

# PPG FLOORING™ 422 ESD Epoxy Topcoat

## DESCRIPTION

Two-Component, 100% Solids Epoxy Topcoat - Designed To Create Electrostatically Conductive or Dissipative Systems

## PRINCIPAL CHARACTERISTICS

- Electrostatic coating designed for static dissipative and conductive flooring systems
- Good abrasion and impact resistance
- Good chemical resistance
- Suitable for areas with heavy traffic
- Easy cleaning
- TYPICAL USES:
- Electronic manufacturing facilities
- Factory and warehouse floors
- Computer and server rooms
- Pharmaceutical manufacturing and hospital operating rooms
- Industrial and commercial warehouses

## COLOR AND GLOSS LEVEL

- Light Gray, Dark Gray
- High gloss

## BASIC DATA AT 25°C (77°F)

Data for mixed product	
Number of components	Two
Mass density	9.5 lb/US gal (1.1 kg/l)
Volume solids	100 ± 2%
VOC (Supplied)	max. 0.4 lb/US gal (approx. 50 g/l)
Recommended dry film thickness	10.0 - 20.0 mils (250 - 500 µm) depending on system
Theoretical spreading rate	160 ft <sup>2</sup> /US gal for 10.0 mils (3.9 m <sup>2</sup> /l for 250 µm) 80 ft <sup>2</sup> /US gal for 20.0 mils (1.9 m <sup>2</sup> /l for 500 µm)
Shelf life	Base: 24 months when stored cool and dry Hardener: 24 months when stored cool and dry

Note:

- Refer to Application Guide for additional information



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## RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

### Concrete

- NEW CONCRETE: May be installed as early as 7 days after pour. The concrete must have achieved a minimum of 3,000 psi (20.7 MPa) compressive strength prior to surface preparation and application.
- Concrete must be sound, dry, free from laitance and any contamination
- Surface profile shall be CSP 2-3 or greater, meeting ICRI standard guideline #03732 for coating concrete, producing a profile equal to 80-grit sandpaper or coarser. Prepare surface by mechanical means to achieve this desired profile.
- Prior to application of product, a coat of PPG NOVAGUARD® 5090 is recommended to reduce the number of voids in the concrete substrate
- NOTE: New concrete may experience early curing movement, shrinkage or cracking while continuing to cure during the first 28 days. If this occurs after coating application, these defects will be reflected through to the final coating
- Concrete surfaces must be primed with PPG Flooring™ 912 LV Primer before applying product.

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## SYSTEM SPECIFICATION

### Chemical Resistances

- Motor Oil
- Brake & Hydraulic fluid
- 50% sodium hydroxide
- Gasoline
- Toluene and xylene
- Acetone
- Ammonium Hydroxide
- 10% Sulfuric Acid
- 10% Hydrochloric Acid
- Ethyl & Butyl Alcohol
- Ethyl & Butyl Acetate

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## INSTRUCTIONS FOR USE

### **Mixing ratio by volume: Part A to Part B 2:1**

- Mix Part A and Part B separately to ensure uniformity. Scrape sides and bottoms of containers
- Pour all of the contents of the Part B container into the Part A container. Mix together for 5 minutes until homogeneous.
- Mix Part A and Part B together using a low speed Jiffy-type mixer

### Notes:

- Conductive System - Ground Plane & Topcoat:  $1 \times 10^5$  -  $1 \times 10^6$  ohms Dissipative System - Topcoat Only:  $1 \times 10^6$  -  $1 \times 10^8$  ohms
- Do not thin with solvents.

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## Application

- Dissipative System: PPG FLR 912LV Primer, PPG FLR 422 Top Coat
- Conductive System: PPG FLR 912LV Primer, PPG FLR 422 Ground Plane, PPG FLR 422 Top Coat - Including Copper Tape
- Apply by notched trowel or squeegee and back roll
- The use of a brush is only recommended for touch-ups
- Ensure good ventilation during application and curing
- Where a slip resistant finished floor is required, an additional coat with the appropriate aggregate can be pre-mixed with the A- and B-components or broadcast into the wet coating
- Apply a first coat of ESD Topcoat at 8-10 mils for anchoring. Mix approximately 11 lbs (5 kg) of 90-100 mesh sand in a 4 gallon (15 L) kit of ESD Topcoat and apply a second coat of ESD Topcoat with sand at 8-10 mils. Alternatively 40-50 or 20-30 mesh sand, aluminum oxide, or other larger grain sizes can be applied in a single layer of 15-20 mils.

### Notes:

- Consult application guide for additional information
- Contact Technical Services to discuss application options

## Cleaning procedure

- All application equipment must be cleaned immediately after use

## ADDITIONAL DATA

### Resistivity

- Top Coat only:  $1 \times 10^6$  -  $1 \times 10^8$  ohms
- Ground Plane & Top Coat:  $1 \times 10^5$  -  $1 \times 10^6$  ohms

Physical data of cured material	
Characteristic	Value
Hardness, Shore D (ASTM D2240)	76
Impact Resistance (ASTM D2794) direct / indirect	60 in-lb / 32 in-lb.
Abrasion resistance (ASTM D4060)	<50 mg
Mandrel Elongation (ASTM D522)	32% (max.)
Adhesion to Concrete (ASTM D4541)	400 - 800 PSI *

### Notes:

- \* note: adhesion testing led to substrate failure before coating bond loss
- The value ranges stated in this Product Data Sheet are based on system processing under laboratory conditions. Equipment configurations and/or field application conditions may produce variances in final system values.



# PPG FLOORING™ 422 ESD Epoxy Topcoat

Overcoating interval				
Overcoating with...	Interval	59°F (15°C)	77°F (25°C)	95°F (35°C)
PPG FLR 422 ESD Top Coat over PPG FLR 422 ESD Ground Plane	Minimum	24 hours	12 hours	6 hours
	Maximum	60 days	30 days	15 days
PPG FLR 422 ESD Top Coat over itself	Minimum	24 hours	16 hours	8 hours
	Maximum	14 days	7 days	4 days

Curing time for Top Coat					
Substrate temperature	Dry to touch	Tack free time	Light traffic	Heavy traffic	Full cure
59°F (15°C)	10 hours	20 hours	36 hours	72 hours	14 days
77°F (25°C)	4 hours	12 hours	24 hours	48 hours	7 days
95°F (35°C)	2 hours	7 hours	16 hours	36 hours	4 days

Pot life of Top Coat	
Mixed product temperature	Pot life
59°F (15°C)	40-50 minutes
77°F (25°C)	20-25 minutes
95°F (35°C)	10-15 minutes

## SAFETY PRECAUTIONS

- Read all label and Safety Data Sheet (SDS) information prior to use

## WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective & Marine Coatings to supply the same product on a worldwide basis. However, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

## WARRANTY

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING OTHERWISE IN LAW, FROM A COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY OTHER WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ARE DISCLAIMED BY PPG. Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life of the product, or one year from the date of the delivery of the product to the Buyer, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.



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## AVAILABILITY OF PACKAGING

### Packaging

- 5-gallon kits
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