

Provisional Product Data Sheet

# MECHSTER™ 9000-10 LSE

(Low Styrene Emission Orthophthalate Polyester Resin)

**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™ 9000-10 LSE** is a medium reactivity, low styrene emission and low viscosity orthophthalate polyester resin. It is designed to give:

- Fast wetout of fibreglass reinforcements
- High Glass to Resin Ratio (larger coverage)
- High loading of inorganic fillers
- Fast Moulding Cycles
- Smooth and Glossy (tack-free) surface.
- Reduced Styrene Emission

The resin is approved by *Lloyd's Register*.

## Physical Properties

Property	Nominal Values	Test Method*
Appearance	Clear Viscous Liquid	-
Specific Gravity @ 25°C	1.10 ± 0.01	AM-103
Viscosity <sup>(1)</sup> @ 25°C (cP)	300 ± 75	AM-101
Acid Value (mg KOH/g)	< 20	AM-102
Volatile Content (%)	40 ± 3	AM-106

**Curing Behaviour at 25 °C:** 100g Resin + 1.2% A101<sup>(2)</sup> + 1.5% Butanox M-50<sup>(3)</sup>

Property	Nominal Values	Test Method*
Gel Time (mins)	10 - 20	AM-110
Total Time to Peak (mins)	25 - 40	AM-110
Peak Exotherm Temp (°C)	165 - 185	AM-110

\*Internal Test Method available upon request.

<sup>(1)</sup> Viscosity: LVDV-E, Sp #2, RPM 20

<sup>(2)</sup> A101: Co Octoate Solution (1% Cobalt)

<sup>(3)</sup> Butanox M-50: Methyl Ethyl Ketone Peroxide from Akzo Nobel

<sup>(4)</sup> Post-Curing: 16 hours at 40 °C

<sup>(5)</sup> HDT Post-Curing: 16 hrs at 40 °C + 2 hrs at 65 °C + 2 hrs at 80 °C

## Properties of Cast of Unfilled Base Resin<sup>(4)</sup>

Property	Nominal Values	Test Method
Specific Gravity @ 25°C	1.21	ISO 1183
Tensile Strength (MPa)	65	ISO 527-2
Tensile Modulus (MPa)	3500	ISO 527-2
Elongation at Break (%)	3	ISO 527-2
Flexural Strength (MPa)	105	ISO 178
Flexural Modulus (MPa)	3200	ISO 178
Heat Deflection Temperature <sup>(5)</sup> (°C)	60	ISO 75-2
Barcol Hardness	40	ASTM 2583

## Uses

**Mechster™ 9000-10 LSE** is a versatile orthophthalate polyester resin suitable for many applications primarily for molding FRP components.

## Packing

**Mechster™ 9000-10 LSE** is supplied in non returnable M.S. drums containing 220 kg or returnable IBCs containing 1.0 MT and ISO Tanks containing ~ 20 MT net

## Storage and Handling

**Mechster™ 9000-10 LSE** should be stored in a cool and dry place away from sunlight, preferably below 25°C. Under these conditions, the shelf life is 4 months. The storage stability could be further improved by aerating the resin stored in barrels at an interval of about a fortnight.

**Mechster™ 9000-10 LSE** 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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