

Technical Data Sheet

Farapol Jam Chemical Indus. Co.

FARAPOL M 603

Product Description Farapol M 603 is a Pure Maleic acid-based Unsaturated Polyester Resin and standard Glycols, dissolved in and cross-linked with Styrene Monomer. The product is highly reactive and, has good mechanical performance and high HDT.

Applications and Use This resin is designed for fabrication using SMC, BMC and molded grating applications process.

Certificates and Approvals Farapol M 603 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	820 - 880	ISO 2555
Acid Value	mgKOH/g	Max 25	ASTM D 1639
Solid Content	%	64 - 66	ISO 3251
Color	Gardner	Max 2	ASTM D 1544
Specific Gravity	relative	1.11-1.14	ISO 2811
Gel Time ¹	minute	10 - 12	ASTM D 2471
Exothermic Peak Temperature	°C	180-210	ASTM D 2471

- 1) Gel Time and Viscosity can be adjusted as per customer requirements.
- 2) Gel time measuring formulation used: (Cobalt Octoate Farapol C 901 1%- 1.0 phr, Akperox A60 1.0 phr).

Reactivity Result³ @ 130 °C

<i>Property</i>	<i>Unit</i>	<i>Result</i>	<i>Method</i>
Gel Time (Time 140°C-Time 80 °C)	s	Max 155	ISO 14848
Curing Time(Time Peak-Time 80 °C)	s	Max 235	ISO 14848
Exothermic Peak Temperature	°C	250-280	ISO 14848

- 3) This test was done with 1.0 % Tert-Butyl Per Benzoate (TBPB-Trigonox C)

Typical Casted Resin Properties⁴

<i>Property</i>	<i>Unit</i>	<i>Specification</i>	<i>Method</i>
Tensile Strength	MPa	Min 65	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 3.2	ISO 3268, ASTM D638, ISO 527-2&4
Flexural Strength	MPa	Min 115	ISO 178/ASTM D 790
Flexural Modulus	GPa	Min 3.4	ISO 178/ASTM D 790
Heat Distortion Temperature	°C	Min 90	ISO 75
Barcol Hardness	Barcol	Min 40	ASTM D 2583
Water Absorption	%	≈ 0.30	ISO 62- Test Method 3
Linear Shrinkage ⁵	%	≈ 2.0	Internal method

- 4) 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 and for HDT samples 2 hrs at 140 °C.
 5) This test is done on the linear sample with dimensions (1 cm × 1 cm × 100 cm).

Handling, Storage and Stability

FARAPOL M 603 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 M 603 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 M 603 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

Contact Information

Tel: +98 21 26231019 Fax: +98 21 26231014
 Site: www.farapol.com Email: info@farapol.com

