



# 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



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## 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.

## LIMITATIONS

Contamination and surface defects (fisheyes): If contaminants of oils, silicones, mold release agents and/or others are present, POLYARMOR® PRIMER 120MT 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 lab for additional recommendations. POLYARMOR® PRIMER 120MT May amber over time from UV exposure. Top coat with the appropriate industrial coating system.

## 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 material 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.

## 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 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 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.