

ESCAT 60 CATALYST FOR POWDER COATINGS

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GENERAL DESCRIPTION

ESCAT 60 is a purified imidazole catalyst absorbed onto a silica carrier. The product is used to accelerate the cure of powder coatings that are responsive to imidazole catalysis. Example powder coating chemistries that can be catalyzed with ESCAT 60 include hybrids such as polyester-epoxy, carboxyl acrylic-epoxy, polyesters cured by GMA-functional acrylics, polyester-TGIC and polyester-PT-910. ESCAT 60 reduces the cure temperature of a particular system and shortens the required bake time at a given cure temperature when compared to non-catalyzed systems. In addition, this purified imidazole product may provide less yellowing and improved catalysis when compared to competitive imidazole catalysts on silica.

Recommended usage level of ESCAT 60 is 0.1 – 0.3% on total formula weight. Each application should be tested to determine the optimum catalyst level to achieve the desired cure time and coating properties.

TYPICAL PROPERTIES*

| | |
|------------------|---------------------------|
| Appearance | White to Off-White Powder |
| % Active | 60% |
| Specific Gravity | 0.95 – 1.05 |

* Not to be used for specification purposes

REGULATORY LISTINGS

The components of this material are either listed or exempt from listing due to polymer exemption criteria for the following chemical inventory listings: DSL (Canada), EINECS (Europe), ENCS (Japan), IECSC (China), NZIoC (New Zealand), SWISS (Switzerland), TSCA (USA)

PACKAGING (NET WEIGHT)

40 lb. / 18.1 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.

EXAMPLE FORMULATION

Polyester-Epoxy Hybrid Formulation

| Component | 1 | 2 | 3 |
|---------------------------------------|--------------|------|------|
| Polyester Resin (60:40) | 35.7 | 35.7 | 35.7 |
| Epoxy Resin | 23.8 | 23.8 | 23.8 |
| Oxymelt® A-4 | 0.5 | 0.5 | 0.5 |
| Resiflow® PL-200 | 1.0 | 1.0 | 1.0 |
| TiO ₂ | 30.0 | 30.0 | 30.0 |
| Barium Sulfate | 9.0 | 9.0 | 9.0 |
| ESCAT 60 | | 0.25 | |
| Competitive Imidazole | | | 0.25 |
| Cure Cycle | 10 min 200°C | | |
| Gel time (seconds) | 149 | 54 | 71 |
| Overbake Yellowing (Δb 20min @ 200°C) | 0.02 | 0.60 | 1.19 |

Polyester-TGIC Formulation

| Component | 1 | 2 | 3 |
|---------------------------------------|--------------|------|------|
| Polyester Resin (Uncatalyzed) | 55.3 | 55.3 | 55.3 |
| TGIC | 4.2 | 4.2 | 4.2 |
| Oxymelt® A-4 | 0.5 | 0.5 | 0.5 |
| Resiflow® PL-200 | 1.0 | 1.0 | 1.0 |
| TiO ₂ | 30.0 | 30.0 | 30.0 |
| Barium Sulfate | 9.0 | 9.0 | 9.0 |
| ESCAT 60 | | 0.25 | |
| Competitive Imidazole | | | 0.25 |
| Cure Cycle | 10 min 200°C | | |
| Gel time (seconds) | 185 | 54 | 62 |
| Overbake Yellowing (Δb 20min @ 200°C) | 0.30 | 0.32 | 0.99 |

CONTACT INFORMATION

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Revision Date: May 30, 2014

TDS Revised by: G. Pearson

TDS Approved by: R. Auerbach