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TECHNICAL DATA SHEET

POLESTER 7215

Non-accelerated Unsaturated Polyester Resin

SPECIAL PROPERTIES AND USE

High reactivity, medium viscous unsaturated polyester resin dissolved in styrene.

GENERAL PROPERTIES

Polester 7215 can be diluted with a proper ratio of styrene to suit for the applications, however, dilution more than 10% with styrene should be avoided since it might cause adverse effects of the mechanical properties.

APPLICATIONS

Polester7215 is a general purpose unsaturated polyester resin providing high hardness, good chemical resistance and good dimensionnal stability at elevated temperature. It is designed particularly for

Hand lay-up	Spray molding
Filament winding	Centrifugal molding
Casting	Hot press molding
Vacuum process	Cold press molding

PACKING AND STORAGE

Steel drum, net weights 230 kg.

SPECIFICATIONS

Appearance	Clear, light yellow liquid
Color (APHA)	100 max
Acid Value (as mg KOH/1 g resin)	27 - 30
Viscosity (cPs.) (Brookfield, LVT, 25°C)	600 – 1,000
Non-volatile (%)	65 - 68
Gel time (Min.) (1.2% Co-1, 2% MEKP-50, 25°C)	5 - 8
Density (g/cm^3) (at 25°C)	1.12
Shrinkage after cure (% b.v.)	ca.7
Flash Point (°C) (DIN 53213)	34

STORAGE STABILITY

Polester 7215 must be kept away from sources of ignition and heat and not in direct sunlight. It is recommended the storage temperature should not exceed 25°C.

At 25°C (no access of air and light) storage stability is more than 6 months.

PHYSICAL PROPERTIES of cured **Polester 7215**

PROPERTY	VALUE	UNIT	TEST METHOD
Specific gravity, 25°C	1.20	g/cm^3	DIN 53479
Refractive index, 25°C	1.558	-	DIN 53491
Barcol Hardness	85	-	-
Elongation	1.8	%	DIN 53455
E-modulus	32,000	kp/cm^2	-
Flexural strength	1,100	kp/cm^2	DIN 53452
Tensile strength	550	kp/cm^2	DIN 53455
Impact strength	7.0	$kpcm/cm^2$	DIN 53453
Compressive strength	1,700	kp/cm^2	DIN 53454
Water absorption	0.2	%	5-day dipping

THERMAL PROPERTIES of cured **Polester 7215**

Specific heat	0.35	kcal/kg °C	-
Thermal conductivity	0.12	kcal/m h °C	DIN 52612
Martens temperature	58	°C	DIN 53458
Heat distortion temperature	78	°C	ASTM D 648-45T

ELECTRICAL PROPERTIES of cured **Polester 7215**

Dielectric strength, at 50 Hz	40	kV/mm	DIN 16946
Surface resistance, R_O	$>10^{12}$	Ohm	DIN 53482
Surface insulation resistance, R_{ST} (test sheet thickness 1.0 cm)	$12x10^{11}$	Ohm	DIN 53482
Dielectric constant, at 800 Hz	3.0	-	DIN 16946
Loss factor tang, at 800 Hz	$1.5x10^{-2}$	-	DIN 16946
Track resistance	KA 3 C	-	DIN 16946
	KB 600	-	

MECHANICAL and **THERMAL PROPERTIES** of **Polester 7215** fiber glass laminates

Property	Unit	Laminate with			Test Method
		30%	50%	65%	
		Chopped strand mat		Woven roving	
Tensile strength	kp/cm^2	1,000	2,000	4,500	DIN 53455
Elongation	%	1.8	2.0	1.8	DIN 53455
Flexural strength	kp/cm^2	2,000	2,500	4,500	DIN 53452
E-modulus	kp/cm^2	70,000	90,000	245,000	-
Impact strength	$kpcm/cm^2$	65	90	140	DIN 53453
Compressive strength	kp/cm^2	2,300	3,000	1,800	DIN 53454
Martens temperature	°C	95	110	>200	DIN 53458