

# LNP<sup>TM</sup> THERMOTUF<sup>TM</sup> COMPOUND RBX7245

## DESCRIPTION

LNP<sup>TM</sup> THERMOTUF<sup>TM</sup> RBX7245 (experimental grade name as ER008352) is a compound based on Recycle Polycarbonate resin containing Non-Brominated & Non-Chlorinated Flame Retardant, with excellent V-0 rating at 0.6mm. Post-Consumer Recycling (PCR) polycarbonate content up to 50%.

## TYPICAL PROPERTY VALUES

Revision 20191217

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	63	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	46	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	75	%	ASTM D 638
Tensile Modulus, 5 mm/min	2500	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	102	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2400	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	44	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	64	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	92	MPa	ISO 178
Flexural Stress, break, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2500	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, notched, 23°C	700	J/m	ASTM D 256
Izod Impact, notched, 0°C	310	J/m	ASTM D 256
Izod Impact, notched, -30°C	91	J/m	ASTM D 256
Charpy Impact, notched, 23°C, 80*10*4mm, Cut	51	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Impact, notched, 0°C, 80*10*4mm, Cut	9	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Impact, notched, -30°C, 80*10*4mm, Cut	7	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	101	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	92	°C	ASTM D 648
Vicat Softening Temp, Rate B/50	110	°C	ISO 306
Vicat Softening Temp, Rate B/120	116	°C	ISO 306
Relative Temp Index, Elec	80	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	80	°C	UL 746B
<b>PHYSICAL</b>			
Specific Gravity	1.2	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.3 – 0.4	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.4 – 0.5	%	SABIC method
Melt Flow Rate, 260°C/2.16 kgf	18	g/10 min	ASTM D 1238

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Water Absorption, (23°C/sat)	0.1	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Melt Volume Rate, MVR at 260°C/2.16 kg	18	cm <sup>3</sup> /10 min	ISO 1133
<b>FLAME CHARACTERISTICS <sup>(1)</sup></b>			
UL Yellow Card Link	<a href="https://www.ul.com/Products/Plastics/Engineering-Plastics/UL-94-Flame-Rated-Plastics/UL-94-Flame-Rated-Plastics-2017-2018">E207780-103823841</a>	-	-
UL Recognized, 94V-2 Flame Class Rating	≥0.25	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥0.6	mm	UL 94
<b>INJECTION MOLDING</b>			
Drying Temperature	80 – 90	°C	
Drying Time	2 – 4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 300	°C	
Nozzle Temperature	250 – 300	°C	
Front - Zone 3 Temperature	250 – 300	°C	
Middle - Zone 2 Temperature	240 – 290	°C	
Rear - Zone 1 Temperature	230 – 280	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	60 – 85	°C	
Vent Depth	0.03 - 0.075	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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