



Orthophthalic Acid Based Sheet Moulding Compound (SMC) Resin

Polyseal -100 S

General Information

POLYSEAL -100 S is a thickenable, medium viscus and medium reactive Orthophthalic acid based unsaturated polyester resin.

Typical Liquid Resin Properties

<u>Properties</u>	<u>Specified Range</u>	<u>Unit</u>
Acid Value	18-28	mg KOH/gm of Resin
Viscosity @ 25°C Brookfield Viscometer RVDV1-M , Spindle 2, RPM-20.	1100-1600	Cps
Monomer Content	28-34	%
Gel Time @ 82°C With 2% BPO Paste	6-8	Min
Peak Exotherm Temperature	Minimum 200	°C
Peak Time	Max. 2	Min
Gel Time @ 140°C With 1.3% TBPB Paste	2-3	Min
Peak Exotherm Temperature	Minimum 225	°C
Peak Time	Max. 2	Min

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
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Mechanical Properties of Cured Resin

<u>Properties</u>	<u>Unit</u>	<u>Nominal Values</u>	<u>Test Method</u>
Tensile Strength	MPa	62	ISO 527-4
Tensile Modulus	MPa	3360	ISO 527-4
Elongation at break	%	2-2.5	-
Flexural Strength	MPa	110	ISO 178
Flexural Modulus	MPa	3600	ISO 178
Heat Deflection Temp.	°C	65	ISO 75
Barcol Hardness	Barcol	42	ASTM D2583

(Cured for 24 hours at room temperature followed by 12 hrs at 65°C)

Features and Applications

Components manufactured from POLYSEAL – 100 S exhibit quite good mechanical strength, electrical insulation, hydrolytic stability, excellent surface finish and higher heat deflection temperature..

It shows uniform thickening behavior with MgO with fast wetting out of reinforcement.

SMC Composites are mainly used in hot press moulding method using catalyst like TBPB(Tertiary butyl per benzoate), BPO (Di-Benzoyl peroxide) etc. It has a wide application area in automobile, building, construction sectors and railways.

Due to its insulation capacity SMC composites are now chosen to manufacture of electrical & electronic equipments.

Approvals & Certificates

The manufacturing, quality control and distribution of the product by Strongbonds Polyseal Pvt. Ltd. are complying with **ISO 9001: 2015** standard.

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Storage & Handling

Like other polyester resins Polyseal -100 S is sensitive to **temperature, moisture** and **Sun light**. Hence resin containers should be stored at dry places in closed-sealed condition bellow 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..

Packaging

Polyseal – 100 S 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.

Revision Date: 08.10.2018

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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