

ISOCRYL[®] EP-560 MATTING HARDENER FOR POWDER COATINGS

www.estrone.com



THE EDGE OF INNOVATION

GENERAL DESCRIPTION

Isocryl[®] EP-560 is a novel glycidyl functional acrylic resin used for the gloss modification of exterior durable polyester powder coatings. As with its predecessor, Isocryl[®] EP-550, "one shot", matte, TGIC-free, weatherable finishes can be produced with Isocryl[®] EP-560 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-560, although crosslinkers such as TGIC are not recommended to be used in formulations with Isocryl[®] EP-560.

The convenient and consistent production of matte finishes with 60° gloss <5% using Isocryl[®] EP-560 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-560. 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-560.

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-560 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 attributes of Isocryl[®] EP-560 include:

- 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	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

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)

44 lb. / 20 kg in fiberboard box with polyolefin liner

PRODUCT AVAILABILITY

This product is commercially available and may require lead time.

**ISOCRYL® EP-560
MATTING HARDENER
FOR POWDER COATINGS**

www.estron.com



THE EDGE OF INNOVATION

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-560 not be stored for prolonged periods at temperatures exceeding 80°F (27°C).

REPRESENTATIVE FORMULATION

Polyester (30-35 AV)	50.5
Isocryl® EP-560	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

CONTACT INFORMATION

807 N. Main Street
P.O. Box 127
Calvert City, KY 42029 USA

(270) 395-4195 PHONE
(270) 395-5070 FAX

Revision Date: June 2, 2014

TDS Revised by: G. Pearson

TDS Approved by: R. Auerbach