

LNPTTM ELCRESTTM FST2732E

DESCRIPTION

LNP ELCRES FST2732E resin is a UV stabilized, glass fiber reinforced polycarbonate Copolymer Resin in opaque colors for sheet extrusion and thermoforming processes. This non-chlorinated, non-brominated flame retardant resin is EN 45545 R6–HL2 compliant and an ideal candidate for train interior applications.

GENERAL INFORMATION	
Features	Flame Retardant, Good Processability, Low Smoke and Toxicity, Non Cl/Br flame retardant, No PFAS intentionally added
Fillers	Glass Fiber, Mineral
Polymer Types	Polycarbonate (PC)
Processing Techniques	Extrusion
INDUSTRY	SUB INDUSTRY
Mass Transportation	Rail

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Modulus, 1 mm/min	3850	MPa	ISO 527
Tensile Stress, yield, 5 mm/min	50	MPa	ISO 527
Tensile Stress, break, 5 mm/min	42	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.6	%	ISO 527
Tensile Strain, break, 5 mm/min	7	%	ISO 527
Flexural Modulus, 2 mm/min	3800	MPa	ISO 178
Flexural Strength, 2 mm/min	83	MPa	ISO 178
Tensile Modulus, 5 mm/min	3900	MPa	ASTM D638
Tensile Stress, yld, Type I, 5 mm/min	50	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	41	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3.8	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	6.8	%	ASTM D638
IMPACT ⁽¹⁾			
Izod Impact, notched 80*10*4 +23°C	17	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	86	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	68	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	16	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	9	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*3 +23°C	91	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	69	kJ/m ²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	15	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	96	kJ/m ²	ISO 179/1eU

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched, 23°C	143	J/m	ASTM D256
Izod Impact, unnotched, 23°C	1200	J/m	ASTM D4812
THERMAL ⁽¹⁾			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	118	°C	ISO 75 /Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	126	°C	ISO 75 /Bf
Vicat Softening Temp, Rate B/50	124	°C	ISO 306
Vicat Softening Temp, Rate B/120	126	°C	ISO 306
CTE, -40°C to 90°C, flow	3.6E-05	1/°C	ISO 11359-2
CTE, -40°C to 90°C, xflow	7.4E-05	1/°C	ISO 11359-2
HDT, 1.82 MPa, 3.2mm, unannealed	116	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	125	°C	ASTM D648
Ball Pressure Test, 125°C +/- 2°C	PASS	-	IEC 60695-10-2
PHYSICAL ⁽¹⁾			
Density	1.29	g/cm ³	ISO 1183
Melt Volume Rate, MVR at 250°C/2.16 kg	4	cm ³ /10 min	ISO 1133
Moisture Absorption, (23°C/50% RH/Equilibrium)	0.12	%	ISO 62-4
FLAME CHARACTERISTICS ⁽¹⁾			
Smoke density, DS-4, 50 kW/m ² ⁽²⁾	< 300	-	ISO 5659-2
Smoke density, VOF4, 50 kW/m ² ⁽²⁾	< 600	-	ISO 5659-2
Smoke toxicity, CITG (8 min), 50 kW/m ² ⁽²⁾	< 0.9	-	ISO 5659-2
Heat release, MAHRE, 50 kW/m ² ⁽²⁾	< 90	kW/m ²	ISO 5660-1
Fire Safety Hazard Level - Requirement set R6 ^{(2) (3)}	HL2	-	EN 45545-2
EXTRUSION			
Drying Temperature	90 – 105	°C	
Drying Time	3 – 6	Hrs	
Maximum Moisture Content	0.05	%	
Melt Temperature	230 – 280	°C	
Barrel - Zone 1 Temperature	210 – 260	°C	
Barrel - Zone 2 Temperature	220 – 270	°C	
Barrel - Zone 3 Temperature	230 – 280	°C	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) 2 to 4 mm

(3) based on EN 45545-2: 2020 revision

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