LNP™ THERMOTUF™ Compound D1000UF

PC — Saudi Basic Industries Corporation (SABIC)

Product Texts

LNP THERMOTUF D1000UF compound is based on Polycarbonate (PC) resin. Added features of this grade include: UV stabilized, impact modified, good low temperature ductility in combination with high flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC resins. This is a general-purpose product available in a wide range of opaque colors and may be an excellent candidate for a broad range of applications.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**16**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
ASTM Data			
Melt Flow Index, MFI	**17**	g/10min	ASTM D 1238
Temperature	**300**	°C	-
Load	**1.2**	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2150**	MPa	ISO 527
Yield stress	**57**	MPa	ISO 527
Yield strain	**5.2**	%	ISO 527
Stress at break	**55**	MPa	ISO 527
Strain at break	**50**	%	ISO 527
Flexural modulus	**2250**	MPa	ISO 178
Charpy impact strength, +23°C, 3mm	**N**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C, 3mm	**N**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C, 3mm	**60**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C, 3mm	**24**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C	**N**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C, 3mm	**55**	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C, 3mm	**21**	kJ/m²	ISO 180/1A
Ball indentation hardness	**95**	MPa	ISO 2039-1
ASTM Data			
Tensile Modulus	**2280**	MPa	ASTM D 638
Tensile Strength at Yield	**58**	MPa	ASTM D 638
Tensile Strength at Break	**56**	MPa	ASTM D 638
Elongation at Yield	**6**	%	ASTM D 638
Elongation at Break	**105**	%	ASTM D 638
Flexural Modulus	**2300**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**750**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**660**	J/m	ASTM D 256
Temperature	**-30**	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, B	**143**	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	**145**	°C	ISO 306
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (2)	**1**	mm	-
GWFI - thickness tested (3)	**3**	mm	-
Glow Wire Ignition Temperature (GWIT)	**875**	°C	IEC 60695-2-13
GWIT - thickness tested (1)	**1**	mm	-
Glow Wire Ignition Temperature (GWIT)	**875**	°C	IEC 60695-2-13
GWIT - thickness tested (3)	**3**	mm	-
ASTM Data			
DTUL @ 66 psi	**136**	°C	ASTM D 648
DTUL @ 264 psi	**122**	°C	ASTM D 648
Vicat Temperature	**143**	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	**0.33**	%	Sim. to ISO 62
Humidity absorption	**0.15**	%	Sim. to ISO 62
Density	**1190**	kg/m³	ISO 1183
Density	**1180**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**120**	°C	-
Pre-drying - Time	**3 - 4**	h	-
Processing humidity	**≤0.02**	%	-
Melt temperature	**295 - 315**	°C	-
Mold temperature	**70 - 95**	°C	-
Zone 1	**270 - 295**	°C	-
Zone 2	**280 - 305**	°C	-
Zone 3	**295 - 315**	°C	-
Screw speed	**40 - 70**	rpm	-
Back pressure	**0.3 - 0.7**	MPa	-

Characteristics

Processing
Injection Molding

Regional Availability
North America, Europe, Asia Pacific

Special Characteristics
High impact or impact modified