



Epoxy based Vinyl Ester Resin

Polyseal -840

General Information

POLYSEAL -840 is a non-promoted Epoxy based Vinyl Ester Resin. This resin is a combination of epoxies and polyester along with their advantages.

It is an excellent corrosion resistant resin against a very wide range of aggressive chemicals over a wide range of temperature. Due to its unique cross-linking pattern after co-polymerization with monomer it provides superior physical strength than other unsaturated polyester resins.

Typical Liquid Resin Properties

<u>Properties</u>	<u>Specified Range</u>	<u>Unit</u>
Acid Value	4-10	mg KOH/gm of Resin
Viscosity @ 25°C Brookfield Viscometer RVDV1-M , Spindle 2, RPM- 20.	350 ± 100	cps
Monomer Content	42 ± 3	%
Gel Time @ 25°C With 1% of 3% Cobalt Octoate Solution + 1% of DMA (20%) Promoter + 1.5% of 50% Solution of MEKP	15 ± 5	Minute
Peak Exotherm Temperature	210 ± 10	°C

Properties are tested in controlled laboratory condition , according to the method described in **IS 6746-1994**.

All the physical parameters can be tailored for suitability of customer's specific end application.

Strongbonds Polyseal Pvt. Ltd.

An ISO 9001 : 2015 Company

CIN No: U51909WB1990PTC049585

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Mechanical Properties of Cast Resin

<u>Properties</u>	<u>Unit</u>	<u>Nominal Values</u>	<u>Test Method</u>
Tensile Strength	MPa	85	ISO 527-4
Tensile Modulus	MPa	3150	ISO 527-4
Elongation at break	%	5-6	-
Flexural Strength	MPa	146	ISO 178
Flexural Modulus	MPa	3300	ISO 178
Heat Deflection Temp.	°C	102	ISO 75
Barcol Hardness	Barcol	42	ASTM D2583

(Cured for 24 hours at room temperature followed by 2 hrs at 120°C)

Features & Application

Polyseal-840 is a high performance resin which combines excellent physical and mechanical properties with anti corrosion resistance against solvents, bleaches and for both aggressive acids & alkali (basic) chemicals even at fairly high temperature.

It's Heat resistivity provides dimensional stability at elevated temperature. Light weight and hydrolytic stability etc. are the others salient features of this resin

This resin is designed for **Hand lay-up, spray-up, Filament winding, Compression molding and Resin transfer molding techniques (RTM)** etc.

Polyseal -840 is especially suitable for the following applications :

- chemical resistant process equipments
- Storage and transportation tank, pipes, ducts, hoods particularly for Acids, Alkalis, Chlorinated compounds and solvents, Oxidizing acids and wide range of inorganic and organic corrosive chemicals.

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Storage & Handling

Like other polyester resins Polyseal -840 is very sensitive to **temperature, moisture** and **Sun light**. Hence resin containers should be stored at dry places in closed-sealed condition strictly below 25°C to ensure optimum resin properties. Prolong exposure to open environment can affect liquid resin properties like viscosity and gel time.

Shelf Life

All the unsaturated polyester resins are of limited shelf life. Under above mentioned conditions the shelf life of the material is 90 days (3 months). Storage at higher temperature will adversely affect resin properties and shelf life.

Packaging

Polyseal – 840 is supplied in 25 kg and 35 kg Jarricanes and M.S. Drums containing 225.0 Kg of resin.

Safety Information

Skin contact and vapour inhalation should be avoided during working due to presence of styrene monomer. Wear breathing mask, safety goggles, Gloves and protective clothing while working. Please consult Material Safety Datasheet prior to working.

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N.B. : All the above information is based on the results of tests carried out at our laboratory. All the information indicates general characteristics of the product.

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