NORYL™ RESIN NH7010

REGION ASIA

DESCRIPTION

NORYL™ NH7010 resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS) and exhibits an excellent balance of non-brominated, non-chlorinated flame retardance, high heat resistance, good flow, and low specific gravity for light weight parts. This injection moldable grade carries UL94 flame ratings of 5VA at 2mm and V0 at 1.5mm along with a UL746C Outdoor Suitability rating of F1. NORYL NH7010 resin is an excellent candidate for applications such as electrical enclosures and solar/PV junction boxes.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	68	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	49	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5.2	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	41	%	ASTM D 638
Tensile Modulus, 5 mm/min	2250	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	2470	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	69	MPa	ISO 527
Tensile Stress, break, 50 mm/min	63	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.9	%	ISO 527
Tensile Strain, break, 50 mm/min	8.4	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	109	MPa	ISO 178
Flexural Modulus, 2 mm/min	2520	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	223	J/m	ASTM D 256
Izod Impact, notched, -30°C	89	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	38	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	20	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	8	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	21	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	160	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	139	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.16E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.15E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	8.16E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.15E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	161	°C	ISO 306
Vicat Softening Temp, Rate B/120	162	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	139	°C	ISO 75/Af
PHYSICAL			

© 2019 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Specific Gravity	1.09	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.8	%	SABIC method
Melt Flow Rate, 300°C/5.0 kgf	10.1	g/10 min	ASTM D 1238
Density	1.09	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.25	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Melt Volume Rate, MVR at 300°C/5.0 kg	10	cm³/10 min	ISO 1133
INJECTION MOLDING			
Drying Temperature	110 – 120	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	300 – 325	°C	
Nozzle Temperature	300 – 325	°C	
Front - Zone 3 Temperature	290 – 325	°C	
Middle - Zone 2 Temperature	275 – 320	°C	
Rear - Zone 1 Temperature	265 – 315	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 70	%	

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