

NORYL™ RESIN 7310

REGION EUROPE

DESCRIPTION

PPE+PS blend. Unfilled. UL94 HB rated. Low water absorption. Hydrolytic stability. Dimensional stability. Suitable for fluid engineering applications: valve components, water pump housings, etc. This grade will no longer be supported with biocompatibility information and should not be used for medical applications which require biocompatibility. Alternative grade HN731A.

TYPICAL PROPERTY VALUES

Revision 20170913

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	65	mg/1000cy	SABIC method
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	30	%	ISO 527
Tensile Modulus, 1 mm/min	2300	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	75	MPa	ISO 178
Flexural Modulus, 2 mm/min	2200	MPa	ISO 178
Hardness, H358/30	100	MPa	ISO 2039-1
IMPACT			
Izod Impact, notched 80*10*4 +23°C	15	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	5	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	15	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	5	kJ/m ²	ISO 179/1eA
THERMAL			
Thermal Conductivity	0.22	W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	7.E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test, approximate maximum	133	°C	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	145	°C	ISO 306
Vicat Softening Temp, Rate B/50	135	°C	ISO 306
Vicat Softening Temp, Rate B/120	140	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	130	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	115	°C	ISO 75/Ae
Relative Temp Index, Elec	105	°C	UL 746B

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Temp Index, Mech w/impact	90	°C	UL 746B
Relative Temp Index, Mech w/o impact	105	°C	UL 746B
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow (2) (5)	0.5 – 0.7	%	SABIC method
Density	1.06	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.23	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	8	cm ³ /10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 3.2 mm	19	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.6	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.002	-	IEC 60250
Dissipation Factor, 1 MHz	0.001	-	IEC 60250
Comparative Tracking Index	175	V	IEC 60112
Relative Permittivity, 50/60 Hz	2.7	-	IEC 60250
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.5	mm	UL 94
UL Recognized, 94HB Flame Class Rating 2nd value (3)	3	mm	UL 94
Glow Wire Flammability Index 750°C, passes at	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	22	%	ISO 4589
INJECTION MOLDING			
Drying Temperature	100 – 120	°C	
Drying Time	2 – 3	hrs	
Melt Temperature	280 – 300	°C	
Nozzle Temperature	260 – 280	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	260 – 280	°C	
Rear - Zone 1 Temperature	240 – 260	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	80 – 120	°C	
PROFILE EXTRUSION			
Drying Temperature	100 – 110	°C	
Drying Time	2 – 3	hrs	
Melt Temperature	250 – 270	°C	
Barrel - Zone 1 Temperature	220 – 240	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Barrel - Zone 2 Temperature	230 – 250	°C	
Barrel - Zone 3 Temperature	250 – 270	°C	
Barrel - Zone 4 Temperature	250 – 270	°C	
Hopper Temperature	40 – 60	°C	
Adapter Temperature	250 – 270	°C	
Die Temperature	250 – 270	°C	
Calibrator Temperature	60 – 80	°C	

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