



PolyArmor 80-150

TECHNICAL DATA SHEET

POLYARMOR 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.

FEATURES

- 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)

TECHNICAL DATA

Material Properties*

Material 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*

Cured Properties*	Test Method	Results
ABRASION RESISTANCE TABOR CS-17, MG LOSS/1000 CYCLES/1000G MASS	ASTM D4060	18 mg
COEFFICIENT OF FRICTION – COF JAMES TEST	ASTM D2047	0.55 0.65(w/SM-240)
TENSILE STRENGTH	ASTM D2370	9,000 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.

RECOMMENDED APPLICATION RATE: 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 80-150 (clear)** will cover 500 sq. ft. (46.5 sq. m) at 4 mils WFT (100 microns).

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

CHEMICAL RESISTANCE*: EPOXY 80-150 CLEAR

1 DAY			7 DAYS			1 DAY			7 DAYS			1 DAY			7 DAYS		
ALKALIES						ACIDS, INORGANIC						SOLVENTS					
10% AMMONIUM HYDROXIDE	E	E	10% Hydrochloric	G	G	Ethylene Glycol	G	G	50% SODIUM HYDROXIDE	E	E	30% Hydrochloric	G	F	Isopropanol	G	G
MISCELLANEOUS						ACIDS, ORGANIC											
20% AMMONIUM	E	E	10% Nitric	G	F	Methanol	P	P	BRAKE FLUID	E	E	50% Phosphoric	G	F	d-Limonene	E	E
BLEACH	E	E	37% Sulfuric	F	P	Jet Fuel	E	E	MOTOR OIL	E	E	10% Acetic	G	F	Gasoline	E	E
SKYDROL®500B	E	E	10% Citric	G	G	Mineral Spirits	E	E	SKYDROL®LD4	E	E	10% Oleic	E	E	Xylene	E	E
20% SODIUM CHLORIDE	E	E	Oleic	E	E	Methylene Chloride	P	P	MEK	G	G	PMA	G	G			
10% TSP	E	E															

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

*Based on spot testing of the clear coating after 14 days of cure. Pigmented versions may see reduced chemical resistance and staining.

USES

Suited for show room floors, aircraft hangers, production 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.

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.

MIX RATIO

Clear: 1 Part A (Iso) : 0.25 Part B (Resin) by volume

Pigmented: 1 Part A (Iso) : 0.35 Part B (Resin) by volume

OPTIONS

Color Pack: Multiple colors are available; please contact your sales representative for specifics. It is important to have a color consistent floor in a similar color before application of **POLYARMOR 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 be incorporated with **POLYARMOR 80-150** to impart improved traction in slip hazard areas.

High Wear and Finish: High Wear 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 contaminants of oils, silicones, mold release agents and/or others are present, **POLYARMOR 80-150** may fisheye or crawl away from the surface. Surface contaminants should be removed with a suitable detergent prior to application. Solvent cleaning of silicone contaminants may make the situation worse; please contact the office for additional recommendations.

INSPECTION AND APPLICATION

Caution! Follow all precautions and instructions prior to installation.

CHECK THE SUBSTRATE CONCRETE: Concrete substrates 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 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 degrees over the dew point.

APPLICATION EQUIPMENT

- Protective equipment and clothing as called for in the SDS.
- 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 contaminants 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 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 80-150** can be coated with other urethanes or may be used as a topcoat over existing (sound) 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 80-150** MUST BE APPLIED OVER AN EPOXY PRIMER (OR SURFACE). Contact your sales representative for primer recommendations.



THE HANSON GROUP, LLC
GOOD PEOPLE. GREAT SCIENCE

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). The color pack should be added last to the mixed coating.

HIGH WEAR FILLER: The optional **SM-240** should be added last at a 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 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 sales representative.

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

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 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.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

THE HANSON GROUP warrants that goods shipped will conform to seller's written specifications, however because use of our products is beyond our control, THE HANSON GROUP accepts no responsibility or liability for any consequential damages from failure in performance in cases where our products are found not to conform to our specification or have failed due to other means, our liability is limited to the purchase price or supply of replacement product (necessary for repair area only) proved to be defective.

The term of limited warranty shall be one year from date of purchase of materials.

Installation of all products purchased must be by approved professional installers.

A modification to any component nullifies any warranty.

Proper record of field conditions must be maintained by the installer (I.E. surface and atmospheric conditions, usage rates, and lot numbers of product installed).

THE HANSON GROUP reserves the right of inspection of any installed product, installation and maintenance records and may conduct testing as may be reasonably required to determine cause.

Warranty is only in force for products or materials that have been paid on full and received by THE HANSON GROUP.

THE HANSON GROUP disclaims liability for incidental and consequential damages resulting from a breach of any warranty, expressed or implied including damages caused by, but not limited to, the following:

Acts of GOD including fire, flood and warfare. Building or structural weakness including settling, casualty, or accident.

Exposure to destructive chemicals not specified in the proposal or processes. Gouging of the floor coating surface by not providing reasonable protection and maintenance or any improper use of the floor. Facilities equipment and machinery being installed after floor system was applied. Business interruption. Premature use of floor without proper cure period. Damages by acts of others to property and personal. Moisture Vapor Transmission (MVT) and ASR (Alkali Silica Reaction) Disclaimer and Exclusion: Although rare, some floors at or below grade level are sometimes subjected to saturation by moisture from beneath the concrete floor slab. This moisture can travel through the concrete and collect between floor toppings creating the potential for delaminating from hydrostatic pressure and or ASR. Conditions contributing to this include heavy rainfall, broken pipes, excess hydration within fresh concrete, and other factors or defective and old concrete. These factors are difficult, if not impossible to predict. THE HANSON GROUP recommends testing for MVT and/or the presence of ASR in the concrete substrate prior to applying any polymer floor topping. The recommended test method for MVT utilizes calcium chloride test kits. ASR can be predicted by a higher than normal pH within the concrete. If high pH should be detected, it is recommended a lab test for ASR. If and when delimitation of the floor occurs because of a moisture condition that exists beneath or in the concrete slab or failure of the concrete due to ASR, this Limited Warranty does not extend to such delaminating or topping failure.

This writing constitutes the sole and only agreement of warranty relating to THE HANSON GROUP products. Any prior agreements, promises or representations by THE HANSON GROUP not expressly set forth in this agreement are of no force and effect.

THIS WARRANTY IS IN PLACE AND IN LIEU OF ALL OTHER WARRENTIES, EPRESSED OR IMPLIED, INCLUDING WARRENTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND OF ANY OTHER OBLIGATIONS OF THE HANSON GROUP.