

**Applications:**

- Special resin for RTM Process.

**Properties:**

- Low Reactivity.
- Good Laminating & wetting properties.
- Good Mechanical performance combining a good elongation at break in tension.

**Composition Of The Resin:** Farapol O 121 is an Unsaturated Polyester Resin based on Orthophthalic Anhydride and standard Glycols, dissolved in and cross linked with Styrene having capability to be used as resin for RTM Purpose.

**Compatibility:** Avoid storing the resin along with Metallic Driers and Peroxides in the same area.

**Safety:**

Material Safety Datasheets of the product is available on demand.

**Product Data<sup>1</sup>:**

➤ Viscosity Brookfield, @25 °C	200 ± 20 cps
➤ Acid Value (mgr KOH/gr Resin)	30±2
➤ Color	Light Green
➤ Specific Gravity	1.06-1.10
➤ Solid Content	56±1 %
➤ Gel Time @25°C	22 ± 2 min
➤ Peak Temperature @25°C	100-120 °C

**Storage Conditions:**

FARAPOL O 121 is a product sensitive to temperature, Light & Oxidation. Hence should be stored indoors in 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.

**Stability:**

On storage under above mentioned conditions, the stability for FARAPOL O 121 is 6 months.

**Supply Modes:**

Resin is Supplied in Steel Barrels and Bulk Road Tankers.

**Food and Drug:**

All resins in this datasheet are manufactured from raw materials that are listed in FDA regulation Title 21 CFR 177.2420.

*<sup>1</sup>Gel Time, Acid Value, and Viscosity can be adjusted as per customer requirements.*



**Gel Time Behavior of Resin at Different Quantity of Catalyst & Cobalt Octoate**

Cobalt Octoate 1%(Farapol C 901) phr	MEKP(Butanox M50) phr	Gel Time (minute) @ 25°C
1.0	1.1	25-27
1.5	1.5	13-15
1.5	1	21-23
2.5	1.5	11-13

*Gel time measuring formulation used: (Co 1%- 1.5 phr, Butanox M50 1.5 phr).*

**Mechanical Properties of Clear Cured Castings:**

PROPERTIES	TEST VALUE	METHOD
Barcol Hardness	>40	ASTM D2583
Tensile Strength (MPa)	>65	ISO 527-2
Elongation at Break	>4	ISO 527-2
Heat Distortion Temperature (°C)	>65	ISO 75-2
Flexural Strength (MPa)	>110	ISO 178

*Material used for curing is: (Co 1%- 1.5 phr, Butanox M50 1.5 phr). Curing time is 24 Hrs at room Temperature and 3 Hrs at 80°C.*

**Water Absorption & Linear Shrinkage:**

PROPERTIES	TEST VALUE	METHOD
Water Absorption (%)	≈ 0.40	ISO 62- Test Method 3
Linear Shrinkage (%)	≈ 1.4	Internal Method

*This test is done on linear sample with dimensions (1 cm × 1 cm × 100 cm).*

**Note:** The laboratory data and results presented herein were obtained through the use of specific methods mentioned and all necessary precautions, high quality lab reagents, and efficient equipment's by FARAPOL JAM CHEMICAL INDUSTRIES. FARAPOL does not guarantee duplication of such results by third parties.

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