

LNPTTM THERMOCOMPTM COMPOUND 9X10401H

DESCRIPTION

LNP THERMOCOMP 9X10401H compound is based on Polyphenylsulfone (PPSU) containing proprietary fillers. Added features of this grade include: Healthcare, X-Ray Opaque.

GENERAL INFORMATION	
Features	Healthcare/Formula lock, X-Ray and metal detection, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyphenylsulfone (PPSU)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Hygiene and Healthcare	Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing
Packaging	Industrial Packaging

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 5 mm/min	72	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	57	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	7	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	12	%	ASTM D638
Tensile Modulus, 5 mm/min	2660	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2720	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	71	MPa	ISO 527
Tensile Stress, break, 5 mm/min	57	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	7	%	ISO 527
Tensile Strain, break, 5 mm/min	12	%	ISO 527
Tensile Modulus, 1 mm/min	2550	MPa	ISO 527
Flexural Modulus, 2 mm/min	2570	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	1640	J/m	ASTM D4812
Izod Impact, notched, 23°C	86	J/m	ASTM D256
Multiaxial Impact	29	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	34	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	175	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	8	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	214	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	203	°C	ASTM D648
CTE, -30°C to 30°C, flow	5.3E-05	1/°C	ASTM D696

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, xflow	5.3E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	213	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	200	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Specific Gravity	1.46	-	ASTM D792
Density	1.45	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.26	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.8 – 1	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	1 – 3	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.47	%	ISO 62
INJECTION MOLDING ⁽³⁾			
Drying Temperature	150	°C	
Drying Time	2.5	Hrs	
Maximum Moisture Content	0.05	%	
Melt Temperature	340 – 390	°C	
Front - Zone 3 Temperature	350	°C	
Middle - Zone 2 Temperature	350	°C	
Rear - Zone 1 Temperature	320	°C	
Mold Temperature	140 – 160	°C	
Back Pressure	0.3 – 0.7	MPa	

- (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) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.
- (3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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