

LEXANT™ COPOLYMER FST9705

REGION ASIA

DESCRIPTION

High viscosity Proprietary Polycarbonate Ester, OSU 55/55 compliant, low smoke, flame retardant resin

TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	72	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	73	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6.7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	102	%	ASTM D 638
Tensile Modulus, 5 mm/min	2610	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	115	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2500	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	74	MPa	ISO 527
Tensile Stress, break, 50 mm/min	76	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6.8	%	ISO 527
Tensile Strain, break, 50 mm/min	109	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	107	MPa	ISO 178
Flexural Modulus, 2 mm/min	2320	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	194	J/m	ASTM D 256
Izod Impact, notched, -30°C	112	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	80	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	16	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	24	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	140	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	121	°C	ASTM D 648
CTE, -40°C to 40°C, flow	5.7E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	5.7E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ISO 11359-2
Ball Pressure Test, approximate maximum	125	°C	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	137	°C	ISO 306
Vicat Softening Temp, Rate B/120	139	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	117	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.34	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.6 – 0.8	%	SABIC method

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Flow Rate, 300°C/ 1.2 kgf	5	g/ 10 min	ASTM D 1238
Density	1.34	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.28	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.11	%	ISO 62
Melt Volume Rate, MVR at 300°C/ 1.2 kg	4	cm ³ / 10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/5.0 kg	16	cm ³ / 10 min	ISO 1133
FLAME CHARACTERISTICS			
OSU total heat release (2 minute test)	<55	kW-min/m ²	FAR 25.853
OSU peak heat release rate (5 minute test)	<55	kW/m ²	FAR 25.853
Vertical Burn a (60s) passes at	2.4	sec	FAR 25.853
Vertical Burn b (12s) passes at	0.5	sec	FAR 25.853
NBS Smoke Density, Flaming, Dmax	<25	-	ASTM E 662
INJECTION MOLDING			
Drying Temperature	105	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	12	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	280 – 305	°C	
Nozzle Temperature	275 – 300	°C	
Front - Zone 3 Temperature	280 – 305	°C	
Middle - Zone 2 Temperature	270 – 295	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	70 – 105	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

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