NORYL™ Resin SE100X
Americas: COMMERCIAL

PPE+PS blend. Unfilled. Non-brominated, non-chlorinated FR system. UL94 V0/V1 rated. RTI Elec/Imp/Str 95/80/95. Good flow. Suitable for E/E market indoor/outdoor applications.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	590	kgf/cm²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	470	kgf/cm²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6.5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	25	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	840	kgf/cm²	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	23500	kgf/cm²	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	26	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	9	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	414	cm-kgf	ASTM D 3763
Instrumented Impact Energy @ peak, -30	165	cm-kgf	ASTM D 3763
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	102	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	92	°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)	0.5 - 0.7	%	SABIC Method
Mold Shrinkage on Tensile Bar, xflow (2) (5)	0.5 - 0.7	%	SABIC Method
ELECTRICAL			
Volume Resistivity	3.1E+16	Ohm-cm	ASTM D 257
Surface Resistivity	>1.E+15	Ohm	ASTM D 257
Dielectric Strength, in oil, 3.2 mm	17.9	kV/mm	ASTM D 149

(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.
(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

PLEASE CONTACT YOUR LOCAL SALES OFFICE FOR AVAILABILITY IN YOUR AREA.

NORYL™ Resin SE100X

Americas: COMMERCIAL

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
ELECTRICAL			
Relative Permittivity, 50/60 Hz	2.66	-	ASTM D 150
Relative Permittivity, 1 MHz	2.57	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.006	-	ASTM D 150
Dissipation Factor, 1 MHz	0.0026	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D 495
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	1	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94V-1 Flame Class Rating (3)	1.47	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	5.99	mm	UL 94
Oxygen Index (LOI)	32.5	%	ASTM D 2863
Radiant Panel Listing	YES	-	UL Tested
UV-light, water exposure/immersion	F1	-	UL 746C

(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.
(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

PLEASE CONTACT YOUR LOCAL SALES OFFICE FOR AVAILABILITY IN YOUR AREA.

NORYL™ Resin SE100X

Americas: COMMERCIAL

PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	75 - 80	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	250 - 275	°C
Nozzle Temperature	250 - 275	°C
Front - Zone 3 Temperature	240 - 275	°C
Middle - Zone 2 Temperature	225 - 270	°C
Rear - Zone 1 Temperature	215 - 265	°C
Mold Temperature	55 - 75	°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

(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.
(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

PLEASE CONTACT YOUR LOCAL SALES OFFICE FOR AVAILABILITY IN YOUR AREA.