SABIC Innovative Plastics™

Noryl* Resin N300X

Americas: COMMERCIAL

PPE+PS blend. Unfilled. Non-brominated, non-chlorinated FR system. UL94 V0. High heat. Dielectric strength. Dimensional stability. Suitable for E/E applications.

Property

TYPICAL PROPERTIES (1)			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	74	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	73	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5.3	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	7.6	%	ASTM D 638
Tensile Modulus, 5 mm/min	2380	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	110	MPa	ASTM D 790
Flexural Stress, yld, 2.6 mm/min, 100 mm span	110	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2650	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	2500	MPa	ASTM D 790
Hardness, Rockwell R	119	-	ASTM D 785
Tensile Stress, yield	75	MPa	ISO 527
Tensile Stress, break	66	MPa	ISO 527
Tensile Strain, yield	5.2	%	ISO 527
Tensile Strain, break	13	%	ISO 527
Tensile Modulus, 1 mm/min	2220	MPa	ISO 527
Flexural Stress	112	MPa	ISO 178
Flexural Modulus	2520	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	190	J/m	ASTM D 256
Izod Impact, notched, -30°C	55	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	54	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	15	kJ/m²	ISO 180/1A
THERMAL	Value	Unit	Standard
HDT, 0.45 MPa, 3.2 mm, unannealed	155	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	140	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	145	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ASTM E 831
Vicat Softening Temp, Rate B/50	162	°C	ISO 306
Vicat Softening Temp, Rate B/120	164	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	156	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	140	°C	ISO 75/Ae
Relative Temp Index, Elec	105	°C	UL 746B
Relative Temp Index, Mech w/impact	105	°C	UL 746B
Relative Temp Index, Mech w/o impact	105	°C	UL 746B
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.1	-	ASTM D 792
Water Absorption, equilibrium, 23C	0.06	%	ASTM D 570

Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Mold Shrinkage on Tensile Bar, xflow (2)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 280°C/5.0 kgf	7.4	g/10 min	ASTM D 1238
Melt Volume Rate, MVR at 280°C/5.0 kg	7	cm³/10 min	ISO 1133
ELECTRICAL	Value	Unit	Standard
Volume Resistivity	1.E+17	Ohm-cm	ASTM D 257
Surface Resistivity	1.E+17	Ohm	ASTM D 257
Dielectric Strength, in oil, 3.2 mm	19.4	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	2.68	-	ASTM D 150
Relative Permittivity, 1 MHz	2.63	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.0031	-	ASTM D 150
Dissipation Factor, 1 MHz	0.009	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
Hot Wire Ignition {PLC)	0	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
FLAME CHARACTERISTICS	Value	Unit	Standard
UL Recognized, 94V-0 Flame Class Rating (3)	1.47	mm	UL 94

Source GMD, last updated:02/01/2005

Processing

Parameter Injection Molding	Value	Unit
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	%

Source GMD, last updated:02/01/2005

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR (LOCAL SALES OFFICE) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.
(2) Only typical data for selection purposes. Not to be used for part or tool design.
(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
(4) Internal measurements according to UL standards.

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