SABIC Innovative Plastics™

Noryl* Resin IGN5531

Americas: COMMERCIAL

Noryl* IGN5531 is an 20% glass fiber reinforced, injection moldable grade. This modified polyphenylene ether resin is designed to deliver a balance of heat, strength and electrical properties. Noryl IGN5531 may be an excellent material candidate for ignition coils and other application requiring electrically insulating properties.

Property

TYPICAL PROPERTIES (1)			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	80	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	80	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.6	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3.3	%	ASTM D 638
Tensile Modulus, 5 mm/min	5100	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	135	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	4500	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	80	MPa	ISO 527
Tensile Stress, break, 5 mm/min	80	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.2	%	ISO 527
Tensile Strain, break, 5 mm/min	2.9	%	ISO 527
Tensile Modulus, 1 mm/min	5800	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	140	MPa	ISO 178
Flexural Modulus, 2 mm/min	5400	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	100	J/m	ASTM D 256
Izod Impact, notched, -30°C	80	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	14	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m²	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	158	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	149	°C	ASTM D 648
CTE, -40°C to 40°C, flow	2.89E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.26E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	2.89E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.26E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	158	°C	ISO 306
Vicat Softening Temp, Rate B/120	159	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	150	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.22	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.4 - 0.4	%	SABIC Method
Melt Flow Rate, 300°C/5.0 kgf	6.4	g/10 min	ASTM D 1238
Density	1.22	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.06	%	ISO 62

Moisture Absorption (23°C / 50% RH)	0.02	%	ISO 62
Melt Volume Rate, MVR at 300°C/5.0 kg	5	cm³/10 min	ISO 1133

Source GMD, last updated:01/16/2007

Processing

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.