NORYL™ RESIN WM300G

DESCRIPTION

NORYL WM300G resin is a non-reinforced impact modified blend of Polyphenylene ether (PPE) + polystyrene (PS). NORYL WM300G resin exhibits good surface appearance, high ductility, low moisture absorption, dimensional and hydrolytic stability. Due to the use of special impact modification NORYL WM300G resin has improved processing stability preventing potential creation of restricted substances upon processing. NORYL WM300G resin is an excellent candidate for a variety of water management applications such as valves, filtration components, and water meter internals. NORYL WM300G resin can be used for injection molding as well as extrusion (e.g. pipe, profile). NORYL WM300G resin is food contact compliant* and global drink water certification is pending.**

*Restrictions may apply in the case of applications involving fatty foods. Please review the food contact declaration for details.
** Potable water listing is color dependent

GENERAL INFORMATION	
Features	Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Corrosivity, Low Moisture Absorption, Low Specific Gravity, Food contact, Potable water safe, Dimensional stability, High stiffness/Strength, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Water Management
Hygiene and Healthcare	Personal and Professional Hygiene

TYPICAL PROPERTY VALUES

Revision 20240827

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	65	MPa	ISO 527
Tensile Stress, break, 50 mm/min	52	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.5	%	ISO 527
Flexural Strength, 2 mm/min	100	MPa	ISO 178
Flexural Modulus, 2 mm/min	2500	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	18	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 0°C	12	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	20	kJ/m²	ISO 179/1eA
Charpy 0°C, V-notch Edgew 80*10*4 sp=62mm	14	kJ/m²	ISO 179/1eA
THERMAL [1]			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	147	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/120	155	°C	ISO 306
PHYSICAL [1]			
Density	1.06	g/cm³	ISO 1183
Melt Volume Rate, MVR at 300°C/5.0 kg	15	cm³/10 min	ISO 1133

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, flow	0.8 – 1	%	SABIC method
Mold Shrinkage, xflow	0.8 – 1	%	SABIC method
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Water Absorption, (23°C/saturated)	0.23	%	ISO 62-1
INJECTION MOLDING [2]			
Drying Temperature	100 – 120	°C	
Drying Time	2 – 3	Hrs	
Melt Temperature	280 – 330	°C	
Rear - Zone 1 Temperature	240 – 290	°C	
Middle - Zone 2 Temperature	260 – 310	°C	
Front - Zone 3 Temperature	280 – 330	°C	
Nozzle Temperature	260 – 330	°C	
Mold Temperature	80 – 120	°C	
Hopper Temperature	60 – 80	°C	
PROFILE EXTRUSION			
Drying Temperature	100 – 120	°C	
Drying Time	2 – 3	Hrs	
Melt Temperature	220 – 285	°C	
Barrel - Zone 1 Temperature	220 – 285	°C	
Barrel - Zone 2 Temperature	220 – 285	°C	
Barrel - Zone 3 Temperature	220 – 285	°C	
Barrel - Zone 4 Temperature	220 – 285	°C	
Hopper Temperature	60 – 80	°C	
Adapter Temperature	220 – 285	°C	
Die Temperature	220 – 285	°C	
Calibrator Temperature	30 – 60	°C	
Water Bath Temperature	30 – 50	°C	

(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) 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