LNP™ THERMOCOMP™ COMPOUND DX06313

DESCRIPTION

Polycarbonate base, 30% glass fiber reinforced, impact modified material. Thinwall housing, mobile phone. Some light color grades may have lower impact data than nature and black grade.

TYPICAL PROPERTY VALUES

Revision 20191216

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	99	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3.6	%	ASTM D 638
Tensile Modulus, 5 mm/min	7500	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	170	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	7000	MPa	ASTM D 790
Tensile Stress, break, 5 mm/min	90	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3.5	%	ISO 527
Tensile Modulus, 1 mm/min	7420	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	170	MPa	ISO 178
Flexural Modulus, 2 mm/min	6650	MPa	ISO 178
IMPACT			
Izod Impact, notched, -30°C	120	J/m	ASTM D 256
Izod Impact, notched, 23°C (Natural & Black Colors)	190	J/m	ASTM D 256
Izod Impact, notched, 23°C (Light & White Colors)	90	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	24	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	16	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	12	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	15	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	142	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	136	°C	ASTM D 648
CTE, -40°C to 40°C, flow	2.2E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.8E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	2.2E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.8E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	142	°C	ISO 306
Vicat Softening Temp, Rate B/120	143	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	136	°C	ISO 75/Af
Relative Temp Index, Elec (1)	80	°C	UL 746B
Relative Temp Index, Mech w/impact (1)	80	°C	UL 746B
Relative Temp Index, Mech w/o impact (1)	80	°C	UL 746B
PHYSICAL			
Specific Gravity	1.42	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.3 – 0.5	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	4.6	g/10 min	ASTM D 1238

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Flow Rate, 300°C/5.0 kgf	42	g/10 min	ASTM D 1238
Density	1.42	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.4	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.1	%	ISO 62
Melt Volume Rate, MVR at 300°C/5.0 kg	32	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS (1)			
UL Yellow Card Link	E207780-101284061	-	-
UL Recognized, 94HB Flame Class Rating	1.6	mm	UL 94
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	48	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	315 – 340	°C	
Nozzle Temperature	310 – 330	°C	
Front - Zone 3 Temperature	315 – 340	°C	
Middle - Zone 2 Temperature	305 – 325	°C	
Rear - Zone 1 Temperature	295 – 315	°C	
Mold Temperature	80 – 115	°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	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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