

NORYL™ RESIN PX500

REGION ASIA

DESCRIPTION

NORYL PX500 is an unfilled modified polyphenylene ether resin capable of multiple conversion routes. This resin is designed for lower odor during conversion than many standard modified PPE resins. NORYL PX500 provides an exceptional balance of high heat performance and dimensional stability with flow and may be an excellent material candidate for IC tray applications.

TYPICAL PROPERTY VALUES

Revision 20241025

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	71	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	56	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5.4	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	35	%	ASTM D638
Tensile Modulus, 50 mm/min	2400	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2590	MPa	ASTM D790
Hardness, Shore D, 30S reading	82	-	ASTM D2240
Tensile Stress, yield, 50 mm/min	70	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5.1	%	ISO 527
Tensile Strain, break, 50 mm/min	5.1	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	110	MPa	ISO 178
Flexural Modulus, 2 mm/min	2530	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	80	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	58	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	8	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	192	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	170	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.1E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.9E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	7.1E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.9E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	192	°C	ISO 306
Vicat Softening Temp, Rate B/120	193	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	169	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.06	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.8 – 0.9	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.8 – 0.9	%	SABIC method
Density	1.06	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.23	%	ISO 62-1

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 320°C/5.0 kg	21	cm ³ /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	%	

MORE INFORMATION

For curve data and CAE cards, please visit and register at <https://materialfinder.sabic-specialties.com>

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.