



Mechemco industries

Commitment to Quality and Consistency

Product Data Sheet

MECHSTER™ 5310G

(Bisphenol A Epoxy Vinyl Ester Gelcoat 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™ 5310G is a specially formulated gelcoat based on Bisphenol A Epoxy Vinyl Ester Resin chemistry, supplied in the Spray / Brush version.

Mechster™ 5310G is designed to have :

- Excellent surface finish
- Faster curing time
- Easier Vertical surface applications
- Minimal Sagging
- Excellent toughness

Components made from **Mechster™ 5310G** exhibit excellent surface finish which is smooth and glossy. This gelcoat provides very good hydrolytic stability, improved mechanical strength and electrical insulation properties.

Physical Properties

Appearance	: Hazy Viscous Liquid
Specific Gravity @25°C	: 1.06 ± 0.01
Viscosity @ 25°C by Brookfield Viscometer cP	: Thixotropic
Thixotropic Index	: ~ 4 - 6
Acid Value mg KOH/g	: 8 ± 2
Volatile Content (w/w) %	: 40 ± 2

Curing Behaviour

Gel time, minutes @ 25°C	: 10 - 15
1.0% Promoter (20% DMA Solution in Styrene)	
1.0% Accelerator (Cobalt Octoate with 1% Co)	
2.0% Catalyst (MEKP with 9% Active Oxygen)	
Peak Exotherm Temperature, °C	: 145 - 155

Properties of Cured Mechster™ 5310G

Specific Gravity @ 25°C	: 1.20
Tensile Strength, MPa	: 75
Tensile Modulus, MPa	: 3300
Elongation at Break, %	: 5
Flexural Strength, MPa	: 135
Flexural Modulus, MPa	: 3200
Heat Deflection Temperature, °C:	: 102
Barcol Hardness	: 35
Water Absorption at 25°C	
After 24 hours, % (w/w)	: < 0.1
After 28 days, % (w/w)	: < 0.25
(Test methods : IS 6746-1972, ASTM and BS where IS not available.)	

Uses

Mechster™ 5310G is a suitable gelcoat for use along with **Mechster™ 5310** for all types of FRP hand layup and spray techniques. **Mechster™ 5310G** can also be used as a barrier coat behind **Mechster™ 1110NG** gel coat layer in marine application to improve on the resistance to water ingress by the FRP laminate.

Packing

Mechster™ 5310G is supplied in non returnable M.S. drums containing 200 kgs. Net.

Caution

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

Storage and Handling

Mechster™ 5310G 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™ 5310G 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.

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