

NORYL™ RESIN HFM3015P

REGION ASIA

DESCRIPTION

NORYL HFM3015P resin is a 30% glass fiber and mineral reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). This injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of V1 at 1.5mm. NORYL HFM3015P resin exhibits exceptional dimensional stability, high stiffness and strength, strong electrical performance, very low moisture absorption, and hydrolytic stability. This material is an excellent candidate for internal structural parts such as chassis.

GENERAL INFORMATION	
Features	Flame Retardant, Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Aesthetics/Visual effects, 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
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yield	98	MPa	SABIC - Japan Method
Tensile Strain, break	4 – 6	%	SABIC - Japan Method
Flexural Stress	137	MPa	ASTM D790
Flexural Modulus	7640	MPa	ASTM D790
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	58	J/m	ASTM D256
THERMAL ⁽¹⁾			
HDT, 1.82 MPa, 6.4 mm, unannealed	110	°C	ASTM D648
CTE, -30°C to 30°C	0.000025 – 0.000035	1/°C	TMA
PHYSICAL ⁽¹⁾			
Specific Gravity	1.32	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.06	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm ⁽²⁾	0.25 – 0.3	%	SABIC method
Melt Flow Rate, 300°C/5.0 kgf	48.3	g/10 min	ASTM D1238
INJECTION MOLDING ⁽³⁾			
Drying Temperature	80 – 90	°C	
Drying Time	2 – 4	Hrs	
Melt Temperature	260 – 300	°C	
Nozzle Temperature	260 – 300	°C	
Front - Zone 3 Temperature	260 – 300	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Middle - Zone 2 Temperature	240 – 280	°C	
Rear - Zone 1 Temperature	230 – 260	°C	
Mold Temperature	60 – 90	°C	
Back Pressure	0.5 – 1.2	MPa	
Screw Speed	40 – 60	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) 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.
- (3) 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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