Technical Data Sheet

Farapol Jam Chemical Indus. Co.

FARAPOL V 303

Product Description

Farapol V 303 Bisphenol A based Epoxy Vinyl Ester Resin designed to provide exceptional mechanical properties at higher temperatures. This resin offers a high resistance to solvents and chemicals, good retention of strength and toughness at elevated temperatures, and excellent resistance to acidic oxidizing environments.

Applications and Use

Farapol V 303 is designed for manufacturing of tanks, containers and pipes. Farapol V 303 can be used in composite production processes including filament winding, pultrusion, hand lay-up and spray-up processes where outstanding mechanical properties and excellent resistance to chemicals and heat are required.

Certificates and Approvals

Farapol Jam Chemical Industrial Company carries out the production, quality control, and distribution of this resin in compliance with ISO 9001, 14001, 45001, 10002, 10004, 10015, and 17065 standards. If the resin is properly formulated and cured, it can meet US FDA regulations 21 CFR 177.2420.

Typical Liquid Resin Properties

Property @ 25 ºC	*Unit*	*Specification*	*Method*
Viscosity Brookfield[1]	cps	400 - 480	ISO 2555
Acid Value	mgKOH/g	Max 30	ASTM D 1639
Solid Content	%	56 - 60	ISO 3251
Color	Gardner	Max 2	ASTM D 1544
Specific Gravity	relative	1.10-1.12	ISO 2811
Gel Time[1]	minute	16 - 22	ASTM D 2471
Exothermic Peak Temperature	ºC	150-180	ASTM D 2471

1) Gel Time and Viscosity can be adjusted as per customer requirements.

Gel Time Behavior of Resin[2]

Temperature (ºC)	*18*	*25*	*30*
Gel Time (minute)	24-30	16-22	10-12

2) Mix ratio for measuring Gel Time: 1.0 phr Cobalt Octoate(1.0%), 0.7 phr DMA (10%) - Catalyst: 1.0 phr Akperox (A60)

Typical Casted Resin Properties[3]

Property	*Unit*	*Specification*	*Method*
Tensile Strength	MPa	Min 75	ISO 3268, ASTM D638, ISO 527-2&4
Elongation at Break	%	Min 3.5	ISO 3268, ASTM D638, ISO 527-2&4
Tensile Modulus	GPa	Min 3.0	ISO 3268, ASTM D638, ISO 527-2&4
Flexural Strength	MPa	Min 120	ISO 178/ASTM D 790
Flexural Modulus	GPa	Min 3.5	ISO 178/ASTM D 790
Glass Transition Temperature (tg)	^{0}C	116.0	ASTM E 1640
Heat Deflection Temperature (HDT)	^{0}C	Min 90	ISO 75-2 Test Method A
Barcol Hardness	Barcol	Min 40	ASTM D 2583
Water Absorption	%	Max 0.25	ISO 62- Test Method 3
Linear Shrinkage[4]	%	Max 1.6	Internal method

3) 1.0 phr Cobalt Octoate (1.0%) & 0.7 phr DMA (10%) - Catalyst: 1.0 phr Akperox (A60). Curing Time is 24 hrs at Room Temperature 2 hrs at 80˚C and 1 hr at 120˚C.
4) This test has been done on the specimen with linear dimensions (1 cm × 1 cm × 100 cm).

Handling, Storage and Stability

FARAPOL V 303 is a product that is sensitive to temperature, light, and oxidation. Hence should be stored indoors in a dry place at a temperature between 5 and 25 °C. Keep always in the original, unopened, and undamaged containers. Avoid keeping material exposed to sunlight. On storage under the above-mentioned conditions, the shelf life for FARAPOL V 303 is 6 months**.**

Healthy and Safety

Avoid storing the resin along with Metallic Driers and Peroxides in the same area. Safety Datasheets of the product are available on demand. The user is fully responsible for reviewing the material's Safety Data Sheet (SDS) and understanding proper handling procedures prior to using the product

Packaging

Farapol V 303 is supplied in 200 Kg steel barrels, IBC and bulk road tankers.

Notice

The information contained herein is provided in good faith and is with the best of our accurate knowledge, but we assume no liability for its accuracy or completeness. Therefore, the buyer is advised to determine the suitability of this product for the intended use. We retain the right to make any changes according to technological progress or further developments. Please note that variations in testing conditions across different laboratories may result in discrepancies, and a tolerance of up to 5% in test results should be expected.
Farapol Jam Company reserves the right to modify the information in this document at its discretion. The latest version available on the Farapol website is considered valid, and any previous versions are void.

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