



MECHSTER™ 1110W

(Isophthalate Polyester Resin for Filament Winding)

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™ 1110W is a medium reactivity, isophthalate polyester resin specially formulated for filament winding process.

Mechster™ 1110W offers excellent wetting of fibers and easy air release ensuring void free and compact laminate with consistent performance properties. The low exotherm curing characteristic of resin allows multi layer buildup.

Laminates from **Mechster™ 1110W** exhibit excellent hydrolytic stability and excellent weather resistance along with good chemical resistance.

Physical Properties of Mechster™ 1110W

Appearance	: Clear Pale Yellow Liquid
Specific Gravity @25°C	: 1.10 ± 0.01
Viscosity @ 25°C by	
Brookfield Viscometer, cps	: 500 ± 100
Acid Value, mg KOH/g	: 15 ± 2
Volatile Content, (w/w) %	: 40 ± 2

Curing Characteristics of Mechster™ 1110W

Geltime, minutes @25°C	
100 gm Resin with	
0.5% v/w A103* + 2.0% v/w C109#	: 12 - 15
Peak Exotherm Temperature, °C	: 190 ± 10

* A 103: Cobalt Octoate (3% Cobalt)
C109: MEKP (9% A.O.)

Typical Properties of Cured Resin (Unfilled Cast)

Specific Gravity	: 1.20
Volumetric Shrinkage, %	: ~ 7
Tensile Strength, MPa	: 78
Tensile Modulus, MPa	: 3500
Elongation at Break, %	: 3.9
Flexural Strength, MPa	: 130
Flexural Modulus, MPa	: 3400
Heat Deflection Temperature, °C	: 82
Barcol Hardness	: 45
Water Absorption, % (w/w)	
After 24 hours	: < 0.10
After 28 days	: 0.25 max.

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

Uses

Mechster™ 1110W is suitable for fillament winding process for manufacturing of pipes, tubes, tanks etc. The finished products have very good rigidity and toughness for variety of applications.

Packing

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

Storage

Mechster™ 1110W 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.

Precautions for Handling Mechster™ 1110W

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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