REAFREE® 5401

POWDER COATINGS / TGIC & PRIMID — **TECHNICAL DATA SHEET**

Product Application details

Saturated carboxylated polyester for combination with Triglycidyl Isocyanurate or β-Hydroxy-alkylamide type hardeners.
Suitable for the formulation of outdoor SUPERDURABLE and protective thermosetting powders for electrostatic application.
For mat paints by dry-blend with REAFREE 5002.
Low TGIC or PRIMID (1) demand.
TMA free type.

Performance Benefits

- Good flow.
- Good mechanical properties.
- Excellent outdoor durability.

Polymer Type

- Saturated Carboxylated Polyester Resin

Sales Specifications

Colour (50%), (ASTM D-1544)	2 max
Acid value, mg KOH/g (ASTM D-1639)	20 - 25
Viscosity 165ºC, Pa.s (ICI – DIN 53229)	20 - 40

Other Characteristics[1]

Appearance	Pale granules
Glass Transition T, ºC (DSC - Tg)	approx 64

1 The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications

Curing Conditions

TGIC: 15 minutes at 200ºC (object temperature)
PRIMID(1): 20 minutes at 180ºC (object temperature)
(1)PRIMID is a trade mark of EMS-Chemie AG

Recommended Mixing Ratio

REAFREE 5401 / TGIC : 96/4
REAFREE 5401 / PRIMID XL-552(1): 97/3

Formulation Guidelines

Starting Formulation

	A	B
REAFREE 5401	---	614
REAFREE 5002	576	---
Titanium Dioxide(1)	320	320
Triglycidyl Isocyanurate(2)	64	26
REAFREE F3300-A15	37	37
Benzoin	3	3

(1) Kronos 2160
(2) Araldite PT-810 (Huntsman) / Tepic (Nissan Chemical)

DRY-blend paints A/B: 50/50

Application / Extrusion Conditions

Extruder:	BUSS PCS-30
Torque:	40%
Speed:	200 rpm
Extrusion temperature:	80ºC
Spraying Gun:	GEMA PG 1-B
Application voltage:	60-80 Kv
Test substrate:	Degreased steel 1 mm
Curing conditions:	15min. at 200ºC

Coating Properties

Film thickness	60-80 microns
Gloss 60º, (ASTM D-523-60E)	Ca 35%
Cupping test, (DIN 53156)	Over 8 mm
Direct Impact, (ASTM D-2794)	Over 50 Kg.cm
Reverse Impact, (ASTM D-2794)	Over 20 Kg.cm
Conical mandrel, (ASTM D-522)	100%
Adhesion, (DIN 53151)	Gt0

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Product Safety	Please refer to the corresponding Safety Data Sheet.
Delivery form	Granules. White opaque polyethylene bags of 25 Kg. One Ton pallet shrink – wrapped.
Storage & Handling	The resin in its original unopened bags is stable for more than three years, stored in a dry place at temperature below 30ºC. Avoid direct sunlight.

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