

ISOCRYL® EP-560G MATTING HARDENER FOR POWDER COATINGS

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GENERAL DESCRIPTION

Isocryl® EP-560G is a novel glycidyl functional acrylic resin used for the gloss modification of exterior durable polyester powder coatings. As with its predecessor Isocryl EP-550G, “one shot” matte, TGIC-free, weatherable finishes can be produced with Isocryl EP-560G in conjunction with acid functional linear polyesters. Polyester resins typically used for TGIC, Primid or Araldite PT-910 powder coatings are well suited for use with Isocryl EP-560G, although crosslinkers such as TGIC are not recommended to be used in formulations with Isocryl EP-560G.

The convenient and consistent production of matte finishes with 60° gloss <5% using Isocryl EP-560G eliminates the need to dry blend powders of different reactivities in order to reduce gloss. A typical binder consists of 75 parts polyester and 25 parts Isocryl EP-560G. Mechanical properties and chemical resistance are enhanced with the use of Estron’s specialty additive ESCAT 22, which is generally used at one-tenth the amount of Isocryl EP-560G.

A thorough premix and single pass through a twin screw extruder are recommended to produce a stable, homogeneous powder coating. As with any raw material, laboratory evaluation is required for each formulation to determine the optimum concentration of the binder components, best processing method, suitability for the end use application, and other pertinent requirements. It is not recommended, however, to formulate with TGIC or Primid in combination with Isocryl® EP-560G due to possible higher, inconsistent gloss and shorter useable shelf life of the powder coating. The low gloss formulations can be marketed as “TGIC-free”.

KEY ATTRIBUTE SUMMARY:

- Dependable low gloss regardless of polyester melt viscosity
- Improved compatibility with non-acrylic powder coatings
- Excellent flexibility, impact and solvent resistance with ESCAT 22
- Ultra matte at both 60° and 85°
- Smooth finish

TYPICAL PROPERTIES*

Appearance	Clear Ground Flakes
Specific Gravity (25/25)	1.05 – 1.15
Gardner Color, 50% IN BUTYL ACETATE	1 max
Softening Point, RING & BALL	110 - 130°C
Non-Volatile, weight %	98.5% minimum

* Not to be used for specification purposes

REPRESENTATIVE FORMULATION

Polyester (30-35 AV)	50.5
Isocryl® EP-560G	16.8
ESCAT 22	1.7
Resiflow® P-67	1.0
Barium Sulfate	10.0
Titanium Dioxide	30.0

RESULTS

60° gloss	<5 %
Solvent resistance	Good
Reverse impact	160 in.lbs
Appearance	Smooth

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REGULATORY LISTINGS

The components in this material are either listed or exempt from listing due to polymer exemption criteria for the following chemical listing inventories: AICS (Australia), DSL (Canada), EINECS (Europe), ENCS (Japan), IECSC (China), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

PACKAGING (NET WEIGHT)

55 lb. / 25 kg in fiberboard box with polyolefin liner

PRODUCT AVAILABILITY

Isocryl EP-560G is commercially available and may require lead time.

STORAGE AND HANDLING

Keep container tightly closed and store in a dry, well ventilated area away from heat and sources of ignition. Store at less than 100°F (38°C). Shelf life of unopened containers is one year from date of shipment. See SDS for additional information.

It is suggested that the long term stability of finished powder coatings be evaluated by the formulator and that unsprayed powder produced with Isocryl EP-560G not be stored for prolonged periods at temperatures exceeding 80°F (27°C).

CONTACT INFORMATION

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TDS Revised by: A. Chizhikova

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