

Technical Data Sheet

Farapol Jam Chemical Indus. Co.

FARAPOL O 121

Product Description Farapol O 121 is an Orthophthalic-based unsaturated polyester resin dissolved in styrene, non-accelerated and non-thixotropic. It has low viscosity, low reactive, good impregnation to fiberglass and good process abilities.

Applications and Use This resin is designed for the manufacturing of special resin for the Resin Transfer Molding (RTM) Process and Vacuum infusion process (VIP).

Certificates and Approvals Farapol O 121 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 resin in compliance with ISO 9001, 14001, 45001, 10002, 10004, 10015, and 17065 standards.

Typical Liquid Resin Properties

<i>Property @ 25 °C</i>	<i>Unit</i>	<i>Specification</i>	<i>Method</i>
Viscosity Brookfield ¹	cps	180 - 210	ISO 2555
Acid Value	mgKOH/g	Max 32	ASTM D 1639
Solid Content	%	56-59	ISO 3251
Color	Visual	Light green	Visual
Specific Gravity	relative	1.01-1.10	ISO 2811
Gel Time ¹	minute	6 - 8	ASTM D 2471
Exothermic Peak Temperature	°C	100-120	ASTM D 2471

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

Gel Time Behavior of Resin

Cobalt Octoate1%(Farapol C 901) phr	MEKP(Akperox A60) phr	Gel Time @ 25°C minute
1.0	1.1	25-27
1.5	1.5	13-15
1.5	1	21-23
2.5	1.5	11-13

Typical Casted Resin Properties³

<i>Property</i>	<i>Unit</i>	<i>Specification</i>	<i>Method</i>
Tensile Strength	MPa	Min 60	ISO 3268, ASTM D638, ISO 527-2&4
Elongation at Break	%	Min 3.0	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 115	ISO 178/ASTM D 790
Flexural Modulus	GPa	Min 3.3	ISO 178/ASTM D 790
Heat Distortion Temperature	°C	Min 60	ISO 75
Barcol Hardness	Barcol	Min 40	ASTM D 2583
Water Absorption	%	≈ 0.40	ISO 62- Test Method 3
Linear Shrinkage ⁴	%	≈ 1.4	Internal method

- 2) Materials used for curing are: (Cobalt Octoate Farapol C 901 1%- 1.5 phr, Akperox A60 1.5 phr). Curing Time is 24 hrs at Room Temperature and 3 hrs at 80 °C.
- 3) This test is done on the linear sample with dimensions (1 cm × 1 cm × 100 cm).

Handling, Storage and Stability

FARAPOL O 121 is a product 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 O 121 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 responsible to familiar with the material handling and safety datasheet before using the product.

Packaging

Farapol O 121 is supplied in 200 Kg steel barrels, IBC and bulk road tankers.

Notice

The information contained herein is provided in good faith and is to the best of our knowledge accurate, 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.

Document Registration

Pub. No: POL- F-76-33

Revision No.: 3

Rev. Date: 11/30/2023

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