

LNPTTM ELCRESTTM FST2733E

DESCRIPTION

LNP ELCRES FST2733E is a glass fiber reinforced Polycarbonate Copolymer Resin for sheet extrusion and part production by thermoforming processes. This UV stabilized, non-Br/Cl flame retardant resin with no intentionally-added PFAS, is intended for train interior applications requiring EN 45545 R1-HL3 compliant materials (e.g. side panels & partition walls). Available in opaque colors.

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

TYPICAL PROPERTY VALUES

Revision 20240430

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Modulus, 1 mm/min	5750	MPa	ISO 527
Tensile Stress, yield, 5 mm/min	60	MPa	ISO 527
Tensile Stress, break, 5 mm/min	48	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Nominal Strain, break, 5 mm/min	8	%	ISO 527
Flexural Modulus, 2 mm/min	5800	MPa	ISO 178
Flexural Strength, 2 mm/min	109	MPa	ISO 178
Flexural Strain, break, 2 mm/min	9	%	ISO 178
Flexural Stress at 3.5% strain, 2 mm/min	97	MPa	ISO 178
Tensile Modulus, 5 mm/min	5650	MPa	ASTM D638
Tensile Stress, yld, Type I, 5 mm/min	61	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	48	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	5	%	ASTM D638
Tensile Nominal Strain, brk, Type I, 5 mm/min	8	%	ASTM D638
IMPACT ⁽¹⁾			
Izod Impact, notched 80*10*4 +23°C	7	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	120	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	7	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	5	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*3 +23°C	105	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	105	kJ/m ²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	7	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	75	kJ/m ²	ISO 179/1eU

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched, 23°C	78	J/m	ASTM D256
Izod Impact, unnotched, 23°C	975	J/m	ASTM D4812
THERMAL ⁽¹⁾			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	105	°C	ISO 75 /Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	114	°C	ISO 75 /Bf
Vicat Softening Temp, Rate B/50	115	°C	ISO 306
Vicat Softening Temp, Rate B/120	116	°C	ISO 306
CTE, -40°C to 90°C, flow	2.8E-5	1/°C	ISO 11359-2
CTE, -40°C to 90°C, xflow	7.0E-5	1/°C	ISO 11359-2
HDT, 1.82 MPa, 3.2mm, unannealed	104	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	113	°C	ASTM D648
Ball Pressure Test, 75°C +/- 2°C	PASS	-	IEC 60695-10-2
PHYSICAL ⁽¹⁾			
Density	1.47	g/cm ³	ISO 1183
Melt Volume Rate, MVR at 260°C/5.0 kg	5.5	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/2.16 kg	2	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/1.2 kg	5.5	cm ³ /10 min	ISO 1133
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Specific Gravity	1.47	-	ASTM D792
FLAME CHARACTERISTICS ⁽¹⁾			
Smoke density, DS-4, 50 kW/m ² ⁽²⁾	<150	-	ISO 5659-2
Smoke density, VOF4, 50 kW/m ² ⁽²⁾	<300	-	ISO 5659-2
Smoke toxicity, CITG (8 min), 50 kW/m ² ⁽²⁾	<0.75	-	ISO 5659-2
Heat release, MAHRE, 50 kW/m ² ⁽²⁾	<60	kW/m ²	ISO 5660-1
Lateral Flame Spread, CFE	>20	kW/m ²	ISO 5658-2
Fire Safety Hazard Level - Requirement set R1 ^{(2) (3)}	HL3	-	EN 45545-2
SHEET EXTRUSION			
Drying Temperature	90 – 110	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	18	Hrs	
Maximum Moisture Content	0.05	%	
Melt Temperature	210 – 250	°C	
Barrel - Zone 1 Temperature	180 – 210	°C	
Barrel - Zone 2 Temperature	200 – 230	°C	
Barrel - Zone 3 Temperature	210 – 250	°C	
Barrel - Zone 4 Temperature	210 – 250	°C	
Die Temperature	210 – 250	°C	
Roll Stack Temp - Bottom	90 – 120	°C	
Roll Stack Temp - Middle	90 – 120	°C	
Roll Stack Temp - Top	90 – 120	°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



ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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