

FloroPoxy ESD

Electrostatic Dissipative Epoxy

Product Description: FloroPoxy ESD is a 100% solids, solvent-free, four-component epoxy system designed to furnish electrostatic dissipative properties while providing excellent protection against harmful fluids. It can provide an ESD surface over a thin film system or a heavy build system and cures to a glossy finish.

A variety of colors are available upon request; contact your Florock representative for information.

Typical Uses: Floors requiring ESD control and excellent chemical resistance are:

- Aircraft Hangars
- Electronics Manufacturers
- Data Processing
- Healthcare Facilities
- Hazardous Industries (static, dust, explosives)
- Photographic, graphic arts

Product Advantages:

- Furnishes electrostatic dissipation properties in accordance with the latest ESD Association guidelines and in accordance with EOS and ANSI/ESD specifications
- Superior Resistance to many harmful chemicals
- Consistent readings
- 100% Epoxy system, solvent free

Packaging:

- 3.7 Gallon Kit Consisting of resin, hardener, colorant and ESD component

Storage: Store at 40° to 95° F in tightly sealed containers and out of direct sunlight.

Coverage:

- FloroPoxy ESD Topcoat shall be applied at 492 SF per kit.

Blended Liquid Physical Properties ESD Epoxy		
Property	Test Method	Results
% Solids by Weight /Volume	ASTM D-2697	100%
Viscosity	ASTM D-1200	1,350 cps
SETA Flash, min.	ASTM D-3278	>200° F
VOC gpl	EPA Method 24	0 gpl

Blended Components – Application Data	
Ratio	4-component kit/ inseparable
Pot life	18 minutes
Curing Time at 70° F @ 50% RH	
Set to Touch	4-6 hours
Foot Traffic	24 hours
Full Cure	7 days
Floor & Air Temp. Limitations	55° F – 90° F
Recommended Spread Rate	492 sf per kit
Dry mil @ Spread rate	12 mils/coat
Recommended Clean up Solvent	Xylene

Surface Preparation: New concrete must have a 28 day cure, and preferably a broom swept finish, prior to coating. In the case of older concrete flooring, remove all surface oils, paint, dust and debris. Prior to coating, make sure the surface is clean, passes the MVT test and the water drop test, and that all surface defects have been repaired. Refer to the Florock "Preparation of Concrete" datasheet for more information on preparation and MVT before proceeding.

FloroPoxy ESD System In the basic system, one coat of FloroPoxy ESD Epoxy is applied @ 12 mils over FloroPoxy SL 4700 in appropriate color. If a mid-coat is needed, apply FloroPoxy SL 4805 or 4900 in appropriate color over primer in sufficient thickness to restore profile.

Important: FloroPoxy should not be applied when floor temperature is above 90° F, below 55° F, or when within 5° F of the dew point.

Installation Over Smooth, Bare Concrete:

1. Primer: Once surface preparation is complete, apply FloroPoxy System 4700 in appropriate color. In a clean, dry container blend 3 parts by volume of Resin (Part A) with 1 part Activator (Part B). Mix thoroughly for 3 to 5 minutes, using a low speed mechanical mixer. Transfer the mixture from the batch container to a transport container, remix and pour entire mix from the transport container onto floor immediately. Retaining mixture in the bucket will shorten the pot life. Using a flat squeegee, apply at desired thickness and backroll with a 3/8" nap roller.

Note: Do not sand, screen, or abrade the primer coat. Consult your representative concerning grounding tape before proceeding

Note: The cure time will vary with conditions. Allow a minimum of 4 hours and a maximum of 24 hours before moving on to next step.

2. Optional Midcoat: When the primer has cured, and before 24 hours elapses, apply the FloroPoxy SL 4805 or 4900 in appropriate color. In a clean, dry container, blend appropriate parts of resin, activator and colorant. Mix thoroughly for 3 to 5 minutes using a low speed mechanical mixer.

Transfer the mixture from the batch container to a transport container, remix and pour entire mix from the transport container onto floor immediately. Retaining mixture in the bucket will shorten the pot life. Using a flat squeegee, apply at desired thickness and backroll with a 3/8" nap roller

Note: The cure time will vary with conditions. Allow a minimum of 8 hours and a maximum of 48 hours before moving on to next step.

Note: Consult your Representative concerning grounding tabs before proceeding.

Chemical Resistance	
Reagent	Spot Test Results
Isoproponal	1
Bleach	1
MEK	4
Ammonia	1
Sodium Hydroxide 50%	1
Phosphoric Acid 10%	1
Nitric Acid 10%	1
Sodium Chloride 20%	1
Citric Acid 10%	1
Sulfuric Acid 10%	1
Sulfuric Acid 25%	1
Nitric Acid 10%	1
Hydrochloric Acid 10%	1
Acetic Acid 10%	2
Sugar Solution 10%	1
Lactic Acid 10%	1
Mineral Spirits	1
Tincture of Iodine	1, S
AFFF	1
Water	1

Based on a 1 day spot test. Coating cured 2 weeks prior to testing. Spot Test IAW ASTM D1308, Pencil Hardness Test IAW ASTM D3363

Rating Scale:

- 1 - Excellent. No change in pencil hardness
- 2 - Good. 1-2 units change in pencil hardness
- 3 - Fair. 3 units change in pencil hardness
- 4 - Poor. 4 or more units change in pencil hardness
- 5 - Stains

Important: Grounding tabs must be in place prior to installing the topcoat.

3. Topcoat FloroPoxy ESD: In a clean, dry container, blend 2 containers of Part C & 1 container of Part B together for 2-3 minutes using a Jiffy mixer blade (this combination will become a thick paste). Allow mixture to rest for 5-10 minutes. Remix part C & part B solution, add 2 containers of Part A & 1 quart colorant. Mix thoroughly for 3 minutes using a low speed mechanical mixer. Pour entire mixture onto the floor immediately. Retaining mixture in the bucket will shorten the pot life. Using a flat squeegee, apply at 492 sf per kit and backroll with a 3/8" nap roller. **DO NOT SPRAY APPLY THIS MATERIAL.**

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Note: Up to 1 quart of Xylene may be added to this kit to allow product to flow better. Coverage for the kit will remain at 492 sf per kit.

Allow coating to cure for a minimum of 24 hours before opening floor to foot traffic and 48 hours before allowing equipment to be moved back in. Allow a full seven days cure for complete chemical resistance.

Fire Lanes and Traffic Lines: After the final coat has cured for 24 hours, the fire lanes, traffic lines, etc., may be installed as specified. Suitable masking tape will be placed on each side of the proposed lines to give a straight edge. Line marking may be achieved by using clear FloroThane MC or MC/HT with colorant or by using Florock FloroMark line marking kits. Remove the tape approximately one hour after application; the area may be opened to light traffic 10 to 12 hours after application.

Maintenance:

Sweep away dust and debris with a broom. Clean on a regular basis with a surfactant type, mild detergent. Florock floors never need to be waxed.

Please read Safety Data Sheets before using product.

DISCLAIMER:

All statements and recommendations above are based on experience we believe to be reliable. The use or application of these products being beyond the control of the Seller or Manufacturer, neither Seller nor Manufacturer make any warranty, expressed or implied, as to results or hazard from its use. The suitability, risk and liability of a product for an intended use shall be solely up to the User.

FloroPoxy ESD Topcoat Cured Physical Properties		
Property	Test Method	Results
Point to Point Resistance	EOS/ESD 7.1	1.0 Mega Ohms to 35 Mega Ohms
Point to Ground Resistance	EOS/ESD 7.1	1.0 Mega Ohms to 35 Mega Ohms
Body Voltage Generation	ESD STM 97.2	<15 Volts
Static Decay	MIL-STD-3010 4046	0.01 seconds
Gloss 60 Degree	ASTM E-97	80
Coefficient of Friction	ASTM D-2047	0.55 smooth 0.65 with beads
Adhesion to Concrete	ASTM D-4541	>400 psi concrete fails
Flexibility	ASTM D 522	0.25 inches passes test
Compressive Strength	ASTM C-579	11,200 psi
Tensile Strength	ASTM D-2370	6,000 psi
Impact Resistance	ASTM D-2794	80 in.-lbs, direct and reverse
Shore Hardness Shore D	ASTM D-2240	80
Tensile Elongation	A ASTM 2370	5%
Abrasion Resistance CS-17 Wheel, 1,000 gm load, 1,000 cycles	ASTM D-4060	75 mg
Water Absorption	ASTM C-413	0.2%
Indentation	MIL-D-3134	PASSES