



杭州瑞科化工有限公司

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## Technical Data Sheet

### Acrylic Resins for Matting Powder Coatings Rimatt RC7700

#### Description

Rimatt RC7700 is a glycidyl-functional acrylic hardener designed to produce low gloss, exterior-durable polyester powder coatings. Benefits include consistent gloss, smooth matt appearance and dependable performance. "One-shot" low gloss coatings can be produced by using RC7700 in conjunction with 30-35 acid value polyester resins. Standard polyester resins used for TGIC, HAA, GMA or Araldite PT-910 powder coatings are well suited for use with RC7700.

#### Technical Data

Appearance:	Granules
Epoxy equivalent weight:	650-750mgKOH/g
Viscosity (@200°C):	31000-48000mPa.s
Non-Volatile:	Min.99%

#### Advantages

- Exterior durable.
- Outstanding burnish resistance
- Efficient matting capability with excellent smoothness
- Improved compatibility with non-acrylic powder coatings
- Good adhesion and impact resistance when used in conjunction with catalyst
- Formulation flexibility for performance and cost
- Excellent storage stability of finished powder coating

#### Packing

25kgs net per paper bag

#### Storage and Handling

Store it in the cool and dry place and close packages after use to avoid moisture

#### Shelf Life

At least 1 year when properly stored

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#### Formulation and Processing Guidelines

- A ratio of 75/25-30 polyester (AV=30-35) to RC7700 is needed.
- Catalyst affords ideal mechanical and solvent resistance properties.
- Adding a co-hardener to this formulation (GMA, TGIC HAA or PT910), it is possible to increase the gloss of the coatings. Unfortunately, the slope of the curve is very sharp meaning that small variations of the co-hardener concentration will give important gloss variations.
- Good premix is essential for obtaining a homogeneous appearance and best possible performance.
- Extrusion conditions should be optimized for appearance and resultant gloss. Scale-up from laboratory to full production may require fine-tuning.
- Twin-screw single extrusion is recommended for optimum dispersion. Excessive extrusion may result in some pre-reaction of the powder formulation which can increase gloss, adversely affect flow, impact resistance, burnish resistance and solvent resistance
- Viscosity of the polyester should have little effect on the resultant matte finish with RC7700.
- In combination with matting agent RC109 can enhance the smoothness, scratch and gloss stability. 1-2% RC109 can provide a stable low gloss range of 15-30%.
- The optimal baking conditions must be determined for each formulation, but basically these systems are not considered "low-bake". Standard oven conditions of 180-200°C should suffice for most formulations. Data indicate that gloss can increase with lower bake temperatures, even with longer bake times, and mechanical properties and solvent resistance are also adversely affected.

#### Suggested Formulation

Polyester Resin (AV=30-35)	450	
Polyester Resin (AV=20-25)		450
Matting Hardener, Rimatt RC7700	120	110
Hardener, TGIC or XL-552	8-6	2-10
Leveling Agent, PV88	10	10
Pigment and Fillers, BaSO <sub>4</sub> , W44HB	400	400
Carbon Black	7	7
Catalyst	0.5-1	0.5-1
Gloss@60 Deg. ,%	2-6	2-6

1. Keep low extruding temperature: melting zone at 90°C, mixing zone at 100-110°C
2. Keep faster feeding speed
3. Curing condition: 10-15 Min. @200°C

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