

MECHSTER™ 9000M

(Orthophthalate 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 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™ 9000M is a medium reactivity, high molecular weight Orthophthalic acid based unsaturated polyester resin tailored for the Resin Transfer Moulding (RTM) process.

Mechster™ 9000M is designed to have :

- fast wet out of reinforcements
- rapid cures
- higher heat deflection temperature
- excellent surface finish
- higher filler loading

Components moulded from **Mechster™ 9000M** exhibit good hydrolytic stability, good mechanical strength and electrical insulation properties.

Physical Properties

Appearance	: Pale yellow viscous liquid
Specific Gravity @30°C	: 1.12 ± 0.01
Viscosity @ 30°C by	
Brookfield Viscometer, cps	: 200 ± 25
Acid Value mg KOH/g	: 22 ± 3
Volatile Content (w/w) %	: 37 ± 2

Curing Behaviour

Gel time, minutes @ 25°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	: 165

Properties of Cured Mechster™ 9000M (Unfilled Cast)

Specific Gravity @ 25°C	: 1.20
Tensile Strength, MPa	: 65
Tensile Modulus, MPa	: 3500
Flexural Strength, MPa	: 110
Flexural Modulus, MPa	: 3700
Elongation at Break, %	: 2.5
Heat Deflection Temperature, °C	: 80
Barcol Hardness	: 45

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

Uses

Mechster™ 9000M is suitable for resin transfer moulding process for manufacturing of high performance FRP components.

Packing

Mechster™ 9000M is supplied in non returnable M.S. drums containing 225 kgs. net and HDPE carboys containing 35 kgs. net.

Storage

Mechster™ 9000M 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.

Physiological and Toxicological Behaviour of Mechster™ 9000M

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.