



**NORYL™ Resin NH7010HF**  
**Americas: COMMERCIAL**

Noryl\* NH7010HF resin is a modified PPE-PS blend that exhibits an excellent balance of non-halogenated flame retardance, high heat resistance, good flow, and low specific gravity for light weight parts. The resin will be available in custom colors and is suitable for injection molding.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, brk, Type I, 50 mm/min	600	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	12	%	ASTM D 638
Tensile Modulus, 5 mm/min	22200	kgf/cm <sup>2</sup>	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1010	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	25000	kgf/cm <sup>2</sup>	ASTM D 790
<b>IMPACT</b>			
Izod Impact, notched, 23°C	23	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	7	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	540	cm-kgf	ASTM D 3763
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	159	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	138	°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
CTE, -40°C to 40°C, flow	8.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ISO 11359-2
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
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
<b>PHYSICAL</b>			
Specific Gravity	1.09	-	ASTM D 792

(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.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Source GMD, last updated:

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### Americas: COMMERCIAL

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>PHYSICAL</b>			
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.8	%	SABIC Method
Melt Flow Rate, 300°C/5.0 kgf	20.1	g/10 min	ASTM D 1238
Density	1.09	g/cm <sup>3</sup>	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	20	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>			
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
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
<b>FLAME CHARACTERISTICS</b>			
UL Compliant, 94V-0 Flame Class Rating (3)(4)	1.5	mm	UL 94 by SABIC-IP
UL Compliant, 94-5VA Rating (3)(4)	2	mm	UL 94 by SABIC-IP

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Injection Molding</b>		
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	%

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