

## Noryl\* Resin SE1

### Americas: LIMITED USE

SINGLE LOT DATA. PPE+PS. Improved productivity and reliability. Nonchlorinated, nonbrominated flame retardant.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	64	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	53	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	7.9	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	36.1	%	ASTM D 638
Tensile Modulus, 50 mm/min	2550	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	104	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2750	MPa	ASTM D 790
Hardness, Rockwell R	121	-	ASTM D 785
Tensile Stress, yield, 50 mm/min	61	MPa	ISO 527
Tensile Stress, break, 50 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	7.7	%	ISO 527
Tensile Strain, break, 50 mm/min	16.8	%	ISO 527
Tensile Modulus, 1 mm/min	2720	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	103	MPa	ISO 178
Flexural Modulus, 2 mm/min	2490	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, notched, 23°C	165	J/m	ASTM D 256
Izod Impact, notched, -30°C	90	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	28	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	15	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	147	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	128	°C	ASTM D 648

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume rate are measured on injection moulded samples. All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. 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) Own measurement according to UL.

Source, GMD, Last Update:07/16/2002

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>THERMAL</b>			
HDT, 1.82 MPa, 3.2mm, unannealed	113	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	132	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	121	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.08E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.12E-04	1/°C	ASTM E 831
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	130	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	115	°C	ISO 75/Ae
<b>PHYSICAL</b>			
Specific Gravity	1.07	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 300°C/5.0 kgf	35.9	g/10 min	ASTM D 1238
<b>FLAME CHARACTERISTICS</b>			
Radiant Panel Listing	RP100	-	UL Tested

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