

# MECHSTER™ 1110R

(Isophthalate Polyester Resin for Hot Press Moulding)

**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™ 1110R** is a high reactivity, high molecular weight Isophthalic acid based unsaturated polyester resin tailored for the compounding of SMC and DMC.

**Mechster™ 1110R** is designed to have :

- uniform thickening with MgO
- higher filler loading
- fast wet out of reinforcements and rapid cures
- higher heat deflection temperature
- excellent surface finish

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

### Physical Properties of Mechster™ 1110R

Appearance	: Pale yellow clear viscous liquid
Specific Gravity @25°C	: 1.10 ± 0.01
Viscosity @ 25°C by Brookfield Viscometer, cps	: 1200 ± 200
Acid Value mg KOH/g	: 16 ± 3
Volatile Content (w/w) %	: 35 ± 2
Moisture Content (w/w)% max. by Karl Fischer Method	: < 0.1

### Curing Behaviour of Mechster™ 1110R

Catalyst	Benzoyl Peroxide (1% w/w)	TBPB (1% v/w)
Temperature, °C	82	140
Gel Time, min.	8 - 9	2 - 3
Cure Time, min.	9 - 10	3 - 4
Peak Exotherm Temperature, °C	210	245

### Properties of Cured Mechster™ 1110R (Unfilled Cast)

Tensile Strength, MPa	: 60
Tensile Modulus, MPa	: 3700
Elongation at Break, %	: 2.0
Flexural Strength, MPa	: 115
Flexural Modulus, MPa	: 3900
Heat Deflection Temperature, °C	: 115
Barcol Hardness	: 45

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

### Uses

**Mechster™ 1110R** is suitable for hot press moulding process for manufacturers of high performance FRP components suitable for not only Electrical Insulation (Class B) but also for many other applications demanding good dimensional stability and mechanical properties at high temperatures.

### Packing

**Mechster™ 1110R** is supplied in non returnable M.S. drums containing 225 kgs. net and HDPE carboys containing 35 kgs. net.

### Storage and Handling

**Mechster™ 1110R** 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 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.*