

ESCAT 60 CATALYST FOR POWDER COATINGS

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THE EDGE OF INNOVATION

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 - 65%
Specific Gravity	0.95 – 1.05

* Not to be used for specification purposes

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

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Cure Cycle	10 min 200°C		
Gel time (seconds)	185	54	62
Overbake Yellowing (Δb 20min @ 200°C)	0.30	0.32	0.99

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), ENCS (Japan), IECSC (China), NZIoC (New Zealand), SWISS (Switzerland), TSCA (USA)

One or more components of this product are not REACH registered. Import quantities may be subject to limitation.

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.

CONTACT INFORMATION

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TDS Revised by: A. Chizhikova

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