

Description and Basic Properties

ES-1025 TIX DCPD/Vinyl ester hybrid thixotropic resin is a medium-high reactive resin. It is used in the production of equipments that requires high mechanical strength. As well, it is advantageous with respect to unsaturated polyester resin in the situation of being resistant to high corrosion even in high temperatures. Available with cobalt, without cobalt and low styrene emission.

Application Methods	Chemical Structure
Hand lay-up Spray-up	Acid : DCPD/VE Reactivity : Medium-High Acceleration : Yes

Properties of Liquid Form

	Unit	Value	Method
Appearance	-	Cloudy, Greenish	-
Viscosity¹	cp	2400 ± 100 (5 rpm)	ISO 2555
		800 ± 100 (50 rpm)	
Monomer Content	%	44 ± 3	ISO 3251
Density	g/cm ³	1.07 ± 0.02	ISO 1675
Gel Time²	min	15 ± 5	ISO 584
Peak Exotherm²	° C	190 ± 10	ISO 584
Shelf Life	month	3	-
¹ Brookfield DV II, 25° C, 4 spd ² 25° C, 1.5 ml MEK-P (Butanox M50) for 100 g sample			

Mechanical Properties of Cured Resin

	Unit	Value ¹	Method
Tensile Strength	MPa	65 ± 5	ASTM D638
Tensile E-Modulus	GPa	3.6 ± 0.4	ASTM D638
Strain at Fracture	%	4.7 ± 0.2	ASTM D638
Elongation at Break	%	2.4 ± 0.3	ASTM D638
Flexural Strength	MPa	130 ± 10	ASTM D790
Flexural E-Modulus	GPa	3.1 ± 0.3	ASTM D790
Heat Deflection Temperature (HDT)²	° C	105 ± 5	ISO 75 A
Impact Strength	Kj/m ²	10 ± 2	ISO 180

¹For fully cured resin, curing Schedule – 24 hrs at 20° C, 4 hrs at 90° C
²Curing Schedule – 24 hrs at 20° C, 4 hrs at 90° C, 3 hrs at 120° C

Storage Conditions

It should be stored in a dry, clean and cool place (15-25 ° C) in closed packages. The shelf life of the product is valid for this temperature range and it should not be forgotten that it will shorten at high temperatures. Products with the same charge number and date must be stored together.

Another factor that affects the life of unsaturated polyester resins containing styrene is sunlight. Styrene must be polymerized in the sunlight and products that are considered to shorten the life of the product should be avoided from direct sunlight contact.

More Information

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