

Noryl* Resin SPN410

Americas: COMMERCIAL

Improved productivity. 210F (99C) DTUL. UL94 HB rated.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	35	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	82	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	55	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	1830	MPa	ASTM D 790
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	373	J/m	ASTM D 256
Izod Impact, notched, -40°C	186	J/m	ASTM D 256
Gardner, 23°C	21	J	ASTM D 3029
THERMAL	Value	Unit	Standard
HDT, 1.82 MPa, 6.4 mm, unannealed	98	°C	ASTM D 648
CTE, -40°C to 95°C, flow	9.E-05	1/°C	ASTM E 831
CTE, -40°C to 95°C, xflow	9.E-05	1/°C	ASTM E 831
Relative Temp Index, Elec	50	°C	UL 746B
Relative Temp Index, Mech w/impact	50	°C	UL 746B
Relative Temp Index, Mech w/o impact	50	°C	UL 746B
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.06	-	ASTM D 792
Water Absorption, 24 hours	0.07	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm	0.5 - 0.7	%	SABIC Method
ELECTRICAL	Value	Unit	Standard
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	2	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS	Value	Unit	Standard
UL Recognized, 94HB Flame Class Rating (3)	1.47	mm	UL 94

Source GMD, last updated:01/05/2000

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	105 - 110	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	280 - 310	°C
Nozzle Temperature	280 - 310	°C

Front - Zone 3 Temperature	270 - 310	°C
Middle - Zone 2 Temperature	260 - 305	°C
Rear - Zone 1 Temperature	250 - 300	°C
Mold Temperature	75 - 105	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	20 - 100	rpm
Shot to Cylinder Size	30 - 70	%

Source GMD, last updated:01/05/2000

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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