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Mechemco resins pvt.ltd.

Provisional Product Data Sheet

MECHSTER™ 1110NSA

(Acrylic Modified NPG Isophthalate Resin for Solid Surface Casting Products)

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 moulding / casting 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 product.

Mechster™ 1110NSA is a premium grade specially formulated UV stabilized acrylic modified NPG-Isophthalate based pre-accelerated room temperature curable unsaturated polyester resin for non-gelcoated solid surface casting as well as clear casting applications.

Mechster™ 1110NSA is designed to have :

- Excellent color and surface finish after cure
- Easy dispersion of pigments and fillers
- Excellent air release properties
- Uniform & complete curing
- UV stability

Solid Surface Casting products made out of **Mechster™ 1110NSA** are:

- Dimensionally stable
- Excellent Thermal Shock resistance
- Excellent Weather Resistant and resistance to yellowing
- Excellent Water Resistant
- Excellent Resistance to normal house-hold chemicals
- Very good stain resistant
- Machinable and easily repairable
- Easily glued or joined using adhesive
- Long term gloss retention

Products made from **Mechster™ 1110NSA** exhibit excellent surface finish with reproducible patterns. These products can be machined to cut, shape and give a finish to any design. These materials are ideal replacement for wood, natural marble and granite. Excellent durability of these products is due to less porosity, water resistance and weathering resistance.

Physical Properties

Appearance	:Pale Yellow Transparent Liquid
Specific Gravity @25°C	: 1.09 ± 0.01
Viscosity @ 25°C by Brookfield Viscometer, cP	: 1000 ± 200
Acid Value mg KOH/g	: < 15
Volatile Content (w/w) %	: 35 ± 2

Curing Behaviour

Geltime, minutes @ 25°C	
50 gm Resin + 1.5% C109[1]	: 9 – 13
Peak Temperature, °C	: 160 – 180
Total Cure Time, minutes	: 20 – 26

[1] *C109: Methyl Ethyl Ketone Peroxide (9% Active Oxygen)*

Typical Properties of Cured Unfilled Cast Resin

Property	ASTM	Value
Specific Gravity @ 25°C	D792	1.18
Volume Shrinkage, (%)	----	7~8
Tensile Strength, MPa	D638M	78
Tensile Modulus, MPa	D638M	4000
Tensile Elongation at Break, %	D638M	3.0
Flexural Strength, MPa	D790M	140
Flexural Modulus, MPa	D790M	4200
Heat Deflection Temperature, °C	D648	105
Barcol Hardness	D2583	45

Uses

Mechster™ 1110NSA is highly suitable for fully densified products like Flat Stocks, Sinks, Bowls, Bath-Tubs etc. as well as products of artistic value like intricate sculptures, decorative items and gift articles which can be used as a replacement of wood, aluminum, natural marble and granite.

Packing

Mechster™ 1110NSA is supplied in non returnable M.S. drums containing 220 kg net and returnable IBCs containing 1.0 MT net.

Storage

Mechster™ 1110NSA 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 and Precautions

Mechster™ 1110NSA 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.

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.

Mechster™ is Registered Trade Mark of Mechemco

D 36/3, TTC Industrial Area, MIDC, Turbhe, Navi Mumbai 400 613
Tel No.: +91-22-27682720, Fax No.: +91-22-27682721
E-mail: techserv@mechemco.com

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