

NORYL™ RESIN CN1134

REGION ASIA

DESCRIPTION

NORYL CN1134 resin is a 20% mineral and glass fiber reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). This high modulus, injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of V1 at 1.5mm. NORYL CN1134 resin exhibits good dimensional stability, low moisture absorption, and high rigidity. It is an excellent candidate for printer chassis and electric vehicle battery (EV) applications.

GENERAL INFORMATION	
Features	Flame Retardant, Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Non Cl/Br flame retardant, Non halogenated flame retardant, Dimensional stability, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber, Mineral
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive EV Batteries, Automotive Under the Hood
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20241016

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yield	98	MPa	SABIC - Japan Method
Tensile Strain, break	7	%	SABIC - Japan Method
Flexural Stress	137	MPa	ASTM D790
Flexural Modulus	5880	MPa	ASTM D790
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	68	J/m	ASTM D256
THERMAL ⁽¹⁾			
HDT, 1.82 MPa, 6.4 mm, unannealed	106	°C	ASTM D648
CTE, -30°C to 30°C	0.000025 – 0.000035	1 / °C	TMA
Relative Temp Index, Elec ⁽²⁾	65	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	65	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	65	°C	UL 746B
PHYSICAL ⁽¹⁾			
Specific Gravity	1.23	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.07	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm ⁽³⁾	0.25 – 0.35	%	SABIC method
Melt Flow Rate, 300°C/2.16 kgf	22.1	g/10 min	ASTM D1238
FLAME CHARACTERISTICS ⁽²⁾			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Yellow Card Link	<u>E207780-228541</u>	-	-
UL Recognized, 94V-1 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	80 – 100	°C	
Drying Time	2 – 4	Hrs	
Melt Temperature	270 – 300	°C	
Nozzle Temperature	280 – 300	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	70 – 90	°C	
Back Pressure	0.5 – 1.2	MPa	
Screw Speed	40 – 80	rpm	

- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses, colors and regions. For details, please see the UL Yellow Card.
- (3) 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.
- (4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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