints must be filled with a flexible material designed for expansion and should not be coated over.
RECOAT: POLYARMOR® URETHANE 80-150 can be coated with other VISURON TECHNOLOGIES, INC. urethanes or may be used as a topcoat over existing (sound) VISURON TECHNOLOGIES, INC. epoxy coatings and urethane coatings. The prior cured coating surface must be sanded with 100 grit sand paper or sanding screen installed on a swing-type floor buffer. Sand to a uniform dulled surface. Remove all sanding debris with a vacuum and damp mop. Scrub with detergent and rinse with clean water. Surface must be dry before coating.
BARE CONCRETE APPLICATION: POLYARMOR® URETHANE 80-150 MUST BE APPLIED OVER AN EPOXY PRIMER (OR SURFACE). Use either POLYARMOR® EPOXY 10-000CR or POLYARMOR® EPOXY 30-340 as the epoxy primer (See appropriate product data sheet for application instructions).

READ MATERIAL SAFETY DATA SHEET (MSDS) FOR SAFETY AND PRECAUTIONS. USE PRODUCT AS DIRECTED. FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.

MAINTENANCE GUIDELINES

Allow floor coating to cure at least one week before cleaning by mechanical means (IE: sweeper, scrubber, disc buffer).

CARE: Increased life of the floor will be seen with proper maintenance and will help maintain a fresh appearance of your new VISURON TECHNOLOGIES, INC. floor. Regularly sweep your new floor as ground in dirt and grit can quickly dull the finish thus decreasing the life of the coating. Spills should be removed quickly as certain chemicals may stain and can permanently damage the finish.
Only soft nylon brushes or white pads should be used on your new floor coating. Premature loss of gloss can be caused by hard abrasive bristle Polypropylene (Tynex®) bushes.
Use only neutral non butyl cleaning detergents on your floor coating. Test any new cleaning product on a non-conspicuous area prior to using to avoid damage to the floor.

CAUTION: Heavy objects dragged across the surface will scratch all floor coatings. Avoid gouging or scratching the surface.
Pointed items or heavy items dropped on the floor may cause chipping or concrete pop out damage. Plasticizer migration from rubber tires can permanently stain the floor coating. If a rubber tire is planned to set on the floor for a long period of time, place a piece of acrylic sheet between the tire and the floor to prevent tire staining. Rubber burns from quick stops and starts from lift trucks can heat the coating to its softening point causing permanent damage and marking.

REPAIR: Repair gouges, chip outs, and scratches as soon as possible to prevent moisture and chemical under cutting and permanent damage to the floor coating.

VITECH™ VISURON TECHNOLOGIES, INC.

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