



PIPD-52026

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. Contains vapor suppressant additive to reduce emissions of volatile components during the lamination process until VSE value of 0.58 (measured under CFR 40, Part 63, Subpart WWWW, Appendix A; "Test Method for Determining Vapor Suppressant Effectiveness").

USES:

Fabrication of fiberglass laminated parts for hand lay-up or spray-up.

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 (%)	49	62	TARQ-200
Gel Time (minutes) ¹	15	20	TARQ-400
Gel to Cure Time (minutes) ¹	5	14	TARQ-400
Exothermic Peak (°C) ¹	165	227	TARQ-400
Brookfield Viscosity (cps) ²	300	400	TARQ-300
Thixotropic Index ³	1.7	3.5	TARQ-300
Density at 25°C (lbs/gal)	8.650	10.000	TARQ-700
Stability at 120°C (hours)	2.0	--	TARQ-660
HAP content (%)	33	38	--
Vinyl Toluene (%)	4	9	--

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.

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 catalyzation. 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 (casting) ¹	Value
Tensile Strength (psi)	6,692
Tensile Modulus (psi x 10 ⁶)	0.804
Elongation (%)	0.23
Flexural Strength (psi)	11,763
Flexural Modulus (psi x 10 ⁶)	0.539
HDT at 264 psi (°C)	85

¹ 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.

Last Revision: SEP/10/2014



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