

# Technical Data Sheet

Farapol Jam Chemical Indus. Co.



## FARAPOL G 4216

### NPG/ISO UPR Gel Coat- Acrylic Modified

#### Product Description

Farapol G 4216 is a high-performance, pre-accelerated gelcoat based on unsaturated polyester resin, acrylic-modified, and formulated using Isophthalic Acid (IPA) and Neopentyl Glycol (NPG). It is dissolved in styrene monomer to ensure efficient cross-linking and optimized performance. This advanced gelcoat delivers excellent surface quality with high gloss and transparency, making it ideal for applications where aesthetics are as important as durability.

Thanks to its acrylic modification, Farapol G 4216 offers improved flexibility, surface smoothness, and balanced mechanical properties — including high elongation at break and elevated heat deflection temperature (HDT). In addition, it provides superior resistance to corrosion, cracking, and impact, ensuring long-term reliability even under harsh environmental conditions.

#### Applications and Use

Farapol G 4216 is a high-performance gelcoat formulated for durability, surface protection, and aesthetic appeal. It is widely used in composite manufacturing where resistance to moisture, chemicals, and mechanical abrasion is essential.

##### *Industrial and chemical applications:*

- Chemical tanks
- Industrial vessels
- Transportation industry components

##### *Marine applications:*

- Marine crafts
- Marine coatings

##### *Architectural and sanitary applications:*

- **Kitchen countertops**
- Washbasins
- Bathroom ware

This gelcoat is suitable for both hand lay-up and spray-up processes, offering excellent workability and ensuring a consistent surface finish in composite manufacturing.

In addition, by leveraging our in-house expertise in formulating high-performance pigment pastes (Farapol P 7604), Farapol G 4216 can be supplied in the full range of RAL standard colors. This ensures precise color matching, consistent pigmentation, and provides maximum design flexibility with enhanced aesthetic value across a variety of end-use environments.

#### Certificates and Approvals

Farapol G 4216 is manufactured 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 Properties<sup>1</sup>

<i>Property @ 25 °C</i>	<i>Unit</i>	<i>Specification</i>	<i>Method</i>
Viscosity Brookfield (brush)	cps	3000-4000	ISO 2555(2018)
Thixotropic Index (brush)	relative	3-5	ISO 2555(2018)
Viscosity Brookfield (spray)	cps	1200-1800	ISO 2555(2018)
Thixotropic Index (spray)	relative	3-5	ISO 2555(2018)
Gel Time <sup>1</sup>	minute	12 - 20	ASTM D 2471(1999)

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

**Gel Time Behavior of Gel Coat<sup>2</sup>**

<i>Temperature (°C)</i>	<i>18</i>	<i>25</i>	<i>30</i>
<i>Gel Time (minute)</i>	22-32	12-20	9-12

2) Mix ratio for measuring Gel Time: (Akperox A60 1.0 phr).

**Typical Casted Resin Properties<sup>3</sup>**

<i>Property</i>	<i>Unit</i>	<i>Specification</i>	<i>Method</i>
Tensile Strength	MPa	Min 70	ISO 3268, ASTM D638, ISO 527-2&4
Elongation at Break	%	Min 2.5	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 3.0	ISO 178/ASTM D 790
Heat Distortion Temperature	°C	Min 65	ISO 75-2 Test Method A
Barcol Hardness	Barcol	Min 40	ASTM D 2583
Water Absorption	%	≈ 0.3	ISO 62- Test Method 3
Linear Shrinkage <sup>4</sup>	%	1.0 - 1.3	Internal method

3) Materials used for curing are: (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 specimen with linear dimensions (1 cm × 1 cm × 100 cm).

**Handling, Storage and Stability**

FARAPOL G 4216 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 4216 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 4216 is supplied in 20 buckets and 200 Kg steel barrels.

**Notice**

The information provided in this document is offered in good faith and reflects our best knowledge at the time of publication. However, Farapol Jam Company assumes no responsibility for the accuracy or completeness of the data. It is the buyer's responsibility to verify the suitability of this product for the intended application.

Please note that test conditions may differ between laboratories, and variations of up to 5% in reported results may occur. Farapol Jam Company reserves the right to update or modify this information in line with technological progress or further developments.

Only the latest version published on the Farapol website is considered valid. All previous versions are therefore null and void.

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