SIP Industries

Quality Manufacturers Since 1960

SIP EZ-SHIELD®: POLYESTER BASED POWDER COATING

SIP EZ-Shield uses a durable, high quality, and corrosive resistant Powdura® polyester TGIC powder coating from Sherwin Williams for use on SIP EZ-GRIP restraint products.

The EZ-Shield Coating System offers excellent:

- **Increased Impact Protection**
- **Long Term Corrosion Protection**
- **UV Resistant**
- **Overall Durability**

General Specifications

Application	:	**Cure Shedule**	:	10 min @ 400°F
		Film Thickness Range (mils)	:	2.5 - 3.5
Attributes	:	**Specific Gravity** (g/ml)	:	1.57
		Coverage at 1.0 mil (ft^2/lb)	:	122.9
		60° Gloss (ASTM D-523)	:	70 - 90
		Flexibility (ASTM D-522)	:	Pass 1/8"
		Pencil Hardness (ASTM D2263)	:	H - 2H
		Impact Resistance (in-lbs) (ASTM D-2794)	:	Dir 120 in-lbs Rev 120 in-lbs
		Humidity (ASTM D-4585)	:	Slight gloss and color change N/A hours
		Salt Spray (ASTM B-117)	:	Max 1/8" creepage N/A hours
		Note: Performance measured using 24-gauge Bonderite® 1000 test panels		
		Shelf Life	:	12 Months

Cleaning

- Glands, Bolts and Wedges are grit blasted to prepare the surface. This process cleans and degreases the surface from all impurities that might interact with the coatings. It also gives the metal a proper surface profile for coating adhesion.
- Glands, Bolts and Wedges are then processed in Zinc Phosphate solution that both cleans and oxidizes as a preparation for the Fluoropolymer coating and Polyester Powder coating.
- Parts are then rinsed, dried and inspected for proper surface preparation prior to the final coating process.

Coating

- Bolts and wedges are coated with a Fluoropolymer coating as a corrosion protection.
- A polyester TGIC powder is applied by an electrostatic process and heated causing the coating to thermally bond to a minimum thickness of 3 mils.
- Parts are then checked at random location to ensure coating quality and to mil thickness requirements.
- Both coatings offer excellent impact, oxidization and UV protection.

Sample Specification

The EZ-Shield Coating system for restraint devices shall conform to the following requirements:

The casted glands shall be blasted, pretreated, rinsed, and Powdura® polyester TGIC powder is applied by an electrostatic process. The positively charged powder particles are directed toward and attracted to the negatively charged castings. The electrostatic coating method encourages uniform application on all surfaces. The powder coated castings are then heated to cause the coating to fuse and cure to a minimum thickness of 3 mils. The coated frames are randomly inspected to ensure coating quality including mil thickness requirements.

The bolt and wedge assemblies shall first be pretreated and rinsed. Then they are preheated, powder coated, and baked with Polytetrafluoroethylene (PTFE) coating to provide excellent fastener performance as well as corrosion and impact resistance. The bolt and wedge assemblies shall be randomly inspected to ensure coating quality including mil thickness requirements.

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