

Technical Data Sheet

Farapol Jam Chemical Indus. Co.

FARAPOL V 306

High HDT Vinyl Ester Resin for Molding

Product Description Farapol V 306 is a vinyl ester resin based on Bisphenol A, specifically designed for molding applications. It combines exceptional thermal resistance with high mechanical properties, making it the ideal choice for industrial molding processes. This resin offers excellent performance under high-temperature conditions with a high heat deflection temperature (HDT), ensuring durability and reliability in demanding applications.

Applications and Use Farapol V 306 is widely used across various industries, including automotive manufacturing, shipbuilding, electronics, and other advanced sectors. Due to its high thermal resistance and mechanical strength, it is ideal for the production of high-quality and precise molds that must perform under high-temperature conditions.

Certificates and Approvals 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. If the resin is properly formulated and cured, it can meet US FDA regulations 21 CFR 177.2420.

Typical Liquid Resin Properties

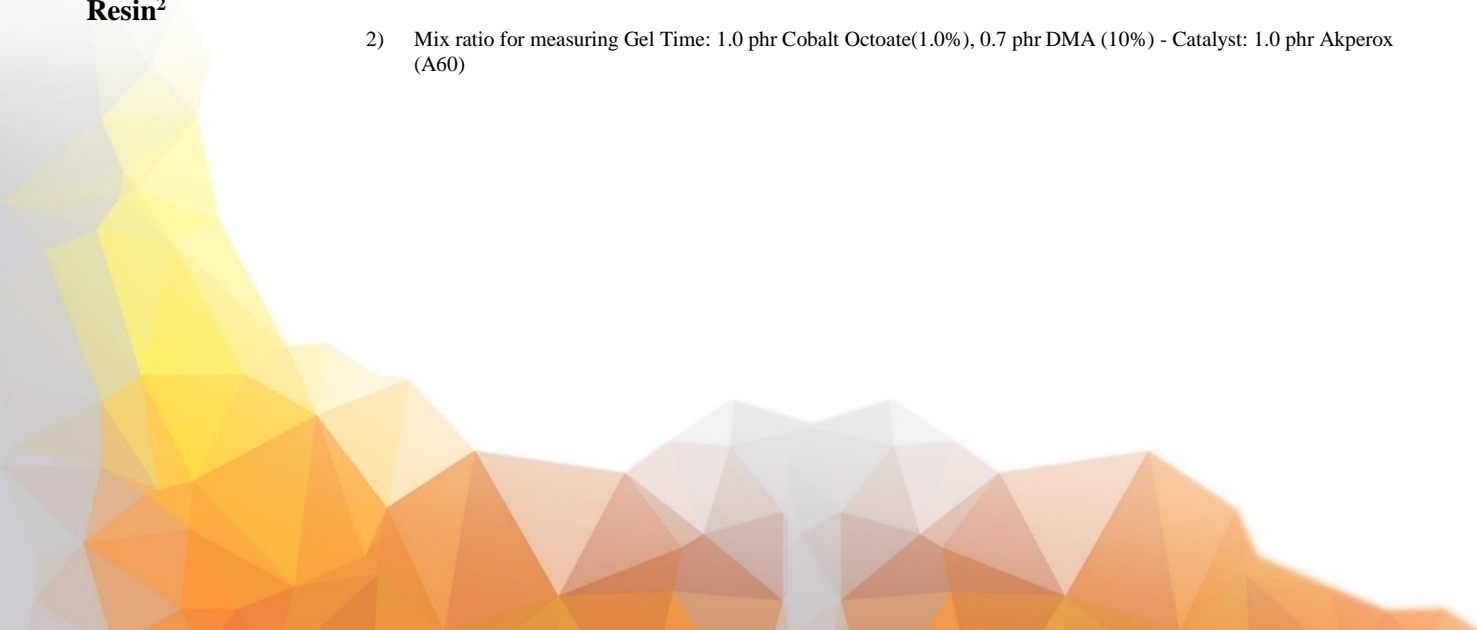
| <i>Property @ 25 °C</i> | <i>Unit</i> | <i>Specification</i> | <i>Method</i> |
|-----------------------------------|-------------|----------------------|---------------|
| Viscosity Brookfield ¹ | cps | 400 - 500 | ISO 2555 |
| Acid Value | mgKOH/g | Max 30 | ASTM D 1639 |
| Solid Content | % | 58 - 62 | ISO 3251 |
| Color | Gardner | Max 2 | ASTM D 1544 |
| Specific Gravity | relative | 1.10 -1.12 | ISO 2811 |
| Gel Time ¹ | minute | 16 - 22 | ASTM D 2471 |
| Exothermic Peak Temperature | °C | 150 -190 | ASTM D 2471 |

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

Gel Time Behavior of Resin²

| <i>Temperature (°C)</i> | <i>18</i> | <i>25</i> | <i>30</i> |
|--------------------------|-----------|-----------|-----------|
| <i>Gel Time (minute)</i> | 24 -30 | 16 -22 | 10 -12 |

2) Mix ratio for measuring Gel Time: 1.0 phr Cobalt Octoate(1.0%), 0.7 phr DMA (10%) - Catalyst: 1.0 phr Akperox (A60)



Typical Casted Resin Properties³

| <i>Property</i> | <i>Unit</i> | <i>Specification</i> | <i>Method</i> |
|-----------------------------------|-------------|----------------------|----------------------------------|
| Tensile Strength | MPa | 70 -80 | 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 120 | ISO 178/ASTM D 790 |
| Flexural Modulus | GPa | 3.0 -3.5 | ISO 178/ASTM D 790 |
| Glass Transition Temperature (Tg) | °C | 115.0 | ASTM E 1640 |
| Heat Deflection Temperature (HDT) | °C | 100 -110 | ISO 75-2 Test Method A |
| Barcol Hardness | Barcol | Min 38 | ASTM D 2583 |
| Water Absorption | % | Max 0.20 | ISO 62- Test Method 3 |
| Overall Shrinkage | % | 7.4 | Din 16945 |

3) 1.0 phr Cobalt Octoate (1.0%) & 0.7 phr DMA (10%) - Catalyst: 1.0 phr Akperox (A60). Curing Time is 24 hrs at Room Temperature 2 hrs at 80°C and 1 hr at 120°C.

Handling, Storage and Stability

FARAPOL V 306 is a product that is sensitive to temperature, light, and oxidation. Hence 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 above-mentioned conditions, the shelf life for FARAPOL V 306 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 fully responsible for reviewing the material's Safety Data Sheet (SDS) and understanding proper handling procedures prior to using the product

Packaging

Farapol V 306 is supplied in 200 Kg steel barrels, IBC and bulk road tankers.

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 variations in testing conditions across different laboratories may result in discrepancies, and a tolerance of up to 5% in test results should be expected.

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.

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