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PolyArmor *EP 10-000*

TECHNICAL DATA SHEET

PolyArmor EP 10-000 is a two component “Universal High Build” 100% solids epoxy resin supplied as a clear or pigmented coating. POLYARMOR® EP 10-000 is supplied with various curing agents to meet the needs of use from general use, chemical resistant, and reduced yellowing. This product produces a Gloss finish.

FEATURES

- Applicator can select the proper curing agent to meet the needs of the final project.
- No Odor
- High build application
- Excellent impact and abrasion resistance
- Seals concrete, protecting against dirt and spills
- Resists staining and major chemical spills of cleaning and industrial chemicals
- Complies with VOC regulations for Industrial Maintenance Coatings in the OTC and CA*. (*excluding SCAQMD when thinned to max)

APPLICATION CHARACTERISTICS

STORAGE/SHELF LIFE:

Materials should be stored in original unopened containers indoors between 65°F (18°C) and 90°F (32°C) and at or below 50% RH. Shelf Life for Unopened containers 1 year from date of manufacture.

PACKAGING:

55 gallon drum kits. Smaller packages available on request.

LIMITATIONS:

Contamination and surface defects (fisheyes): If contaminates of oils, silicones, mold release agents and/or others are present, POLYARMOR® EP 10-000 may fisheye or crawl away from the surface. Surface contaminates should be removed with a suitable detergent prior to application. Solvent cleaning of silicone contaminates may make the situation worse; please contact the lab for additional recommendations. POLYARMOR® EP 10-000 may amber over time from UV exposure. Top coat with an aliphatic urethane to improve UV.

TECHNICAL DATA

Material Properties*

	Test Method	Results
POT LIFE @ 72F, 50% RH	Internal	15-20 minutes
TACK FREE / MINIMUM RECOAT @ 72F, 50% RH	ASTM D5895	4-6 hours
MAXIMUM RECOAT WINDOW	Internal	18 hours
FLASH POINT	ASTM D3278	≥215 °F (102°C)
VOLUME SOLIDS (MIXED)	ASTM D2369	100%
MIXED VISCOSITY	ASTM D2196	400 -700 cPs
VOC -VOLATILE ORGANIC COMPOUND	ASTM D3960	0 g/l clear

Cured Properties*

	Test Method	Results
ABRASION RESISTANCE TABOR CS-17, MG LOSS/1000 CYCLES/1000G MASS	AST M D4060	75 mg
COEFFICIENT OF FRICTION – COF JAMES TEST	AST M D2047	0.55 0.65(w/NS-36)
TENSILE STRENGTH	AST M D2370	12,000 psi
ADHESION TO CONCRETE	AST M D4541	350 psi concrete failure
IMPACT	AST M D2794	40 in. lbs Direct & Reverse
HARDNESS (PENCIL)	AST M D3363	2H

*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.

CHEMICAL RESISTANCE*: EP 10-000 CLEAR

1 DAY			7 DAYS			1 DAY			7 DAYS			1 DAY			7 DAYS		
ALKALIES						ACIDS, INORGANIC						SOLVENTS					
10% AMMONIUM HYDROXIDE		E	E	10% Hydrochloric		E	E	Ethylene Glycol		G	G						
MISCELLANEOUS						30% Hydrochloric		F	P	Isopropanol		E	E				
20% AMMONIUM		E	E	10% Nitric		E	E	Methanol		P	P						
NITRATE		E	E	50% Phosphoric		G	F	d-Limonene		E	E						

BRAKE FLUID	E	E	37% Sulfuric	E	E	Jet Fuel	E	E
BLEACH	E	E	ACIDS, ORGANIC			Gasoline	G	F
MOTOR OIL	E	E	10% Acetic	G	F	Mineral Spirits	E	E
SKYDROL®500B	E	E	10 % Citric	E	G	Xylene	E	G
SKYDROL®LD4	E	E	Oleic	E	E	Methylene Chloride	P	P
20% SODIUM CHLORIDE	E	E				MEK	P	P
10% TSP	E	E				PMA	G	G

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.

HANSONCO.NET | P: 770.495.9554 | F: 404.521.4396 | E: SALES@HANSONCO.NET | 3044 ADRIATIC COURT, PEACHTREE CORNERS, GA 30071

MIX RATIO

2 Resin : 1 Curative by volume

PREPARATION

Surface dirt, grease, oil and contaminants must be removed by detergent scrubbing and rinsing with clean (clear) water. Acid Etch (bare concrete): {Not recommended for high build coatings} Successive acid etch treatments may be required to obtain proper adhesion to concrete. Rinse with clean water. Shot Blasting (bare concrete): Is a preferred method of surface preparation. Modify blaster to minimize too heavy of a surface profile and over-lap marks. Diamond Grind (bare concrete): Results of grinding may vary depending on technique and the hardness of the concrete. JOINTS: All non moving joints (control joints) can be filled with a semi-rigid joint compound. Construction joints may need to be re-built and re-cut and then filled with 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® EP 10-000 can be coated with other urethanes or may be used as a topcoat over existing (sound) epoxy 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.

RECOMMENDED APPLICATION

COATING APPLICATIONS:

80 sq. ft. per gallon at 20 mils WFT. 1.9 sq. m, per liter at 508 microns. One kit (3.00 gallons) of mixed POLYARMOR® EP 10-000 (clear) will cover 320 sq. ft. (29.7 sq. m) at 15-20 mils WFT (381-508 microns). One kit (3.13 gallons) of mixed POLYARMOR® EP 10-000 (pigmented) will cover 335 sq. ft. (31.1 sq. m) at 15-20 mils WFT (381-508 microns).

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.

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.

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 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®) brushes. 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.

APPLICATION

MIXING: Premix all components at slow speed prior to mixing together. Use a Jiffy® ES mix blade attached 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 the 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 POLYARMOR® EP 10-000.

MIX: Mix all components together for 2-3 minutes. Thin only to max VOC limit of 250 g/l with xylene or other suitable solvent.

APPLY POLYARMOR® EP 10-000: at a rate of 8-25 mils 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 to the surface.

SPREADING RATE: When POLYARMOR® EP 10-000 is applied as a primer, surface irregularities and porosity in the concrete may affect coverage rate. Be sure to plan accordingly as there may be a need for extra material to provide proper coverage. Material applied too heavy may blister or 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 higher humidity or for heavier traffic. Full coating properties may take up to 7 days to develop.

TECHNICAL SUPPORT: For application questions, please contact The Hanson Group.

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

USES

Use as a primer, build coat, broad casting resin, toweling resin and top coat. Suited for concrete applications where a universal epoxy coating is desired for use and installation in industrial work areas.

PRECAUTIONS: Part-A contains an Isocyanate. Before using, refer to Safety Data Sheets (SDS). Ensure the same safe working methods are followed for all persons in the work area. Wear suitable protective clothing, rubber gloves and safety goggles with side shields during mixing and application. Respiratory masks should be worn at all times. Contact with skin-wash immediately with soap and water. Contact with eyes-rinse immediately with lots of water and seek medical attention. Keep away from children. **NOTICE:** Read all the information in this product information bulletin, and safety data sheet (SDS) before applying any material. The information contained herein is for the purpose of identifying the product and does not constitute a warranty or guaranty that the product will conform to this description. Product specifications and performance will vary depending on application methodologies, raw materials and other factors. All published information and specifications are subject to change without notification. Technical data shown in product data sheets are typical but reflect laboratory test procedures conducted in laboratory conditions. Actual field performance and test results will depend on installation methods and site conditions. Field test results will vary due to critical job site factors. All recommendations, statements and technical data contained in this data sheet are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty or guaranty of any kind. Satisfactory results depend upon many factors beyond the control of The Hanson Group, LLC. User shall rely on their own information and tests to determine suitability of the product for the intended use and user assumes all risk, loss, damage, expense and liability resulting from their direct use, indirect use or consequential to their use of the product. The Hanson Group, LLC shall not be liable to the buyer or any third party for any injury, loss or damage directly or indirectly resulting from use or inability to use the product. Products manufactured by The Hanson Group, LLC are free of defects for a period of one (1) year from time of manufacture. Liability and buyer's remedy under this limited warranty shall not exceed the purchase price of the materials in question. PolyArmor® is a trademark registered in the US Patent and Trademark Office. The marks of The Hanson Group, LLC, its divisions, slogans, emblems, other marks appearing in this document are the trademarks and/or service marks of The Hanson Group, LLC, its subsidiaries, affiliates or licensors.

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