105-PumaPOXY/c

PumaCRETE Corp. 857-226-8247
68 Harrison Ave Boston, MA 02111
www.PumaCRETE.net

TECHNICAL DATA SHEET

DESCRIPTION

105-PumaPOXY/c is a black, high solids, water-based ESD Epoxy Ground Plane coating. This product is used as standalone system, or as a base coat for the 112-PumaESD/c topcoat.

105-PumaPOXY/c is installed in many environments where the damaging effects of electrostatic discharge (ESD) cannot be tolerated. Primary industries include Electronic Assembly, Data Processing, Military/Aerospace, Hazardous Industries (dust or explosion hazards, EED's).

The **105-PumaPOXY/c** is intended for application over top of a PumaCRETE insulating epoxy primer or build coat, such as 104-PumaPOXY MB, or 103-PumapoXY WB, or 107-PumaPOXY.

Typical electrical readings are 100k ohms ppt. If used as a primer for the 112-PumaESD, final electrical readings of under 400k ohms may be achieved.

♦ FEATURES & BENEFITS

- ♦ Matte Black Finish
- ♦ Handles foot and hand cart traffic.
- ♦ Up to 20+ Minutes Working Time.
- ♦ Re-coatable for higher build thickness.
- ♦ Moisture Tolerant - Can be applied to green concrete in as little as 7 days.
- ♦ Semi-Permeable - Allows moisture through the concrete coating without failure.
- ♦ Low Viscosity.

TYPICAL USES

- ♦ Warehouses
- ♦ EED Manufacturing
- ♦ Electronics Mfg
- ♦ Military
- ♦ Aerospace
- ♦ Energetics Mfg

PACKAGING

- ♦ 2.0 gal white pail - Resin
- ♦ 1/2 gallon can - Hardener

The addition of 10-20% water is required AFTER the Resin Hardener is mixed together.

STORAGE

Materials should be stored indoors between 60°F (16°C) and 90°F (32°C).

SHELF LIFE

One (1) year from date of manufacture.

LIMITATIONS

This product is best suited for application in temperatures between 50°F and 90°F. The presence of surface contaminants such as oil, silicones, or other agents may cause **105-PumaPOXY/c** to fisheye or crawl. Surface contaminants should be removed with a suitable detergent and/or mechanical preparation prior to application.

105-PumaPOXY/c will cure quicker in drier conditions when the relative humdity is below 50% at 70ºF, and there is some air movement in the application environment to facilitate evaporation rate. The coating will cure at a slower rate with higher humidity & lower temperature conditions, and with little or no air movement for evaporation.

PRODUCT GUIDE

1. **105-PumaPOXY/c Resin** is a water-based epoxy resin offering good viscosity for body and flow so it can be easily applied when combined at **1 part** resin and **4 parts 105-PumaPOXY/c** hardener.

2. **105-PumaPOXY/c Hardener** is a water-based epoxy hardener balancing reasonable working time with a 4-5 hour cure (70°F, 50% RH) when combined with **105-PumaPOXY/c Resin.**

ELECTRICAL GROUNDING.

The ground plane must be grounded to an earth ground to function properly. Conductive copper tape installed below the ground plane every 1000 sq. ft. or approved contact points. The copper tape and/or contact points must be connected to the buildings electrical ground or directly to an approved earth ground. Copper is not allowed in all applications. The EOS/ESD **Association provides instruction for proper grounding of ESD equipment and floors.**

COVERAGE RATE

If applied as a base c oat for 112-PumaESD, a gallon of **105-PumaPOXY/c** will have a spread rate of 4-6 mils, (400-267 sq. ft./gal).

PRELIMINARY FLOOR INSPECTIONS

CHECK THE CONCRETE: Concrete must be structurally sound, dry, and free of dust, laitance, curing compounds, paint, sealers, or other contaminants. If you suspect that the concrete has been previously sealed, call **PumaCRETE** technical support for further instructions.

CHECK THE TEMPERATURE AND HUMIDITY: Floor temperature and materials should be between **55°F** and **90°F.** Excessive humidity above 75% will significantly reduce evaporation rates and overall cure of the material. With higher humidity, proper air movement is recommended.

SURFACE PREPARATION

This product requires preparation in order to perform as expected. Substrate must be mechanically profiled (ASTM 4259-83), clean, sound, and dry. Removing any residual dust will help ensure a tenacious bond between **105-PumaPOXY/c** and the substrate.

JOINT GUIDELINES

Depending on preference, joints may or may not be filled. If the joints are filled, non-moving joints, i.e. construction or control joints can be treated by using 115-PumaFLEX with **PumaTHICKENER**.

Note: Coating applied over filled joints may crack if there is concrete movement.

MIXING INSTRUCTIONS

Application Equipment:

- ♦ Personal Protective Equipment (PPE) & clothing per SDS (Safety Data Sheet)
- ♦ Jiffy® Mixer Blade (ES Model)
- ♦ Clean Mixing Container
- ♦ Shed-Resistant Roller Cover- 3/8" Nap
- ♦ Application Squeegee

Mix ratio for **105-PumaPOXY/c** is **4 parts Hardener to 1 part Resin** by volume. When combining, be sure to add the hardener into the clean mixing container first. Then add the resin scraping out the container. Always pour into the **center** of the mixing container. Add 1 part, clean, potable water to reduce viscosity, if desired. Mix the components thoroughly for **1-2 minutes** with a Jiffler ES style mix blade. **105-PumaPOXY/c** has a pot life of 30 min at 70°F, 50% RH in 1.25 gal volume.

CLEANING GUIDELINES & MAINTENANCE

Allow floor coating to cure at least 3 days before cleaning by mechanical means (e.g., sweeper, scrubber, disc machine).

CARE

Proper maintenance will increase the service life and help maintain the appearance of your new **PumaCRETE** floor coating system. This product is considered to be a low maintenance coating system, however, certain textures and service environments require specific procedures. SEE "CLEANING GUIDELINES" for more information.

Note: ESD coatings maintain optimal electrical properties when cleaned with isopropyl alcohol based cleaners or similar solvent based cleaning products.

CAUTION

Avoid scratching or gouging the surface. All floor coatings will scratch if heavy or sharp objects are dragged across the surface.

Do not drop heavy or pointed items on the floor as this may cause chipping or concrete pop-outs in the case of a weak substrate cap.

Avoid high traffic conditions on this coating. Protect floor from damage when using powered material handling equipment on the floor.

REPAIRS

Repair gouges or scratches or chip outs as soon as possible to prevent potential chemical contamination.

DISPOSAL

Dispose in accordance with federal, state and local regulations.

TECHNICAL SUPPORT

For any application questions, please call **Puma**CRETE technical support at **857-226-.8247**.

SDS

PLEASE SEE SAFETY DATA SHEET (SDS) FOR SAFETY AND PRECAUTIONS. USE PRODUCT AS DIRECTED. **KEEP OUT OF THE REACH OF CHILDREN.**

PHYSICAL CHARACTERISTICS	
Appearance (cured)	Clear
Percentage Solids by Weight	55.0 % undiluted; 49.5% diluted 10% with water
Mix Ratio (by volume)	4 parts Hardener & 1 part Resin (10-20% water)
Mixed Viscosity at 70°F	1,850 cps
Pot life at 70°F, 50% RH	60 minutes (1 part Water) 40 minutes (Neat)
Cure Time, Tack-Free at 70°F, 50% RH	3-4 hours foot traffic 18-24 hrs for normal operation
Working Time at 70ºF, 50% RH	20+ minutes
Recoat Window	Maximum of 36 hours
Coverage Rate	5 mils (WFT), 320 sq ft/US gallon
Volatile Organic Compound	(VOC) <50g/l, mixed

PHYSICAL PROPERTY	TEST METHOD	RESULT
Hardness (Pencil)	ASTM D-3363	2H
Tensile Strength, psi	ASTM D-2370	3,300
Percent Elongation	ASTM D-2370	15%
Adhesion to Concrete	ASTM D-4541	400 psi, concrete failure
Impact Resistance	ASTM D-2794	>160 in/lb
Abrasion Resistance CS17 Wheel 1000 GM Load 1000 Cycles	ASTM D-4060	35 mg loss
Coefficient of Friction (James Friction Tester) Wet Dry	ASTM D-2047	 0.55 (smooth) 0.65 (smooth)

Warranties: Seller warrants that its goods, as described on the face hereof, are free from any defects in material or workmanship. Seller makes no other warranty, express or implied, and all implied warranties of merchantability and fitness for a particular purpose are hereby disclaimed. Seller shall not be liable for prospective profits or special indirect or consequential damages. Seller's sole liability and buyer's exclusive remedy for breach of any warranty as expressly limited, at seller's option, to replacement at the original F.O.B. point or refund of purchase price. Seller shall not be responsible for any claim resulting from failure to utilize product in the manner in which it was intended and in accordance with instruction provided for use of product. Any claim for breach of warranty shall be deemed waived unless buyer shall give seller written notice of such claim within sixty (60) days after delivery and shall allow seller reasonable opportunity to investigate claim and inspect product.

ESD-CONTROL COATING WARRANTY ADDENDUM: The properly installed ESD coating will retain static control properties for a period of five years from the date of installation under normal and ordinary wear conditions. This warranty is null and void if the ESD-control coating are no longer intact or said coating has been coated with waxes, finishes or other coatings. This warranty will be null and void in any area where the ESD control coating has been damaged. PIP will, under this limited warranty, provide replacement