

# REAFREE® 6481

POWDER COATINGS / HYBRID

TECHNICAL DATA SHEET

## Product

Saturated carboxylated polyester suitable for the formulation of decorative and protective thermosetting powders in combination with epoxy resins. High reactive type. For mat coatings.

## Application details

TMA free type.

## Performance Benefits

- Very good flow.
- High salt spray resistance.
- Good mechanical properties.
- Good recoatability.
- Low gloss and good mechanical properties with Vestagon B-68 (Creanova), Casamid 1457 (Thomas Swan) and Dyhard PC-45 (SKW Trostberg).

## Polymer Type

- Saturated Carboxylated Polyester Resin

## Sales Specifications

|   |         |
|---|---------|
| Colour (50%), (ASTM D-1544)             | 2 max   |
| Acid value, mg KOH/g (ASTM D-1639)      | 31 - 36 |
| Viscosity 165°C, Pa.s (ICI – DIN 53229) | 12 - 20 |

## Other Characteristics<sup>1</sup>

|                                   |               |
|-----------------------------------|---------------|
| Appearance                        | Pale granules |
| Glass Transition T, °C (DSC - Tg) | approx 48     |

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

## Curing Conditions

10 minutes at 170°C (oven temperature)

## Recommended Mixing Ratio

REAFREE 6481 / Epoxy : 70/30

### Starting Formulation

|                                 |     |
|---------------------------------|-----|
| <b>REAFREE 6481</b>             | 438 |
| Titanium Dioxide <sup>(1)</sup> | 334 |
| Epoxy resins <sup>(2)</sup>     | 188 |
| REAFREE F3300-A15               | 37  |
| Benzoin                         | 3   |

(1) Kronos 2160

(2) Araldite GT-7004 (Huntsman) DER 663 UE (Dow Chemical) Epikote 3003 (Resolution)

## Formulation Guidelines

### Application / Extrusion Conditions

|                        |                      |
|------------------------|----------------------|
| Extruder:              | BUSS PCS-30          |
| Torque:                | 40%                  |
| Speed:                 | 200 rpm              |
| Extrusion temperature: | 80°C                 |
| Spraying Gun:          | GEMA PG 1-B          |
| Application voltage:   | 60-80 Kv             |
| Test substrate:        | Degreased steel 1 mm |

### Coating Properties

|                               |               |
|-------------------------------|---------------|
| Film thickness                | 60-80 microns |
| Gloss 60°, (ASTM D-523-60E)   | Over 94%      |
| Cupping test, (DIN 53156)     | Over 8 mm     |
| Direct Impact, (ASTM D-2794)  | Over 80 Kg.cm |
| Reverse Impact, (ASTM D-2794) | Over 80 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.

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**Delivery form**

Granules. White opaque polyethylene bags of 25 Kg. One Ton pallet shrink – wrapped.

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**Storage & Handling**

The resin in its original unopened bags is stable for more than three years, stored in a dry place at temperature below 30°C. Avoid direct sunlight.

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**Headquarter****ARKEMA FRANCE**

420 rue d'Estienne d'Orves  
92705 Colombes Cedex – France  
Tel : +33 (0)1 49 00 80 80

Arkema.com - [arkemacoatingresins.com](http://arkemacoatingresins.com)

**ARKEMA QUÍMICA, S.A.U.**

CTRA. OLZINELLES, S/N  
E08470 SANT CELONI (BCN) – ESPAÑA  
Tel: + 34 93 867 40 00

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