

Technical Data Sheet

Farapol Jam Chemical Indus. Co.

FARAPOL G 4214

Product Description Farapol G 4214 is a pre-accelerated Gelcoat of Unsaturated Polyester Resin based on Isophthalic Acid and Neopentyl Glycol, dissolved in and cross-linked with Styrene Monomer. The product has a good mechanical performance combining a good elongation at break in tension and high HDT. This gelcoat has good corrosion resistance, cracking resistance, and impact resistance.

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 G 4214 is synthesized from raw materials listed in FDA regulation Title 21 CFR 177.2420. 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.

Typical Liquid Gel Coat Properties¹

<i>Property @ 25 °C</i>	<i>Unit</i>	<i>Specification</i>	<i>Method</i>
Viscosity Brookfield (brush)	cps	3800 ± 400	ISO 2555(2018)
Thixotropic Index (brush)	relative	4-6	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>	29-32	16-18	9-12

2) Mix ratio for measuring Gel Time: (Cobalt Octoate Farapol C 901 1%- 1.0 phr, Akperox A60 1.0 phr).

Typical Casted Resin Properties³

<i>Property</i>	<i>Unit</i>	<i>Specification</i>	<i>Method</i>
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 3.2	ISO 3268, ASTM D638, ISO 527-2&4
Flexural Strength	MPa	Min 130	ISO 178/ASTM D 790
Flexural Modulus	GPa	Min 3.4	ISO 178/ASTM D 790
Heat Deflection Temperature (HDT)	°C	Min 80	ISO 75-2 Test Method A
Barcol Hardness	Barcol	Min 42	ASTM D 2583
Water Absorption	%	≈ 0.20	ISO 62- Test Method 3
Linear Shrinkage ⁴	%	≈ 1.4	Internal method

- 3) Materials used for curing are: (Cobalt Octoate Farapol C 901 1%- 1.0 phr, Akperox A60 1.0 phr). Curing Time is 24 hrs. at Room Temperature and 3 hrs. at 80 °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 4214 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 4214 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 4214 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.

Document Registration

Pub. No: POL- F-76-33 Revision No.: 3 Rev. Date: 11/30/2023

Contact Information

Tel: +98 21 26231019

Fax: +98 21 26231014

Site: www.farapol.com

Email: info@farapol.com

