

# NORYL™ RESIN HM3020H

REGION ASIA

## DESCRIPTION

NORYL HM3020H resin is a 30% glass fiber and mineral reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). This high flow, injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame ratings of 5VB and V1. NORYL HM3020H resin exhibits good dimensional stability, Low warpage, and low moisture absorption. It is an excellent candidate for printer chassis and components.

GENERAL INFORMATION	
Features	Flame Retardant, High Flow, 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
Consumer	Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, yield	115	MPa	SABIC - Japan Method
Tensile Strain, break	4 – 6	%	SABIC - Japan Method
Flexural Stress	147	MPa	ASTM D790
Flexural Modulus	7940	MPa	ASTM D790
Hardness, Rockwell M	88	-	ASTM D785
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, notched, 23°C	58	J/m	ASTM D256
<b>THERMAL <sup>(1)</sup></b>			
HDT, 1.82 MPa, 6.4 mm, unannealed	125	°C	ASTM D648
CTE, -30°C to 30°C	0.000024 – 0.000034	1/°C	TMA
<b>PHYSICAL <sup>(1)</sup></b>			
Specific Gravity	1.33	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.06	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm <sup>(2)</sup>	0.25 – 0.3	%	SABIC method
Melt Flow Rate, 300°C/2.16 kgf	17.7	g/10 min	ASTM D1238
<b>ELECTRICAL <sup>(1)</sup></b>			
Surface Resistivity	1.E+16	Ω	ASTM D257
<b>INJECTION MOLDING <sup>(3)</sup></b>			
Drying Temperature	80 – 100	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Time	2 – 4	Hrs	
Melt Temperature	275 – 305	°C	
Nozzle Temperature	275 – 305	°C	
Front - Zone 3 Temperature	270 – 290	°C	
Middle - Zone 2 Temperature	260 – 280	°C	
Rear - Zone 1 Temperature	250 – 270	°C	
Mold Temperature	80 – 100	°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.

## ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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