



PIPD-52025

DESCRIPTION:

Pre-promoted, medium viscosity, isophthalic polyester resin. It has good wet-out to mineral fillers and fiberglass; fast hardness development and good mechanical properties on finished parts. Styrene content is under 38% to meet particular customer requirements.

USES:

Fabrication of fiberglass laminated parts for hand lay-up or spray-up. Meets UL94HB and FMVSS-302 requirements. The styrene content on this resin is below

TYPICAL LIQUID PROPERTIES:

Next values are for a reference guide only. Certain batches will not conform exactly to these numbers due to: storage conditions, temperature changes, batch age, test equipment and procedures; these

variables may affect deeply the evaluation results. Products with values outside of these numbers can perform acceptably. Final suitability of product is in the end use performance.

Test	Minimum Value	Maximum Value	Test Method
Acid Number (solution)	--	25	TARQ-100
Non-Volatile Content (%)	58	62	TARQ-200
Gel Time (minutes) ¹	15	20	TARQ-400
Gel to Peak Time (minutes) ¹	6	9	TARQ-400
Exothermic Peak (°C) ¹	170	190	TARQ-400
Stability at 120°C (hours)	2.0	--	TARQ-660
Brookfield Viscosity (cps) ²	325	450	TARQ-300
Thixotropic Index ³	2.3	3.5	TARQ-300

¹ 1.25% Butanox M-50a @ 25°C

² LVDV-E, spindle # 3, 60 rpm @ 25°C

³ LVDV-E, spindle # 3, 6 rpm / 60 rpm @ 25°C

CURE:

It is recommended that gel time be tested in the customer's plant, due to age, temperature, humidity and catalyst type / amount, will produce varied gel times.

The catalyst level should not exceed 2.4% or fall below 1% for proper cure.

This product will have use difficulty when temperature fall below 16°C, due to curing may be adversely affected. All the gel and cure times are related to Butanox M-50a as catalyst. If any doubt, please contact our Technical Service Department.

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PHYSICAL PROPERTIES:

Polyester resin do not develop ultimate physicals, i.e. "cure" right away. Time and / or heat are needed. Heat may come from internal exotherm or external sources. The amount of catalyst will affect the cure. With time and / or heat, a "moderate cure" will develop into "ultimate physicals".

When the part reaches ultimate cure depends upon time, temperature and satisfactory catalyization. Too

much or too little catalyst can result in permanent under-cure, wich cannot be overcome.

Practically speaking, serviceable cure time will range from overnight to a week, and occasionally longer due to circumstances. Small and thickness laminates, properly catalyzed without exotherm or external heat can be delay months or years to get their last physical properties. Sufficient external heat can reduce the cure time to less than one day.

Test (laminate) ¹	Value
Tensile Strength (psi)	13,200
Tensile Modulus (psi x 10 ⁶)	1.250
Elongation (%)	1.2
Flexural Strength (psi)	29,615
Flexural Modulus (psi x 10 ⁶)	1.446
HDT at 264 psi (°C) ²	80

¹ Glass content 30%; ² clear casting
Post-cure 12 hours at RT, then 5 hours at 65°C

CAUTIONS:

Do not use air to mix, because it is not effective and moreover can produce contamination with water and oil. Do not add any material than the recommended fillers and catalyst for this product. If any doubt, please contact our Technical Service Department.

Warning: Avoid direct mixing of organic peroxide with metallic soaps, amines or any type of accelerator or promotor, because it can result on violent decomposition with fire or explosion.

STORAGE LIMITATIONS:

Uncatalyzed unsaturated polyester have a usage life of three months from date of manufacture when stored at 25°C or below, in a closed, factory-sealed,

opaque container and out of direct sunlight, heat sources or moisture. By each 7°C increment on temperature, usage life decrease to half.

SHIPPING:

Metallic, closed and sealed drums of 230 Kg or tank-wagons.

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