



NORYL™ Resin BN31
Americas: COMMERCIAL

Blowmoldable. Excellent processability and flammability. Good heat resistance. Low temperature impact strength. Dimensional stability.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	490	kgf/cm ²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	730	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	24600	kgf/cm ²	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	27	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -40°C	10	cm-kgf/cm	ASTM D 256
Gardner, 23°C	138	cm-kgf	ASTM D 3029
Gardner, -40°C	345	cm-kgf	ASTM D 3029
THERMAL			
HDT, 1.82 MPa, 6.4 mm, unannealed	82	°C	ASTM D 648
Relative Temp Index, Elec	95	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	95	°C	UL 746B
PHYSICAL			
Specific Gravity	1.1	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.6 - 0.7	%	SABIC Method
ELECTRICAL			
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1.47	mm	UL 94
UL Recognized, 94-5VA Rating (3)	2.99	mm	UL 94
UV-light, water exposure/immersion	F1	-	UL 746C



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- Dry for recommended time and temperature as overdrying can cause loss of physical properties and/or create appearance defects.

PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Extrusion Blow Molding		
Drying Temperature	95	°C
Drying Time	2 - 4	hrs
Melt Temperature (Parison)	210 - 215	°C
Barrel - Zone 1 Temperature	205 - 215	°C
Barrel - Zone 2 Temperature	205 - 215	°C
Barrel - Zone 3 Temperature	205 - 215	°C
Barrel - Zone 4 Temperature	210 - 215	°C
Adapter - Zone 5 Temperature	210 - 215	°C
Head - Zone 6 - Top Temperature	210 - 215	°C
Head - Zone 7 - Bottom Temperature	215 - 220	°C
Mold Temperature	50 - 70	°C
Die Temperature	215 - 220	°C

- As screw speed is increased, shear heating increases; reducing barrel temperatures helps keep melt temperature under control.
- Processing temperature must be measured with a hand-held probe as opposed to an internal-head probe.
- A reverse barrel profile may increase output while maintaining the melt temperature.