

Mechster™ 9000TA

(Pre-accelerated Thixotropic Orthophthalate Polyester Resin)

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™ 9000TA is a medium reactivity, low viscosity, pre-accelerated, low exotherm, thixotropic Orthophthalate Polyester Resin.

Mechster™ 9000TA is designed to have :

- Excellent surface finish
- Faster curing time with low exotherm even with thick laminates
- Easier Vertical surface applications
- Minimal Sagging

Component made from **Mechster™ 9000TA** exhibit excellent surface finish which is smooth and glossy. This provides very good hydrolytic stability, improved mechanical strength and electrical insulation properties.

Physical Properties

| | |
|--------------------------------|--------------------------|
| Appearance | : Hazy Rose Color Liquid |
| Specific Gravity @25°C | : 1.11 ± 0.01 |
| Viscosity @ 25°C by Brookfield | |
| RVT, Sp. #2, 50 rpm | : 550 ± 50 |
| Thixotropic Index | : ~ 2.0 |
| Acid Value mg KOH/g | : 24 ± 3 |
| Volatile Content (w/w) % | : 41 ± 2 |

Curing Behaviour

| | |
|--------------------------------------|-------------|
| Gel time, minutes @ 25°C with | : 15 - 25 |
| 100 gm Resin and 1.5% MEKP (9% A.O.) | |
| Time to Peak Temp., min | : 35 - 45 |
| Peak Exotherm Temperature, °C | : 140 – 160 |

Properties of Cured Mechster™ 9000TA

| | |
|---------------------------------|--------|
| Specific Gravity @ 25°C | : 1.20 |
| Tensile Strength, MPa | : 65 |
| Tensile Modulus, MPa | : 4000 |
| Elongation at Break, % | : 2.0 |
| Flexural Strength, MPa | : 110 |
| Flexural Modulus, MPa | : 4100 |
| Heat Deflection Temperature, °C | : 75 |
| Barcol Hardness | : 45 |
| Water Absorption at 25°C | |
| After 24 hours, % (w/w) | : 0.1 |
| After 28 days, % (w/w) | : 0.5 |

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

Uses

Mechster™ 9000TA 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.

Packing

Mechster™ 9000TA is supplied in non returnable M.S. drums containing 225 kgs.

Storage and Handling

Mechster™ 9000TA 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 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.