LNP™ THERMOCOMP™ COMPOUND D251RCC

DESCRIPTION

LNP™ THERMOCOMP™ D251RCC is a compound based on Post-Consumer Recycling (PCR) Polycarbonate resin containing Glass Fiber, Flame Retardant. Added features of this material include: colorable, high modulus, good flatness, good ductility, Non-Brominated & Non-Chlorinated Flame Retardant. PCR polycarbonate content up to 40%.

TYPICAL PROPERTY VALUES

Revision 20191216

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Flexural Modulus, 1.3 mm/min, 50 mm span	6300	MPa	ASTM D 790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	161	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	158	MPa	ASTM D 790
Flexural Modulus, 2 mm/min	6100	MPa	ISO 178
Flexural Stress, yield, 2 mm/min	157	MPa	ISO 178
Flexural Stress, break, 2 mm/min	156	MPa	ISO 178
Tensile Modulus, 5 mm/min	6650	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	100	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.9	%	ASTM D 638
Tensile Modulus, 1 mm/min	6750	MPa	ISO 527
Tensile Stress, break, 5 mm/min	108	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3.1	%	ISO 527
IMPACT			
Izod Impact, notched, 23°C	139	J/m	ASTM D 256
Izod Impact, notched, -30°C	94	J/m	ASTM D 256
Izod Impact, unnotched, 23°C	616	J/m	ASTM D 4812
Izod Impact, notched 80*10*4 +23°C	12	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	9	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	38	kJ/m²	ISO 180/1U
Instrumented Impact Total Energy, 23°C	24	J	ASTM D 3763
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	114	°C	ASTM D 648
HDT, 0.45 MPa, 3.2 mm, unannealed	119	°C	ASTM D 648
Vicat Softening Temp, Rate B/50	122	°C	ISO 306
Vicat Softening Temp, Rate B/120	125	°C	ISO 306
CTE, 23°C to 80°C, flow	2.5E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, xflow	7.4E-05	1/°C	ASTM E 831
PHYSICAL			
Density	1.37	g/cm³	ASTM D 792
Melt Flow Rate, 300°C/2.16 kgf	31	g/10 min	ASTM D 1238
Melt Flow Rate, 300°C/1.2 kgf	16	g/10 min	ASTM D 1238
Melt Volume Rate, MVR at 300°C/2.16 kg	27	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/1.2 kg	13	cm³/10 min	ISO 1133
Mold Shrinkage, flow, 24 hrs	0.2 – 0.4	%	ASTM D 955

© 2019 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, xflow, 24 hrs	0.2 – 0.4	%	ASTM D 955
Water Absorption, 23°C/24hrs	0.03	%	ISO 62-1
ELECTRICAL			
Dielectric Constant, 1.1 GHz	3.21	-	SABIC method
Dielectric Constant, 1.9 GHz	3.22	-	SABIC method
Dielectric Constant, 5 GHz	3.22	-	SABIC method
Dielectric Constant, 10 GHz	3.22	-	SABIC method
Dissipation Factor, 1.1 GHz	0.0064	-	SABIC method
Dissipation Factor, 1.9 GHz	0.0065	-	SABIC method
Dissipation Factor, 5 GHz	0.0067	-	SABIC method
Dissipation Factor, 10 GHz	0.0069	-	SABIC method
FLAME CHARACTERISTICS (1)			
UL Yellow Card Link	E207780-103855643	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.6	mm	UL 94
INJECTION MOLDING			
Drying Temperature	110	°C	
Drying Time	3 – 6	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	285 – 310	°C	
Nozzle Temperature	285 – 305	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	50 – 90	rpm	

(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.

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.

© 2019 Copyright by SABIC. All rights reserved