

PROVISIONAL PRODUCT DATA SHEET

MECHSTER™ 1110HG(T)

(High HDT Isophthalate Tooling Gelcoat)

Mechster™ designates a variety of unsaturated polyester resins synthesized at **Mechemco Resins Pvt. Ltd.** These resins are specially engineered to meet the most diverse needs of fibreglass reinforced plastic moulding industry. Our R & D is geared to tailor **Mechster™ Resins** for the customers' most specific end application. In fact we take pride in suitably formulating the resin to improve your production efficiency as also the field performance of the FRP product.

Mechster™ 1110HG(T) is a specially formulated tooling gelcoat resin which is made from a specially modified high reactivity, high HDT Isophthalate Polyester chemistry.

Mechster™ 1110HG(T) is designed to have :

- Excellent surface finish
- Excellent Toughness and good abrasion resistance
- Excellent adhesion with the backup FRP
- Easier Vertical surface applications with minimum sagging

Components made from **Mechster™ 1110HG(T)** exhibit excellent surface finish which can be glossy or mat finish as per the requirement. This gel coat is having excellent hydrolytic stability, very good impact resistance and performance properties desired in the tooling application.

Liquid Gelcoat Properties

Property	Nominal Values	Test Method*
Appearance	Highly Viscous Opaque Liquid	AM-113
Specific Gravity @25°C	1.27 ± 0.02	AM-103
Viscosity ¹ @ 25°C, cP	5500 ± 500	AM-101
Thixotropic Index (10/100)	> 4.5	AM-101
Acid Value, mg KOH/g	15 ± 3	AM-102
Volatile Content, (w/w) %	35 ± 3	AM-106

Curing Characteristics

Standard Gel Time Test² @ 25°C

Property	Nominal Values	Test Method*
Gel Time, minutes	15 - 20	AM-110
Peak Exotherm Temperature, °C	>140	AM-110

Notes:

- * Internal Test Method, available on request
1: By Brookfield Viscometer, Sp. No 4, 100 rpm
2: Determined using 1.5% Butanox M-50

Butanox M-50: Methyl Ethyl Ketone Peroxide from Akzo Nobel

Properties of Unfilled Cast of Base Resin

Property	Nominal Values	Test Method
Specific Gravity	1.20	ISO 1183
Tensile Strength, MPa	70	ISO 527-2
Tensile Modulus, MPa	3700	ISO 527-2
Elongation at Break, %	2.5	ISO 527-2
Flexural Strength, MPa	120	ISO 178
Flexural Modulus, MPa	3900	ISO 178
Heat Deflection Temperature, °C	120	ISO 75-2
Volume Shrinkage, %	< 5.0	ISO 3521
Barcol Hardness	45	ASTM 2583
Water Absorption, (w/w)%, 30°C	1 day	<0.10
	7 days	0.13

Uses

Mechster™ 1110HG(T) is a suitable tooling gelcoat for all types of moulds to be used for Hand-layup, Spray-up and RTM applications. It is best suitable for making LRTM cover molds and transparent molds. This tooling gel coat can be backed up with Tooling Resin - **Mechster™ 1110H(T)** for best results.

Packing

Mechster™ 1110HG(T) is supplied in non returnable Open Top M.S. drums containing 25 kg and 50 kg net.

Storage & Handling

Mechster™ 1110HG(T) should be stored in a cool and dry place away from sunlight, preferably below 30°C. Under these conditions, the shelf life is 3 months. The storage stability could be further improved by aerating the resin stored in barrels at an interval of about a fortnight.

Mechster™ 1110HG(T) has a flash point of 32°C and is classified as flammable. Containers should be kept in a cool and ventilated place away from sunlight and sources of ignition. "No Smoking" rules should be strictly enforced. In case of fire, use dry chemical, foam, carbon dioxide or water spray to extinguish the flame. Spillages may be absorbed onto sand or earth and shovelled off and disposed according to local disposal regulations.

Skin contact and vapor inhalation should be avoided during moulding because of the presence of styrene monomer. In case of irritation in the eye or skin, wash with copious amount of water. In extreme case, seek immediate medical advice. The moulding area should be sufficiently ventilated for reducing the vapour levels in the air while compounding and moulding.

The above information and recommendation are based on our extensive experience in the field and is provided only as a general guidance for application of our product. The user should verify the suitability of our product for their own specific applications. We do not warrant or assume any liability for the information provided.

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