COLPOLY 783-02

Unsaturated Polyester Resin

Description:

Unsaturated polyester resin based on isophthalic acid modified maleates and standard glycols dissolved in styrene.

Application:

Resin is designed for use in producing bulk mould compound (BMC), sheet moulding compound (SMC).

Features and benefits:

- High crack resistance.
- High resistance to heat deformation.
- High reactivity and high viscosity.

Physical characteristics of the liquid resin:

Property	Range	Method / According to standard
Appearance	Transparent	
Acid value	15 - 18 mg KOH/g	MH1051 / ISO 2114
Density, 20 °C	1.11 - 1.13 kg/L	MH1028 / ISO 2811
Non-volatile matter	65 - 68%	MH1155 / ISO 3251
Viscosity, 23 °C	3600 - 4000 mPa·s	MH1009 / ISO 3219
Refractive index, 23 °C	1.536 - 1.538	MH1035 / DIN 51423 P1
Water content	0.03 - 0.10%	MH1041
Flash point	34 °C	DIN 51 755
Shelf life at 25 °C in darkness	6 months	

Curing characteristics at 140 °C:

Property	Range	Method / According to standard
Time from 40 - 140 °C	60 - 90 seconds	MH 3026
Time from 40 °C to peak	120 - 150 seconds	glass tube
Exothermic temperature (peak)	240 - 260 °C	100 g resin, 1.0% TBPB

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Physical characteristics of cured nonreinforced base resin:

Property	Range	Method / According to standard
Density, 20 °C	1.20 - 1.22 kg/L	ISO 1183
Tensile strength	60 - 80 MPa	ISO R 527
Elongation at break	2.5 - 3.5%	ISO R 527
Flexural strength	80 - 100 MPa	ISO 178
E - modulus in tension	3600 - 4000 MPa	ISO R 527
Impact resistance	23 - 27 kJ/m^2	ISO 179
Heat distortion temperature	95 - 110 °C	ISO 75 A
Glass transition temperature	115 - 130 °C	ISO 537

Handling and safety precautions:

Colpoly 783-02 is flammable liquid and should be kept away from naked flames. For further details, please see the relevant Safety Data Sheet.

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