

ISOCRYL[®] EP-550 MATTING HARDENER FOR POWDER COATINGS

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THE EDGE OF INNOVATION

GENERAL DESCRIPTION

Isocryl[®] EP-550 is the original matting hardener of the Isocryl[®] line that now includes EP-550, EP-560 and EP-570. Isocryl[®] EP-550 can be formulated with low viscosity, linear, carboxyl-functional polyesters having acid values 30-35 to generate low-gloss, weatherable, TGIC-free powder coating systems. A typical binder consists of 75 parts polyester and 25 parts Isocryl[®] EP-550. Mechanical properties and chemical resistance are enhanced with the use of Estron's specialty additive ESCAT 22 in the formulation, which is generally used at one-tenth the amount of the Isocryl[®] EP-550. TGIC is not to be formulated with Isocryl[®] EP-550.

As with any raw material, laboratory evaluation is required for each formulation to determine the best processing method and the optimum concentration of the binder components. In addition to matte finishes with Isocryl[®] EP-550, mid-gloss powder coatings are possible with some formulation adjustments such as using two polyesters of differing viscosities, or by addition of a co-reactant such as Estron's GMA-300. The ability to adjust the 60° gloss from 5 to 50% is a key attribute of Isocryl[®] EP-550. Additional formulating tips and application data for Isocryl[®] EP-550 are provided in the Technical Briefs #1, #2, and #3.

TYPICAL PROPERTIES*

Appearance	Flakes
Specific Gravity (25/25)	1.05 – 1.15
Gardner Color, 50% IN BUTYL ACETATE	2 maximum
Softening Point, RING & BALL	110 - 130°C
Non-Volatile, weight %	98.5% minimum
Epoxy Equivalent Weight	520 - 540

* 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: DSL (Canada), ECL (Korea), EINECS (Europe), IECSC (China), NZIoC (New Zealand), 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.

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-550 not be stored for prolonged periods at temperatures exceeding 80°F (27°C).

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REPRESENTATIVE FORMULATION

Polyester (30-35 AV) low viscosity	50.5
Isocryl[®] EP-550	16.8
ESCAT 22	1.7
Resiflow [®] PL-200	1.0
Titanium Dioxide	30.0

RESULTS

60° gloss	5-10 %
Solvent resistance	Good
Reverse impact	160 in.lbs
Appearance	Smooth

CONTACT INFORMATION

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TDS Revised by: G. Pearson

TDS Approved by: R. Auerbach