

Description and Basic Properties

ES-500 ISO/NPG based acrylic modified high performance gelcoat is used in the production of kitchen counter-tops, sinks and wash basins. It has very high resistance to chemical scratches, impacts, UV resistant and thermal shocks. It does not show cracking and fatigue in temperature differences and is flexible. It can be used in all kinds of composite applications where atmospheric and hydrolytic resistance is important as well as chemical and mechanical resistance.

Chemical Structure

Acid : ISO / NPG
Acceleration : Yes
Modification : Acrylic

Properties of Liquid Form

	Unit	Value	Method
		Spray Type	
Viscosity¹	cp	12000 ± 2000 (5 rpm)	ISO 2555
		1900 ± 200 (50 rpm)	
Monomer Content	%	39 ± 3	ISO 3251
Density	g/cm ³	1.09 ± 0.02	ISO 1675
Gel Time²	min	10 ± 2	ISO 2535
Shelf Life	month	6	-

¹Brookfield DV II, 25°C, 4 spd for spray type
²25°C, 1.0 mL MEK-P(Butanox M60) for 100 g sample

Mechanical Properties of Cured Resin

	Unit	Value ¹	Method
Tensile Strength	MPa	60 ± 5	ASTM D638
Strain at Fracture	%	3.8 ± 0.4	ASTM D638
Elongation at Break	%	3.3 ± 0.2	ASTM D638
Flexual Strength	MPa	110 ± 10	ASTM D790
Heat Deflection Temperature (HDT)²	° C	80 ± 5	ISO 75 A
Barcol Hardness	Barcol	45 ± 5	ASTM D2583
¹ For fully cured resin, curing Schedule – 24 hrs at 20° C, 4 hrs at 90° C ² Curing 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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