

Technical Data Sheet

Farapol Jam Chemical Indus. Co.



FARAPOL G 4301

Product Description Farapol G 4301 is a pre-accelerated Gelcoat based on Bisphenol A Epoxy Vinyl Ester Resin designed to provide exceptional mechanical properties at higher temperatures. This gelcoat offers high resistance to solvents and chemicals, good retention of strength and toughness at elevated temperatures, and excellent resistance to acidic oxidizing environments. This gelcoat is thixotropic, pre-accelerated and colored or colorless.

Applications and Use This gelcoat is designed for Manufacturing of chemical tanks and crafts, transport industries and marine industries coating, kitchen countertops, washbasins and sanitary ware. It can be used in hand lay-up and spray-up processes.

Certificates and Approvals Farapol Jam Chemical Industrial Company carries out the production, quality control, and distribution of this product 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 Gel Coat Properties¹

<i>Property @ 25 °C</i>	<i>Unit</i>	<i>Specification</i>	<i>Method</i>
Viscosity Brookfield (brush)	cps	5000 ± 500	ISO 2555(2018)
Thixotropic Index (brush)	relative	5-6	ISO 2555(2018)
Viscosity Brookfield (spray)	cps	1500 ± 300	ISO 2555(2018)
Thixotropic Index(spray)	relative	4-5	ISO 2555(2018)
Gel Time ¹	minute	15 - 25	ASTM D 2471(1999)

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

Gel Time Behavior of Gel Coat²

<i>Temperature (°C)</i>	<i>18</i>	<i>25</i>	<i>30</i>
<i>Gel Time (minute)</i>	27-30	19-21	10-12

2) Mix ratio for measuring Gel Time: 1.0 phr Cobalt (1.0%) , 0.5 phr DMA (10%) - Catalyst: 1.0 phr Akperox (A60)

Typical Casted Resin Properties³

<i>Property</i>	<i>Unit</i>	<i>Specification</i>	<i>Method</i>
Tensile Strength	MPa	Min 80	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)	°C	124.1	ASTM E 1640
Heat Deflection Temperature (HDT)	°C	Min 105	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 1.5	Internal method

3) 1.0 phr Cobalt (1.0%) & 0.5 phr DMA (10%) - Catalyst: 1.0 phr Akperox (A60). Curing Time is 24 hrs at Room Temperature 2 hrs at 80°C & 1 hour 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 G 4301 is a product that is sensitive to temperature, light, and oxidation. Hence, it 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 conditions mentioned above, the shelf life for FARAPOL G 4301 is 3 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 G 4301 is supplied in 20 buckets and 200 Kg steel barrels.

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 testing conditions may vary between different laboratories, and a tolerance of up to 5% should be expected in the test report.

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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