

Polyarmor® G32

General Description

A functionalized polyethylene copolymer based thermoplastic powder coating that exhibits excellent impact resistance and UV-stability. Polyarmor® G32 is designed to have a slightly higher Melt Index which assists in areas where out gassing is an issue such as applications on hot dipped galvanized steel.

Surface Preparation

Chemical Pretreatment - Multi-stage phosphate conversion coating may be used

Mechanical Preparation - (SSPC-SP6) 2-3 mil (50-75µm) anchor profile using clean, sharp edged blast media

NOTE: Properly preparing parts before powder coating is essential for a quality finish. This includes cleaning, rinsing, drying and ensuring the substrate surface is free and clear of any contaminates.

Fluidized Bed

For fluidized-bed dipping, preheat parts to 400° F (205°C) adjusting for part thickness. Dip parts in fluidized-bed of POLYARMOR® G32 for 4-6 seconds. Carefully remove excess powder. For improved surface finish, if necessary, parts may be post-baked for a short period of time.

Electrostatic Deposition

Polyarmor® G32 can be applied via electrostatic deposition with or without pre-heat. When not using pre-heat, the powder should be applied to achieve a thickness of 8 – 10mils (203 - 254µm). Recommended voltage setting when using Corona equipment is 40 – 60 kv. Post-baking at 350 - 425°F (175 - 220°C) for 5 to 10 minutes depending on metal thickness, or until desired flow out is achieved. For pre-heated parts, the recommended preheat temperature is 400°F (205°C). Deposit Polyarmor® G32 8-12mils (203 – 300µm) or higher if desired. For improved surface finish, parts may be post-baked for a short period of time if necessary. Times and temperatures in the oven will depend on configuration and thickness of the part.

No Cure Time

Thermoplastic powder coatings need only be heated enough to flow out the coating, nothing more. Overheating may cause degradation or embrittlement of the coating. Coating may be put into service when cooled.

Powder Properties	
Coverage (100% efficiency)	25.65 ft ² per pound @ 8mils (5.24 m ² per kg @ 203µm)
Particle Size	Available in fluid bed and spray grades
VOC Content	ZERO
Thickness (Recommended)	8 – 10mils (203 – 254µm)
Storage Stability	Store in dry area below 90 F (32°C), keep container closed with liners sealed and out of direct sunlight and any moisture or external contaminates. Always use good manufacturing practices.

Performance Properties		
Melting Point		221°F (105°C)
Specific Gravity	ASTM D 792	0.935g/cm ³
Adhesion	ASTM D 4541	>1,527 (10.7MPa)
Hardness Shore D	ASTM D 2240	55
Impact Resistance	ASTM B 2794	>384 in-lbs (43 Joules)
Tensile Strength	ASTM D 638	2207 (15.2MPa)
Elongation (%)	ASTM D 638	305%
Humidity Resistance	ASTM D 2247	No blistering or loss of gloss after 1000 hours
Salt Spray	ASTM B 117	2,000 hrs. no significant change in color or gloss
QUV	ASTM G 53	2,000 hrs. no significant change in color or gloss
Taber Abrasion	ASTM D 4060	61mg loss, CS 17 wheel
Flexibility (Conical Mandrel Bend)	ASTM D 522	1/8in (3.2mm), no cracks (>32%)
Gloss	ASTM D 523	60 – 80 (Depending on color choice)
Melt Index	ASTM D 1238	32

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