

## Noryl\* Resin EXNL0303

Americas: DEVELOPMENTAL

EXNL0303 is a modified PPE-HIPS blend that presents an excellent balance of non halogenated flame retardance, lower smoke production upon burning and low specific gravity for light weight parts. Noryl EXNL0303 is available in custom colors and may be an excellent material candidate for applications requiring light weight parts and may be processed by injection molding or extrusion techniques.

### Property

TYPICAL PROPERTIES <sup>(1)</sup>			
	Value	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	56	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	47	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4.1	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	17	%	ASTM D 638
Tensile Modulus, 5 mm/min	2280	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	90	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2360	MPa	ASTM D 790
<b>IMPACT</b>			
Izod Impact, notched, 23°C	156	J/m	ASTM D 256
<b>THERMAL</b>			
HDT, 1.82 MPa, 3.2mm, unannealed	104	°C	ASTM D 648
<b>PHYSICAL</b>			
Specific Gravity	1.05	-	ASTM D 792
Melt Flow Rate, 280°C/5.0 kgf	27	g/10 min	ASTM D 1238

Source GMD, last updated:11/21/2007

### Processing

Parameter	Value	Unit
<b>Injection Molding</b>		
Drying Temperature	95 - 105	°C
Drying Time	2 - 4	hrs
Drying Time (Cumulative)	12	hrs
Maximum Moisture Content	0.07	%
Melt Temperature	260 - 290	°C
Nozzle Temperature	260 - 290	°C
Front - Zone 3 Temperature	250 - 290	°C
Middle - Zone 2 Temperature	240 - 280	°C
Rear - Zone 1 Temperature	225 - 275	°C
Mold Temperature	65 - 100	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	20 - 100	rpm
Shot to Cylinder Size	30 - 70	%
Vent Depth	0.038 - 0.051	mm
<b>Sheet Extrusion</b>		
Drying Temperature	95 - 105	°C

Drying Time	2 - 4	hrs
Drying Time (Cumulative)	12	hrs
Maximum Moisture Content	0.07	%
Melt Temperature	215 - 250	°C
Barrel - Zone 1 Temperature	215 - 250	°C
Barrel - Zone 2 Temperature	215 - 250	°C
Barrel - Zone 3 Temperature	215 - 250	°C
Barrel - Zone 4 Temperature	215 - 250	°C
Adapter Temperature	215 - 250	°C
Die Temperature	215 - 250	°C
Roll Stack Temp - Top	90 - 150	°C
Roll Stack Temp - Middle	90 - 150	°C
Roll Stack Temp - Bottom	90 - 150	°C
Parameter		
Profile Extrusion	Value	Unit
Drying Temperature	95 - 105	°C
Drying Time	2 - 4	hrs
Drying Time (Cumulative)	12	hrs
Maximum Moisture Content	0.07	%
Melt Temperature	215 - 250	°C
Barrel - Zone 1 Temperature	215 - 250	°C
Barrel - Zone 2 Temperature	215 - 250	°C
Barrel - Zone 3 Temperature	215 - 250	°C
Barrel - Zone 4 Temperature	215 - 250	°C
Hopper Temperature	80 - 120	°C
Adapter Temperature	215 - 250	°C
Die Temperature	215 - 250	°C
Calibrator Temperature	30 - 60	°C
Water Bath Temperature	30 - 50	°C

Source GMD, last updated:11/21/2007

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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