NORYL™ RESIN EK002

DESCRIPTION

NORYL EK002 resin is a non-reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). This injection moldable grade exhibits good surface appearance, high ductility, and good impact resistance along with low moisture absorption, creep resistance, dimensional stability, and hydrolytic stability. NORYL EK002 resin is an excellent candidate for a variety of applications.

GENERAL INFORMATION	
Features	Hydrolytic Stability, Low Warpage, Dielectrics, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Dimensional stability
Fillers	Unreinforced
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding
Regional Availability	Global

TYPICAL PROPERTY VALUES

Revision 20260330

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yield, 50 mm/min	53	MPa	ISO 527
Tensile Stress, break, 50 mm/min	47	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	50	%	ISO 527
Tensile Modulus, 1 mm/min	2490	MPa	ISO 527
Flexural Modulus, 2 mm/min	2320	MPa	ISO 178
Flexural Stress, yield, 2 mm/min	87	MPa	ISO 178
Tensile Strain, brk, Type I, 50 mm/min	35	%	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	47	MPa	ASTM D638
Tensile Stress, yld, Type I, 50 mm/min	56	MPa	ASTM D638
Tensile Modulus, 5 mm/min	2300	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2460	MPa	ASTM D790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	90	MPa	ASTM D790
IMPACT			
Izod Impact, notched 80*10*4 +23°C	17	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 -30°C	139	kJ/m²	ISO 180/1U
Izod Impact, notched, 23°C	214	J/m	ASTM D256
Izod Impact, notched, -30°C	112	J/m	ASTM D256
Izod Impact, unnotched, 23°C	2150	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	1550	J/m	ASTM D4812
Izod Impact, unnotched 80*10*4 +23°C	214	kJ/m²	ISO 180/1U
THERMAL			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	115	°C	ISO 75/Af
HDT, 1.82 MPa, 3.2mm, unannealed	113	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 6.4 mm, unannealed	120	°C	ASTM D648
CTE			
-40°C to 40°C, flow	8.E-05	1/°C	ISO 11359-2
-40°C to 40°C, xflow	8.E-05	1/°C	ISO 11359-2
PHYSICAL			
Moisture Absorption (23°C / 50% RH)	0.03	%	ISO 62
Specific Gravity	1.06	-	ASTM D792
Melt Volume Rate			
280°C/5.0 kg	12	cm³/10 min	ISO 1133
250°C/10.0 kg	12	cm³/10 min	ISO 1133
Melt Flow Rate			
250°C/10.0 kgf	7	g/10 min	ASTM D1238
ELECTRICAL			
Dielectric Constant			
@ 2.5 GHz	2.59	-	SABIC method
@ 5 GHz	2.58	-	SABIC method
@ 10 GHz	2.58	-	SABIC method
Dissipation Factor			
@ 2.5 GHz	0.0024	-	SABIC method
@ 5 GHz	0.0024	-	SABIC method
@ 10 GHz	0.0024	-	SABIC method
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING			
Drying Temperature	105 – 110	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	280 – 310	°C	
Rear - Zone 1 Temperature	250 – 300	°C	
Middle - Zone 2 Temperature	260 – 305	°C	
Front - Zone 3 Temperature	270 – 310	°C	
Nozzle Temperature	280 – 310	°C	
Mold Temperature	75 – 105	°C	
Back Pressure	0.3 – 0.7	MPa	
Shot to Cylinder Size	30 – 70	%	