NORYL™ RESIN HM4025H

REGION ASIA

DESCRIPTION

NORYL HM4025H resin is a 40% glass 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 HM4025H resin exhibits good dimensional stability, Low warpage, and low moisture absorption. It is an excellent candidate for printer chassis and other consumer electronic 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
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 20241016

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield	116	MPa	SABIC - Japan Method
Tensile Strain, break	4 – 6	%	SABIC - Japan Method
Flexural Stress	154	MPa	ASTM D790
Flexural Modulus	10290	MPa	ASTM D790
Hardness, Rockwell M	90	-	ASTM D785
IMPACT [1]			
Izod Impact, notched, 23°C	68	J/m	ASTM D256
THERMAL [1]			
HDT, 1.82 MPa, 6.4 mm, unannealed	125	°C	ASTM D648
CTE, -30°C to 30°C	0.000021 – 0.000033	1/°C	TMA
PHYSICAL [1]			
Specific Gravity	1.44	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.06	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm [2]	0.15 – 0.25	%	SABIC method
Melt Flow Rate, 300°C/2.16 kgf	15.4	g/10 min	ASTM D1238
ELECTRICAL [1]			
Surface Resistivity	1.E+16	Ω	ASTM D257
FLAME CHARACTERISTICS			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Yellow Card Link	E207780-228551	-	-
INJECTION MOLDING [3]			
Drying Temperature	105 – 110	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	295 – 315	°C	
Front - Zone 3 Temperature	280 – 315	°C	
Middle - Zone 2 Temperature	270 – 310	°C	
Rear - Zone 1 Temperature	260 – 305	°C	
Mold Temperature	75 – 105	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 70	%	

(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.

DISCLAIMER