

Description and Basic Properties

ES-2620 Isophthalic Based Chemically Resistant Polyester is a medium reactive resin. It is used with the processes of foremost hand lay-up and also fiber spraying, pultrusion and filament winding. It can be used in the production of the materials that requires high temperature and chemical resistance such as tubes and tanks and in the production of equipments that serves the purposes of moving, storing and handling food stuffs. Its fiber wetting features are well developed.

ES-2620 Polyester material samples report of conformity to BS6920-1, 2,6 standard, with regard to its effect on the quality of the water.

Application Methods	Chemical Structure
Hand lay-up Spray-up Filament winding Pultrusion	Acid : Isophthalic Acid Acceleration : No Reactivity: Medium

Properties of Liquid Form

	Unit	Value	Method
Appearance	-	Clear, Yellowish	-
Viscosity¹	cp	650 ± 50	ISO 2555
Monomer Content	%	35 ± 3	ISO 3251
Density	g/cm ³	1.12 ± 0.02	ISO 1675
Acid Number	mg KOH/g	18 ± 5	ISO 2114
Gel Time²	min	6 ± 1	ISO 2535
Peak Exotherm²	° C	190 ± 10	ISO 584
Shelf Life	month	6	-

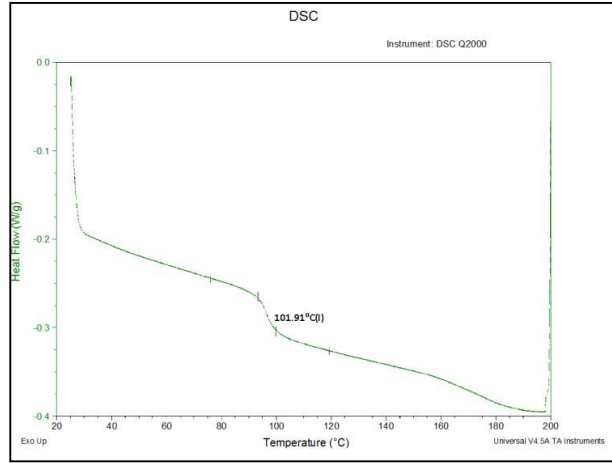
¹Brookfield DV II, 25° C, 3 spd 10 rpm
²25° C, 0.25 ml Cobalt Octoate (6% con.) and 2 ml MEK-P (Butanox M60) to 100 g sample

Mechanical Properties of Cured Resin

	Unit	Value ¹	Method
Tensile Strength	MPa	65 ± 5	ASTM D638
Tensile E-Modulus	GPa	3.9 ± 0.1	ASTM D638
Elongation at Break	%	3.5 ± 0.3	ASTM D638
Flexural Strength	MPa	130 ± 10	ASTM D790
Flexural E-Modulus	GPa	3.8 ± 0.2	ASTM D790
Elongation at Break	%	3.5 ± 0.3	ASTM D790
Heat Deflection Temperature (HDT)²	° C	85 ± 5	ISO 75 A
Barcol Hardness	Barcol	45 ± 5	ASTM D2583
Glass Transition Temperature (Tg)	° C	105 ± 5	ISO 11357-2

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



Differential Scanning Calorimetry (DSC) Determination of Glass Transition Temperature (T_g)

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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