



# PolyArmor *EP 120MT*

## TECHNICAL DATA SHEET

**POLYARMOR® EP 120MT** is a two component “Moisture Tolerant” 100% solids clear epoxy resin primer. **POLY-ARMOR® EP 120MT** is designed to coat over damp to wet concrete surfaces to block out moisture intrusion that can harm coatings applied to concrete surfaces.

### FEATURES

- Can be applied over damp to wet concrete.
- 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)

### TECHNICAL DATA

#### Material Properties\*

Material Properties*	Test Method	Results
FLASH POINT	ASTM D3278	≥215 °F (102°C)
VOLUME SOLIDS (MIXED)	ASTM D2369	100%
MIXED VISCOSITY	ASTM D2196	1400 - 1800 cPs
DRY TIME	ASTM D5895	Tack Free 4-6 hr Dry 8-12 hr Full Cure 7 days
VOC -VOLATILE ORGANIC COMPOUND	ASTM D3960	0 g/l clear & pigmented ≤250 g/l with max thinning

#### Cured Properties\*

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	4H
DRY FILM THICKNESS	at 10 mils WFT	10 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.

### CHEMICAL RESISTANCE\*: EPOXY 10-000/EPOXY 10-000CR-B CLEAR

	1 DAY	7 DAYS		1 DAY	7 DAYS		1 DAY	7 DAYS
<b>ALKALIES</b>			<b>ACIDS, INORGANIC</b>			<b>SOLVENTS</b>		
10% AMMONIUM HYDROXIDE	E	E	10% Hydrochloric	E	E	Ethylene Glycol	G	G
50% SODIUM HYDROXIDE	E	E	30% Hydrochloric	F	P	Isopropanol	E	E
<b>MISCELLANEOUS</b>			10% Nitric	E	E	Methanol	P	P
20% AMMONIUM	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	<b>ACIDS, ORGANIC</b>			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. Pigmented versions may see reduced chemical resistance and staining.

### APPLICATION CHARACTERISTICS

**STORAGE/SHELF LIFE:** 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 for Un-opened containers 1 year from date of manufacture.

### MIX RATIO

2A: 1B by volume



THE HANSON GROUP, LLC  
GOOD PEOPLE. GREAT SCIENCE

## OPTIONS

Special colors available on request. It is important to have a color consistent floor in a similar color before application of POLYARMOR® PRIMER 120MT or multiple coats may be required. Some deep base colors may require multiple coats or double color pack to obtain full hide.

## 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 color pack (if used). The color pack should be added last to the mixed coating POLYARMOR® PRIMER 120MT. MIX: Mix all components together for 2-3 minutes. Thin only to max VOC limit of 100 g/l or 250 g/l with xylene or other suitable solvent.

**APPLY POLYARMOR® PRIMER 120MT:** at a rate of 7-10 mils to the floor surface using a notched squeegee. 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® PRIMER 120MT 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 your Hanson Group salesman or technical service.

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

## USES

Use as a primer to prepare concrete surfaces for the proper adhesion of top coat epoxies or urethanes. PRIMER 120MT is fast setting/curing epoxy primer for applications at a minimum 55 deg. F. Applications of PRIMER 120MT may require the addition of solvent for penetration into the concrete.

## 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.

## PREPERATION

Surface dirt, grease, oil and contaminates 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 and neutralize with TSP solution. **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 such as POLYPRO® Sealant 25-000 or 45-000. 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® PRIMER 120MT can be coated with other Hanson Group epoxy or urethanes. If application should be over top of an existing coating, 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® PRIMER 120MT MUST BE APPLIED TO BARE CONCRETE. AN ADDITIONAL EPOXY PRIMER MAY BE REQUIRED BEFORE TOP COAT APPLICATION. Use POLYARMOR® EPOXY 10-000 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 Hanson Group 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.

## 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 free of standing water before applications of primer. 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 6 pounds per 1000 sq. ft. over 24 hours. Acceptable RH value < 80% 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 degrees over the dew point.

## RECOMMENDED APPLICATION

7-10 mils as a primer. The addition of xylene solvent may be required for deep penetration into dense concrete.

**PRIMER APPLICATIONS:** Up to 1 quart of xylene solvent can be added per 3.00 gallons of resin (total 3.25 gallons) for a maximum VOC=100 g/l. Up to 1 gallon of xylene solvent can be added per 3.00 gallons of resin (total 4.00 gallons) for a maximum VOC=250 g/l. 160 sq. ft. per gallon at 10 mils WFT. 3.9 sq. m, per liter at 254 microns. One kit (3.00 gallons) of mixed POLYARMOR® PRIMER 120MT (clear) will cover 680 sq. ft. (63.2 sq. m) at 7-10 mils WFT (178-254 microns).

**SURFACE HARDNESS:** Due to the composition of Primer 120MT the surface hardness of the primer may appear to be soft for up to 3 days after application. During normal application Primer 120MT should be ready to be top coated within 12 hours of application.

**CURING AGENT USAGE:** Primer 120MT-B (Part B) is a hybrid polyamide/cycloaliphatic curing agent and offers superior water intolerance and chemical resistance and is only intended for use as a primer. Primer 120MT may amber over time.



THE HANSON GROUP, LLC

GOOD PEOPLE. GREAT SCIENCE

**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.