

NORYLTM RESIN GFN 1

REGION EUROPE

DESCRIPTION

NORYL GFN1 resin is a 10% glass fiber reinforced blend of polyphenylene ether (PPE) +polystyrene (PS). This general-purpose injection moldable grade exhibits very low moisture absorption, high strength, hydrolytic stability, Low warpage, low specific gravity, and dimensional stability. NORYL GFN1 carries a UL746C outdoor suitability rating of F1 and is an excellent candidate for a variety of indoor and outdoor applications including construction, electrical components + displays, lawn and garden equipment. *See NORYL GFN1F resin for FDA food compliant / NSF version.

GENERAL INFORMATION	
Features	Flame Retardant, Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Non CI/Br flame retardant, Non halogenated flame retardant, Dimensional stability, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Commercial Appliance
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL (1)			
Taber Abrasion, CS-17, 1 kg	50	mg/1000cy	SABIC method
Tensile Stress, yield, 5 mm/min	50	MPa	ISO 527
Tensile Stress, break, 5 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3	%	ISO 527
Tensile Strain, break, 5 mm/min	4	%	ISO 527
Tensile Modulus, 1 mm/min	4000	MPa	ISO 527
Flexural Stress, break, 2 mm/min	95	MPa	ISO 178
Flexural Modulus, 2 mm/min	3500	MPa	ISO 178
Ball Indentation Hardness, H358/30	100	MPa	ISO 2039-1
IMPACT (1)			
Izod Impact, unnotched 80*10*4 +23°C	20	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	20	kJ/m²	ISO 180/1U
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	25	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	25	kJ/m²	ISO 179/1eU
THERMAL (1)			
Thermal Conductivity	0.24	W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	5.E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.E-05	1/°C	ISO 11359-2



RNOPERTIES TYPICAL VALUES UNITS TEST METHODS Ball Pressure Test, 125°C+2°C PASSES - ICC 60895-10-2 Vicat Softening Temp, Rate A/30 135 °C 80 306 Vicat Softening Temp, Rate B/120 130 °C 80 306 MIDT Rep. 0.45MPa Edgew 120°10°4 sp=100mm 130 °C 80 306 HDT JRG, 0.45MPa Edgew 120°10°4 sp=100mm 135 °C 80 306 PHDT JRG, 1.5M Pa Edgew 120°10°4 sp=100mm 135 °C 80 306 PHDT JRG, 1.5M Pa Edgew 120°10°4 sp=100mm 130 °C 80 50 Ec PHDT JRG, 1.5M Pa Edgew 120°10°4 sp=100mm 130 °C 80 SMC PHDT JRG, 1.5M Pa Edgew 120°10°4 sp=100mm 1.7 What Passer Specific JRG Park 100 JRG				
Vicat Softening Temp, Rate Al, 50 95 96	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B J SO 25 Co SO 306 Vicat Softening Temp, Rate B J 120 30 °C SO 306 HDT JRe, 0.45MPa Edgew 120*10*4 sp=100mm 15 °C SO 75/Re PHDT JRA, 1.84 MPa Edgew 120*10*4 sp=100mm 11 °C SO 75/Re PHDT JRA, 1.84 MPa Edgew 120*10*4 sp=100mm 15 °C SO 75/Re PHDT JRA, 1.84 MPa Edgew 120*10*4 sp=100mm 13 °C SO 75/Re PHDT JRA, 1.84 MPa Edgew 120*10*4 sp=100mm 13 SO 75/Re PHDT JRA, 1.84 MPa Edgew 120*10*4 sp=100mm 3 SO 75/Re Phot Shrikage on Tensile Bar, flow 20 3 SO 75/Re Bestive Promitive Shrikage on Tensile Bar, flow 20 2 SO 62 Mater Absorption (23*C/ 50xRH) 2 SO 62 Mel Volume Rate, MVR at 280*C/5.0 kg 1 SO 62 Belt Catter CLC.** ************************************	Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Victa Softenin Temp. Rate Bj 120 130 °C 130 (180 (180 (180 (180 (180 (180 (180 (18	Vicat Softening Temp, Rate A/50	135	°C	ISO 306
HOT/Be, L98MPB Edgew 120*10*4 sp=100mm 130 °C 150 / 58 / 58 / 58 / 58 / 58 / 58 / 58 /	Vicat Softening Temp, Rate B/50	125	°C	ISO 306
HDT/Ae.1.8 MPa Edgew 120*10*4 sp=100mm 15 °C Not S7/Ae PHYSICAL. ⁽¹⁾ V SABIC method PHYSICAL. ⁽¹⁾ SABIC method ABIC method Bod Shrinkage on Tensile Bar, flow ⁽²⁾ 0.3 – 0.5 % ABIC method Wester Absorption, (23°C/saturated) 0.2 % 50 ∈ 21 Molt Volume Rate, MYR at 280°C/5.0 kg H) 0.6 % 100 ∈ 2 Melt Volume Rate, MYR at 280°C/5.0 kg 1.6 ±15 0.cm 1EC 60093 Surface Resistivity 1.6 ±15 0.cm 1EC 60093 Surface Resistivity, RAD 1.6 ±15 0.cm 1EC 60093 Disease Frentitivity, 1 MHz 2.8 2.0 1EC 60093 Relative Permittivity, 50/60 Hz 0.0005 2.0 1EC 60250 Relative Permittivity, 50/60 Hz 2.8 2.0 1EC 60250 Relative Permittivity, 50/60 Hz 2.3 2.0 1EC 60250 Relative Permittivity, 50/60 Hz 2.3 2.0 1EC 60250 Relative Permittivity, 50/60 Hz 2.5 2.0 1EC 60250 UN-W	Vicat Softening Temp, Rate B/120	130	°C	ISO 306
PMSICAL (**) Mold Shrinkage on Tensile Bar, flow (**) 0.3 – 0.5 % (**) SABIC method Density 1.77 (**) (**) 1.91 Bag Water Absorption (23°C/ soutrated) 0.6 % 1.00 Ca Molisture Absorption (23°C/ 50% RH) 0.6 % 1.00 Ca Molisture Absorption (23°C/ 50% RH) 0.6 % 1.00 Ca Molisture Absorption (23°C/ 50% RH) 0.6 % 1.00 Ca Molisture Absorption (23°C/ 50% RH) 0.6 % 1.00 Ca Molisture Absorption (23°C/ 50% RH) 0.06 % 1.00 Ca Molisture Absorption (24°C/ 50% RH) 1.00 Ca 1.00 Ca 1.00 Ca Molisture Absorption (24°C/ 50% RH) 1.00 Ca	HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	130	°C	ISO 75/Be
Mold Shrinkage on Tensile Bar, flow IP 3.9.08 % MERC Method Desity 1.72 9/m³ 50.183 Water Absorption, (23°C/ shurated) 0.2 % 50.62-1 Molsture Absorption (23°C/ shurated) 0.06 % 50.62-1 Melt Volume Rate, MVR at 280°C/5.0 kg 8 on³/l min 50.133 EUCTRICAL (**) Unima Rate, MVR at 280°C/5.0 kg 1.8+15 0.0m EC 60093 Surface Resistivity, ROA 1.8+15 0.0m 1.0m	HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	115	°C	ISO 75/Ae
Desiry 1/17 9/m³ 100 18 Water Absorption, (23°C / sturated) 0.2 3 106 22 Molsture Absorption (23°C / storRH) 0.0 2 100 22 Melt Volume Rate, MVR at 280°C / storRH) 8 m³/m³ min 0 ECETRICAL III V V 100 22 Buller Resistivity, ROA 1.61 5 0 100 20 Dielectric Strength, in oil, 3.2 mm 1.61 5 0 100 20 Belative Pemititivity, 1 MHz 2 8 100 20 100 20 Belative Pemititivity, 50 fot Hz 0.005 2 100 20 100 20 Relative Pemititivity, 50 fot Hz 2 100 20	PHYSICAL (1)			
Desiry 1/17 9/m³ 100 18 Water Absorption, (23°C / sturated) 0.2 3 106 22 Molsture Absorption (23°C / storRH) 0.0 2 100 22 Melt Volume Rate, MVR at 280°C / storRH) 8 m³/m³ min 0 ECETRICAL III V V 100 22 Buller Resistivity, ROA 1.61 5 0 100 20 Dielectric Strength, in oil, 3.2 mm 1.61 5 0 100 20 Belative Pemititivity, 1 MHz 2 8 100 20 100 20 Belative Pemititivity, 50 fot Hz 0.005 2 100 20 100 20 Relative Pemititivity, 50 fot Hz 2 100 20	Mold Shrinkage on Tensile Bar, flow (2)	0.3 – 0.5	%	SABIC method
Molsture Absorption (23°C / 50% RH) 0.06 % 150 cc 150 cc </th <th></th> <th>1.17</th> <th>g/cm³</th> <th>ISO 1183</th>		1.17	g/cm³	ISO 1183
Melt Volume Rate, MVR at 280°C/5.0 kg 8 m²/10 min SO 1133 ELECTRICAL ⁽¹⁾ Volume Resistivity 1.E+15 Ω.cm EC 60093 Surface Resistivity, ROA 21.E+15 Q.cm EC 60093 Dielectric Strength, in oil, 3.2 mm 18 V/m EC 6024-1 Relative Permittivity, 1 MHz 0.0005 - EC 60250 Dissipation Factor, 50/60 Mz 0.001 - EC 60250 Relative Permittivity, 50/60 Mz 2.8 - EC 60250 Both Wire Ignition (HWI), PLC O 2.8 - - EC 60250 HOLW Card Link F45329-236754 -	Water Absorption, (23°C/saturated)	0.2	%	ISO 62-1
BECETRICAL ¹⁰ Volume Resistivity, POA 1.E+15 Ω.cm IEC 60093 Surface Resistivity, ROA >1.E+15 Q IEC 60093 Dielectric Strength, in oil, 3.2 mm 18 W/m IEC 60243-1 Relative Permittivity, 1 MHz 2.8 IEC 60250 Dissipation Factor, 506 Mt2 0.0005 IEC 60250 Belative Permittivity, 50/60 Mt2 3.0 IEC 60250 HotWire Ignition (HWI), PLC 0 3.2 mm U. 746A Belative Permittivity, 50/60 Mt2 3.2 mm U. 94 UV Flow Card Link 453.92-236754 UV Flow Card Link 5.5 mm U. 94 UV Suppen Index (LOI) 2.2 <th>Moisture Absorption (23°C / 50% RH)</th> <th>0.06</th> <th>%</th> <th>ISO 62</th>	Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Volume Resistivity, ROA1.E+15α.cmIE 60093Surface Resistivity, ROA>1.E+15αIE 60093Dielectric Strength, in oil, 3.2 mm18W/mmIE 60243-1Relative Permittivity, 1 MHz2.8IE 60250Dissipation Factor, 506 Hz0.0005IE 60250Dissipation Factor, 1 MHz0.001IE 60250Belative Permittivity, 50 fo Hz3.2mmHot-Wire Ipition (HWI), PLC 03.2mmU.Y ellow Card Link£53.92.236754U. Recognized, 94HB Flame Class Rating3.2mmBow Wire Flammability Index 750°C, passes at 403.2mmOyagen Index (LOI)2.2mmDrying Temperature2.3Bowling Time2.3Melt Temperature2.0Mozele Temperature60-280Font- Zone 3 Temperature60-280Mozele Temperature20-280Mozele Temperature20-280Mozele Temperature20-280Mozele Temperature20-280Mozele Temperature20-280Mozele Temperature20-280Mozele Temperature20-280	Melt Volume Rate, MVR at 280°C/5.0 kg	8	cm³/10 min	ISO 1133
Surface Resistivity, ROA >1.E+15 © Ice 60093 Dielectric Strength, in oil, 3.2 mm 18 kW/mm Ice 60243-1 Relative Permittivity, 1 MHz 2.8 - Ice 60250 Dissipation Factor, 50/60 Hz 0.0005 - Ice 60250 Relative Permittivity, 50/60 Hz 2.8 - Ice 60250 Relative Permittivity, 50/60 Hz 2.8 - Ice 60250 Hot-Wire Ignition (HWI), PLC 0 2.8 - Ice 60250 Hot-Wire Ignition (HWI), PLC 0 2.3 mm U.746A U. Vedor, CHARCETERISTICS 10 - - - - U. Recognized, 94HB Flame Class Rating 2.1 mm U.94 - Clow Wire Flammability Index 750°C, passes at 60 2.2 mm U.94 - Oxygen Index (LOI) 50 1.5 mm U.94 - Diving Time 2.3 Hz - - - MECTION MOLDING 5 2.2 - - - - - - - <th>ELECTRICAL (1)</th> <th></th> <th></th> <th></th>	ELECTRICAL (1)			
Dielectric Strength, in oil, 3.2 mm 18 W/mm IC 60243-1 Relative Permittivity, 1 MHz 2.8 - IC 60250 Dissipation Factor, 50/60 Hz 0.0005 - IC 60250 Belative Permittivity, 50/60 Hz 0.001 - IC 60250 Bot-Wire Ignition (HWI), PLC 0 2.8 - IC 60250 Bot-Wire Ignition (HWI), PLC 0 3 mm U. 746A ***********************************	Volume Resistivity	1.E+15	Ω.cm	IEC 60093
Relative Permittivity, 1 MHz Dissipation Factor, 50/60 Hz Ox0005 Ox005 Ox007 O	Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dissipation Factor, 50/60 Hz0.0005- C 60250Dissipation Factor, 1 MHz0.001- C 60250Relative Permittivity, 50/60 Hz2.8- C 60250Hot-Wire Ignition (HWI), PLC 0- 32- mmU 746AFLAME CHARACTERISTICS (3)UL Yellow Card Link£45329-236754- C- CUL Recognized, 94HB Flame Class Rating1.5mmU 94Glow Wire Flammability Index 750°C, passes at (4)3.2mmE 60695-2-12Dying Temperature (UI)2.3- mmE 60695-2-12Dying Temperature (Prime Tamperature)100 − 120°C- T 14Melt Temperature2.9- M 15- T 15Mozzle Temperature2.02.0°CTont-Zone 3 Temperature2.02.0°CMiddle - Zone 2 Temperature2.02.0°CMiddle - Zone 2 Temperature2.02.0°CRear-Zone 1 Temperature2.02.0°CRear-Zone 1 Temperature2.02.0°CHopper	Dielectric Strength, in oil, 3.2 mm	18	kV/mm	IEC 60243-1
Dissipation Factor, 1 MHz.0001.001.001.000.000.000Relative Permittivity, 50/60 Hz2.8.000.000.000Hot-Wire Ignition (HWI), PLC 023.000.000.000FAME CHARACTERISTICS (3)UL Yellow Card Link£45329-236754.000.000.000UL Recognized, 94HB Flame Class Rating2.15.000.000.000.000Chow Wire Flammability Index 750°C, passes at (4).200.000.000.000Divigor Index (LOI).000.000.000.000Drying Temperature.000.000.000.000Porjing Time.000.000.000.000.000Melt Temperature.000.000.000.000.000Poszel Temperature.000.000.000.000.000Modile-Zone 3 Temperature.000.000.000.000.000Middle-Zone 2 Temperature.000.000.000.000.000Rear-Zone 1 Temperature.000.000.000.000.000Hopper Temperature.000.000.000.000.000Long Temperature.000.000.000.000Long Temperature.000.000.000.000Long Temperature.000.000.000.000Long Temperature.000.000.000.000Long Temperature.000.000.000.000	Relative Permittivity, 1 MHz	2.8	-	IEC 60250
Relative Permittivity, 50/60 Hz28-IEC 60250Hot-Wire Ignition (HWI), PLC 0≥3mmUZ 14AAFLAME CHARACTERISTICS ⁽³⁾ UL Yellow Card Link£45329-236754UL Recognized, 94HB Flame Class Rating≥1.5mmUE 94Clow Wire Flammability Index 750°C, passes at ⁽⁴⁾ 3.2mmIEC 60695-2·12Oxygen Index (LOI)26%150-120Drying Temperature100-120°C***Prying Time2-3Hrs***Melt Temperature280-300°C***Oxzzel Temperature260-280°C***Font - Zone 3 Temperature260-280°C***Middle - Zone 2 Temperature260-280°C***Middle - Zone 1 Temperature260-280°C***Bear - Zone 1 Temperature260-280°C***Bopper Temperature60-80°C***	Dissipation Factor, 50/60 Hz	0.0005	-	IEC 60250
Hot-Wire Ignition (HWI), PLC 0 ≥3 mm UL 746A FLAME CHARACTERISTICS (3) L45329-236754 - - - UL Yellow Card Link £45329-236754 - <th>Dissipation Factor, 1 MHz</th> <th>0.001</th> <th>-</th> <th>IEC 60250</th>	Dissipation Factor, 1 MHz	0.001	-	IEC 60250
FLAME CHARACTERISTICS (3) UL Yellow Card Link	Relative Permittivity, 50/60 Hz	2.8	-	IEC 60250
UL Yellow Card Link UL Recognized, 94HB Flame Class Rating \$1.5\$ \[\text{mom}\] \[\text{mom}\] \[\text{mom}\] \[\text{mom}\] \[\text{mom}\] \[\text{looy Mire Flammability Index 750°C, passes at \(^{4}\)}\) \[\text{2}\] \[\text{2}\] \[\text{dow}\] \[\text{mom}\] \[\text{looy Mire Flammability Index 750°C, passes at \(^{4}\)}\) \[\text{2}\] \[\text{2}\] \[\text{2}\] \[\text{looy Mire Flammability Index 750°C, passes at \(^{4}\)}\) \[\text{2}\] \[\text{2}\] \[\text{2}\] \[\text{3}\] \[\text{2}\] \[\text{3}\] \[\text{2}\] \[\text{3}\] \[\text{2}\] \[\text{3}\] \[\text{3}\] \[\text{2}\] \[\text{3}\] \[\text{3}\] \[\text{2}\] \[\text{3}\] \[\t	Hot-Wire Ignition (HWI), PLC 0	≥3	mm	UL 746A
UL Recognized, 94HB Flame Class Rating \$1.5 mm UL 94 Clow Wire Flammability Index 750°C, passes at (4) 3.2 mm IEC 60695-2-12 Oxygen Index (LOI) 26 % ISO 4589 INJECTION MOLDING (5) Drying Temperature 100 – 120 °C Drying Time 2-3 Melt Temperature 280 – 300 °C Nozzle Temperature 280 – 300 °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 Hopper Temperature 60 – 80 °C Hopper Temperature 80 – 80 °C	FLAME CHARACTERISTICS (3)			
Glow Wire Flammability Index 750°C, passes at (4) 3.2 mm IEC 60695-2·12 Oxygen Index (LOI) 26 % 80 4589 INJECTION MOLDING (5) Drying Temperature 100 − 120 °C Drying Time 2 − 3 Hrs Melt Temperature 280 − 300 °C Nozzle Temperature 260 − 280 °C Front - Zone 3 Temperature 260 − 280 °C Middle - Zone 2 Temperature 260 − 280 °C Rear - Zone 1 Temperature 240 − 260 °C Hopper Temperature 60 − 80 °C	UL Yellow Card Link	E45329-236754	-	
Oxygen Index (LOI)26%ISO 4589INJECTION MOLDING (5)Drying Temperature100 – 120°CDrying Time2 – 3HrsMelt Temperature280 – 300°CNozzle Temperature260 – 280°CFront - Zone 3 Temperature280 – 300°CMiddle - Zone 2 Temperature260 – 280°CRear - Zone 1 Temperature240 – 260°CHopper Temperature60 – 80°C	UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
Oxygen Index (LOI)26%ISO 4589INJECTION MOLDING (5)Drying Temperature100 – 120°CDrying Time2 – 3HrsMelt Temperature280 – 300°CNozzle Temperature260 – 280°CFront - Zone 3 Temperature280 – 300°CMiddle - Zone 2 Temperature260 – 280°CRear - Zone 1 Temperature240 – 260°CHopper Temperature60 – 80°C	Glow Wire Flammability Index 750°C, passes at (4)	3.2	mm	IEC 60695-2-12
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	Oxygen Index (LOI)	26	%	ISO 4589
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	INJECTION MOLDING (5)			
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	Drying Temperature	100 – 120	°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	Drying Time	2 – 3	Hrs	
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	Melt Temperature	280 – 300	°C	
Middle - Zone 2 Temperature 260 – 280 °C Rear - Zone 1 Temperature 240 – 260 °C Hopper Temperature 60 – 80 °C	Nozzle Temperature	260 – 280	°C	
Rear - Zone 1 Temperature 240 - 260 °C Hopper Temperature 60 - 80 °C	Front - Zone 3 Temperature	280 – 300	°C	
Hopper Temperature 60 − 80 °C	Middle - Zone 2 Temperature	260 – 280	°C	
The second secon	Rear - Zone 1 Temperature	240 – 260	°C	
Mold Temperature 90 120 °C	Hopper Temperature	60 – 80	°C	
word remperature 60 = 120	Mold Temperature	80 – 120	°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⁾ 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⁾ UL Ratings shown on the technical datasheet might not cover the full range of thicknesses, colors and regions. For details, please see the UL Yellow Card.

⁽⁴⁾ Value shown here is based on internal measurement.

⁽⁵⁾ 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.



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