

NORYLTM RESIN NH5110E

REGION EUROPE

DESCRIPTION

NORYL NH5110E is a flame retardant, non halogenated, impact modified extrusion grade. Developed for low beard-growth, with a Vicat B/120 of 138 Deg C, according to ISO 306 and a UL-94 rating of V1@ 1.5mm, it would be suitable for electrical conduit and cable management applications.

TYPICAL PROPERTY VALUES

Revision 20181012

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yield, 50 mm/min	64	MPa	ISO 527
Tensile Stress, break, 50 mm/min	52	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	18	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	98	MPa	ISO 178
Flexural Modulus, 2 mm/min	2400	MPa	ISO 178
IMPACT			
Izod Impact, notched 80*10*4 +23°C	24	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	9	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	26	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	11	kJ/m ²	ISO 179/1eA
THERMAL			
CTE, 23°C to 80°C, flow	8.2E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, xflow	9.4E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, flow	8.2E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	9.4E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	149	°C	ISO 306
Vicat Softening Temp, Rate B/120	138	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	129	°C	ISO 75/Be
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	114	°C	ISO 75/Af
Relative Temp Index, Elec	65	°C	UL 746B
Relative Temp Index, Mech w/impact	65	°C	UL 746B
Relative Temp Index, Mech w/o impact	65	°C	UL 746B
PHYSICAL			
Density	1.09	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.15	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	9	cm ³ /10 min	ISO 1133
ELECTRICAL			
Relative Permittivity, 1 MHz	2.6	-	ASTM D 150
Dissipation Factor, 1 MHz	0.0017	-	ASTM D 150
Dielectric Strength, shorttime, 1.0mm	46	kV/mm	IEC 60243-1

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Permittivity, 1 MHz	2.6	-	IEC 60250
Dissipation Factor, 1 MHz	0.0017	-	IEC 60250
FLAME CHARACTERISTICS			
UL Recognized, 94V-1 Flame Class Rating	1.5	mm	UL 94
Oxygen Index (LOI)	34	%	ISO 4589
PROFILE EXTRUSION			
Drying Temperature	80 – 90	°C	
Drying Time	2 – 3	hrs	
Melt Temperature	240 – 260	°C	
Barrel - Zone 1 Temperature	220 – 240	°C	
Barrel - Zone 2 Temperature	230 – 250	°C	
Barrel - Zone 3 Temperature	240 – 260	°C	
Barrel - Zone 4 Temperature	240 – 260	°C	
Hopper Temperature	40 – 60	°C	
Adapter Temperature	240 – 260	°C	
Die Temperature	240 – 260	°C	
Calibrator Temperature	50 – 70	°C	

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