

Product Data Sheet

MECHSTER™ 1620(I)

(Very Low Flammability Isophthalate 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™ 1620(I) is a medium viscosity, medium reactivity, flame retardant Unsaturated Polyester Resin specially designed for components to comply with the fire retardant characteristics as per IS 6746:1994 Type I. This resin while exhibiting very low flammability, retains physical and mechanical and electrical properties of unsaturated polyester resins. Laminate made from this resin passes the horizontal and vertical flammability test as per IS 15061:2002.

The **Mechster™ 1620(I)** is designed to have,

- Medium Viscosity
- Homogenous Consistency
- Fast Wet out of Reinforcements
- Complete Cure

Liquid Resin Properties

Property	Nominal Values	Test Method*
Appearance	Creamy White Viscous Liquid	AM-113
Specific Gravity @25°C	1.28 ± 0.01	AM-103
Viscosity ¹ @ 25°C, cP	500 ± 100	AM-101
Acid Value, mg KOH/g	10 ± 3	AM-102
Volatile Content, (w/w) %	30 ± 2	AM-106

Curing Characteristics

Standard Gel Time Test² @ 25°C

Property	Nominal Values	Test Method*
Gel Time, minutes	10 - 12	AM-110
Peak Exotherm Temperature, °C	> 140	AM-110

Notes:

* Internal Test Methods available on request

1: By Brookfield Viscometer, LVD Sp. No 3, 50 rpm

2: Determined with 100 g resin mass using 1.0 % A103 + 2.0% C109

3: Cast is prepared by Catalysing resin with 1.0% A103 + 1.5% C109 and curing at room temperature for 24 hours followed by post curing for 6 hours at 80 °C

A103: Cobalt Octoate solution containing 3% Cobalt

C109: Methyl Ethyl Ketone Peroxide (containing 9% Active Oxygen)

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Properties of Cured Resin (Unfilled Cast)³

Property	Nominal Values	Test Method*
Specific Gravity @ 25°C	1.34	AM-201
Tensile Strength, MPa	50	ISO 527-2
Flexural Strength, MPa	75	ISO 178
Heat Deflection Temperature, °C	85	ISO 75-2
Barcol Hardness	40	ASTM 2583
Limiting Oxygen Index	Min 25	ISO 4589-2

Uses

Mechster™ 1620(I) is suitable for Flame Retardant Components and Parts to be produced by Hand Lay-up / Spray-up / RTM / VARTM process for applications in Mass Transit, Automotive and Building and Construction Industries.

Packaging

Mechster™ 1620(I) is supplied in an open mouth Tins containing 60kg net. or in HDPE Barrels containing 40 kg Net. It is recommended that material in the container is stirred / mix thoroughly prior to transfer / use.

Storage & Handling

Mechster™ 1620(I) should be stored in its original containers, in a cool and dry place away from direct sunlight, preferably below 25°C. Under these conditions, the shelf life is 2 months.

Mechster™ 1620(I) 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. Spillage may be absorbed onto sand or earth and shoveled 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.

Caution

Always store catalyst and accelerator separately. Do not allow them to come in contact with each other as they form an explosive mixture. Always carry out separate addition of accelerator and catalyst to the resin mix for avoiding accidents.

The above information and recommendation are based on our extensive experience in the field. These are 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 in this data sheet.