

Provisional Product Data Sheet

# MECHSTER™9000TA-LSE

(Low Styrene Emission Thixotropic Preaccelerated 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™9000TA-LSE** is a medium reactivity, low viscosity, pre-accelerated, promoted, low exotherm, thixotropic Orthophthalate Polyester Resin containing fading dye indicator and LSE additive.

**Mechster™9000TA-LSE** is designed to have :

- Excellent surface finish
- Faster curing time with low exotherm even with thick laminates
- Easier Vertical surface applications
- Minimal Sagging
- Reduced styrene emission
- Fading dye indicator for catalyst addition

**Mechster™9000TA-LSE** contains additives which form a barrier film during the lamination process to reduce emission of styrene without loss of secondary bond strength. As a precaution, it is recommended to sand the base laminate before over-laminating it.

**Mechster™9000TA-LSE** is ideally suited for spray-up application and designed to use with mineral fillers. A suitable laminate thickness of 2 – 6 mm at a time is recommended to achieve the desired results.

Component made from **Mechster™9000TA-LSE** exhibit excellent surface finish along with very good hydrolytic stability, improved mechanical strength and electrical insulation properties.

## Physical Properties

Appearance	: Hazy Light Blue Color Liquid
Specific Gravity @25°C	: 1.08 ± 0.01
Viscosity @ 25°C, Brookfield	
LVT, Sp. #2, 20 rpm	: 900 ± 100
Thixotropic Index (2/20)	: > 3.0
Acid Value mg KOH/g	: < 30
Volatile Content (w/w) %	: 42 ± 2

## Curing Behaviour

- Gel time, minutes @ 25°C with : 30 – 40  
100 gm Resin and 1% C109<sup>1</sup>  
Time to Peak Temp., minutes: 50 – 65  
Peak Exotherm Temperature, °C : > 120
- Gel time, minutes @ 25°C with : 20 – 30  
100 gm Resin and 1.5% C109<sup>1</sup>  
Time to Peak Temp., minutes: 35 – 50  
Peak Exotherm Temperature, °C : 140 – 170

<sup>1</sup>C109: Methyl Ethyl Ketone Peroxide (9% Active Oxygen)

## Properties of Cured Mechster™9000TA-LSE

Specific Gravity @ 25°C	: 1.20
Tensile Strength, MPa	: 60
Tensile Modulus, MPa	: 3500
Elongation at Break, %	: 1.5
Flexural Strength, MPa	: 90
Flexural Modulus, MPa	: 3600
Heat Deflection Temperature, °C	: 65
Barcol Hardness	: 48

(Test methods : IS 6746-1994, ASTM and BS where IS not available.)

## Uses

**Mechster™9000TA-LSE** is a suitable thixotropic resin for the single step multi layered built up using hand lay-up or spray-up technique. This allows for faster production by contact moulding process. It is recommended as a structural back-up resin for acrylic and / or ABS surfaces.

## Packing

**Mechster™9000TA-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™9000TA-LSE** 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.

**Mechster™9000TA-LSE** has a flash point of 34°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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