

# NORYL™ RESIN V01550

REGION EUROPE

## DESCRIPTION

NORYL V01550 is a 15 % short glass fibre reinforced, flame retardant material with a HDT/A of 130C according ISO 75. NORYL V01550 is V0 at 0.75 mm according UL94 and is halogen free according VDE/DIN 472 part 815. NORYL V01550 is designed for electronic and electrical applications.

## TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Taber Abrasion, CS-17, 1 kg	50	mg/1000cy	SABIC method
Tensile Stress, break, 5 mm/min	50	MPa	ISO 527
Tensile Strain, break, 5 mm/min	5	%	ISO 527
Tensile Modulus, 1 mm/min	2700	MPa	ISO 527
Flexural Stress, break, 2 mm/min	100	MPa	ISO 178
Flexural Modulus, 2 mm/min	3000	MPa	ISO 178
Hardness, H358/30	130	MPa	ISO 2039-1
<b>IMPACT</b>			
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	45	kJ/m <sup>2</sup>	ISO 180/1U
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	45	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	45	kJ/m <sup>2</sup>	ISO 179/1eU
<b>THERMAL</b>			
Thermal Conductivity	0.28	W/m.°C	ISO 8302
CTE, 23°C to 80°C, flow	4.E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	6.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Ball Pressure Test, approximate maximum	145	°C	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	160	°C	ISO 306
Vicat Softening Temp, Rate B/50	150	°C	ISO 306
Vicat Softening Temp, Rate B/120	155	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	145	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	135	°C	ISO 75/Ae
Relative Temp Index, Elec	50	°C	UL 746B
Relative Temp Index, Mech w/impact	50	°C	UL 746B
Relative Temp Index, Mech w/o impact	50	°C	UL 746B
<b>PHYSICAL</b>			
Mold Shrinkage on Tensile Bar, flow	0.3 – 0.5	%	SABIC method
Density	1.25	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.5	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	7	cm <sup>3</sup> /10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/5.0 kg	10	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Volume Resistivity	1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 0.8 mm	33	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	26	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	16	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	3	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.005	-	IEC 60250
Dissipation Factor, 1 MHz	0.003	-	IEC 60250
Comparative Tracking Index	250	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.1	-	IEC 60250
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94V-0 Flame Class Rating	0.75	mm	UL 94
UL Recognized, 94-5VA Rating	3	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	32	%	ISO 4589
<b>INJECTION MOLDING</b>			
Drying Temperature	110 – 120	°C	
Drying Time	2 – 3	hrs	
Melt Temperature	300 – 320	°C	
Nozzle Temperature	280 – 300	°C	
Front - Zone 3 Temperature	300 – 320	°C	
Middle - Zone 2 Temperature	280 – 300	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Hopper Temperature	80 – 100	°C	
Mold Temperature	100 – 130	°C	

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