

Mechster™ 5310P (Vinyl Ester Resin for Pultrusion Process)

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™ 5310P is a high reactivity, high molecular weight vinyl ester resin. It is a specialty resin for the pultrusion process.

Mechster™ 5310P is designed to have :

- fast wet out of reinforcements and rapid cures
- higher heat deflection temperature
- excellent surface finish
- tough finished products
- higher filler loading

Pultruded components moulded from **Mechster™ 5310P** exhibit excellent chemical resistance, very good mechanical strength coupled with electrical insulation properties.

Physical Properties

Appearance	: Pale yellow viscous liquid
Specific Gravity @25°C	: 1.07 ± 0.01
Viscosity @ 25°C by Brookfield Viscometer, cps	: 500 ± 100
Acid Value, mg KOH/g	: 8 ± 2
Volatile Content, (w/w) %	: 40 ± 2

Curing Behaviour

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	240

Properties of Cured Mechster™ 5310P (Unfilled Cast)

Tensile Strength, MPa	: 80
Flexural Strength, MPa	: 125
Elongation at Break, %	: ~ 4 - 5
Heat Deflection Temperature, °C	: 112
Barcol Hardness	: 35

(Test methods : IS 6746-1972, ASTM and BS where IS not available.)

Uses

Mechster™ 5310P is suitable for manufacturing of high performance FRP components by pultrusion process.

Packing

Mechster™ 5310P is supplied in non returnable M.S. drums containing 200 kgs. net and HDPE carboys containing 30 kgs. net.

Storage

Mechster™ 5310P 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.

Handling

Mechster™ 5310P 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 processing.

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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