

Mechster™ 1110M

(Isophthalate Polyester Resin for RTM Applications)

Mechster™ designates a variety of unsaturated polyester resins synthesized at **Mechemco Industries**. These resins are specially engineered to meet the most diverse needs of fibreglass reinforced plastic molding 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™ 1110M is a medium reactivity, high molecular weight Isophthalic acid based unsaturated polyester resin tailored for the Resin Transfer Molding (RTM) process.

Mechster™ 1110M is designed to have:

- Fast wet out of reinforcements
- Rapid cures
- Higher heat deflection temperature
- Excellent surface finish
- Higher filler loading

Components molded from **Mechster™ 1110M** exhibit excellent hydrolytic stability, improved mechanical strength and electrical insulation properties.

Mechster™ 1110M provides better hydrolytic stability, out door durability and retention in properties over Orthophthalate Resins.

Physical Properties

Appearance	: Pale yellow viscous liquid
Specific Gravity @30°C	: 1.11 ± 0.01
Viscosity @ 30°C by Brookfield Viscometer, cP	: 250 ± 25
Acid Value mg KOH/g	: 15 ± 2
Volatile Content (w/w) %	: 40 ± 2

Curing Behavior

Gel time, minutes @ 30°C	: 5 - 10
1.0% v/w Accelerator (Cobalt Octoate with 3% Co)	
2.0% v/w Catalyst (MEKP with 8% Active Oxygen)	
Cure time, minutes	: 10-15
Peak Exotherm Temperature, °C	: 185 ± 5

Properties of Cured Mechster™ 1110M (Unfilled Cast)

Specific Gravity @ 25 °C	: 1.20
Tensile Strength, MPa	: 70
Tensile Modulus, MPa	: 3700
Flexural Strength, MPa	: 115
Flexural Modulus, MPa	: 3900
Elongation at Break, %	: 3.0
Heat Deflection Temperature, °C	: 90
Barcol Hardness	: 45

(Test methods: IS 6746-1972, ASTM and BS where IS not available.)

Uses

Mechster™ 1110M is suitable for resin transfer molding process for manufacturing of high performance FRP components.

Packing

Mechster™ 1110M is supplied in non-returnable M. S. drums containing 225 kg. net and HDPE carboys containing 35 kg. net.

Storage

Mechster™ 1110M should be stored in a cool and dry place away from sunlight, preferably below 25°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.

Skin contact and vapor inhalation should be avoided during molding 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 molding area should be sufficiently ventilated for reducing the vapor levels in the air while compounding and molding.

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.