

## LNPTM LUBRICOMPTM COMPOUND KCL34A

KCL-4034 D

## **DESCRIPTION**

LNP LUBRICOMP KCL34A compound is based on Acetal (POM) Homopolymer resin containing 15% PTFE, 20% carbon fiber. Added features of this grade include: Wear Resistant, Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Wear resistant, Carbon fiber filled, High stiffness/Strength
Fillers	Carbon Fiber, PTFE
Polymer Types	Acetal (POM) Homopolymer
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

## **TYPICAL PROPERTY VALUES**

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL (1)			
Tensile Stress, yield	87	MPa	ASTM D638
Tensile Stress, break	87	MPa	ASTM D638
Tensile Strain, yield	0.7	%	ASTM D638
Tensile Strain, break	0.7	%	ASTM D638
Tensile Modulus, 50 mm/min	17230	MPa	ASTM D638
Flexural Stress	110	MPa	ASTM D790
Flexural Modulus	13100	MPa	ASTM D790
Tensile Stress, yield	88	MPa	ISO 527
Tensile Stress, break	88	MPa	ISO 527
Tensile Strain, yield	0.7	%	ISO 527
Tensile Strain, break	0.7	%	ISO 527
Tensile Modulus, 1 mm/min	15510	MPa	ISO 527
Flexural Stress	117	MPa	ISO 178
Flexural Modulus	15000	MPa	ISO 178
IMPACT (1)			
Izod Impact, unnotched, 23°C	267	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	4	J	ASTM D3763
Multiaxial Impact	1	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	16	kJ/m²	ISO 180/1U



PROPERTIES         TYPICAL VALUES         UNITS         TEST METHODS           Izod Impact, notched 80°10'4 + 23°C         3         ki/m²         50 180/1A           THERMALI***         "         ASTM D648           HDT, 1,32 MPa, 3,2mm, unannealed         175         "C         ASTM D648           HDT, 1,32 MPa, 3,2mm, unannealed         171         "C         ASTM D648           CTE, 40°C to 40°C, flow         66605         1/°C         ASTM B831           CTE, 40°C to 40°C, flow         66605         1/°C         ASTM B831           CTE, 40°C to 40°C, flow         60605         1/°C         50 73/81           HDT/B, 0.45 MPa Flatw 80°10°4 sp=64mm         170         °C         50 73/81           HDT/B, 0.45 MPa Flatw 80°10°4 sp=64mm         170         °C         50 73/81           HDT/B, 0.45 MPa Flatw 80°10°4 sp=64mm         150         9cm²         ASTM D792           HDT/B, 0.45 MPa Flatw 80°10°4 sp=64mm         150         8         ASTM D792           Mold Shrinkage, flow, 24 hrs 80         3         9cm³         ASTM D792           Mold Shrinkage, flow, 24 hrs 80         13         3         STM D955           Mold Shrinkage, flow, 24 hrs 100         2         3         STM D970           Mold Shrinkage, f				
Hort O, 45 MPa J, 2 mm, unannealed         175         °C         ATM D648           HOT, 1,45 MPa, 3,2 mm, unannealed         171         °C         ASTM D648           HOT, 1,52 MPa, 3,2 mm, unannealed         171         °C         ASTM D648           CTE, 40°C to 40°C, folow         666 D5         17°C         ASTM E831           CTE, 40°C to 40°C, folow         666 D5         17°C         SO 11359-2           CTE, 40°C to 40°C, folow         660 D5         17°C         SO 11359-2           CTE, 40°C to 40°C, folow         17°C         SO 15 JB           CTE, 40°C to 40°C, folow         660 D5         17°C         SO 15 JB           CTE, 40°C to 40°C, folow         10         C         SO 75 JB           CTE, 40°C to 40°C, folow         600 D5         17°C         SO 1359-2           CTE, 40°C to 40°C, folow         600 D6         10°C         SO 75 JB           CTE, 40°C to 40°C, folow         600 D7         C         50°T JB           CTE, 40°C to 40°C, folow         600 D7         SO 75 JB         50°T JB           CTE, 40°C to 40°C, folow         50°T JB         50°T JB         50°T JB           CTE, 40°C to 40°C, folow         50°T JB         50°T JB         50°T JB         50°T JB           CHOSTAT	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT. 0.45 MPs. 3.2mm, unannealed         175         °C         ASTM D648           HDT. 1.82 MPs. 3.2mm, unannealed         171         °C         ASTM D648           CTE, 40°C to 40°C, flow         66E050         1°C         ASTM B31           CTE, 40°C to 40°C, flow         66E050         1°C         ASTM B31           CTE, 40°C to 40°C, flow         66E050         1°C         S0 1359-2           CTE, 40°C to 40°C, flow         66E050         1°C         S0 75/8           CTE, 40°C to 40°C, flow         66E050         1°C         S0 75/8           CTE, 40°C to 40°C, flow         66E050         1°C         S0 75/8           CTE, 40°C to 40°C, flow         66E050         1°C         S0 75/8           CTE, 40°C to 40°C, flow         66E050         1°C         S0 75/8           CTE, 40°C to 40°C, flow         60E050         1°C         S0 75/8           CTE, 40°C to 40°C, flow         50         S0 75/8         S0 75/8           CTE, 40°C to 40°C, flow         50         S0 75/8         S0 75/8           CTE, 40°C to 40°C, flow         50         S0 75/8         S0 75/8           CHISTAL TO 40°C to 40°C, flow         50         S0 75/8         S0 75/8           CHISTAL TO 40°C to 40°C, flow         5	Izod Impact, notched 80*10*4 +23°C	3	kJ/m²	ISO 180/1A
IDD. 1.82 MPa. 3.2mm, unannealed         171         °C         ASTM D648           CTE. 40°C to 40°C, flow         270 605         1°C         ASTM E831           CTE. 40°C to 40°C, flow         66605         1°C         ASTM E831           CTE. 40°C to 40°C, flow         501359-2         CE           CTE, 40°C to 40°C, flow         60605         1°C         S01339-2           HDT JB, LOS MP Flatw 80°10°4 sp=64mm         175         °C         S075 JB           HDT JB, LOS MP Flatw 80°10°4 sp=64mm         175         °C         S075 JB           HDT JB, LOS MP Flatw 80°10°4 sp=64mm         175         °C         S075 JB           HDT JB, LOS MP Flatw 80°10°4 sp=64mm         175         °C         S075 JB           HDT JB, LOS MP Flatw 80°10°4 sp=64mm         175         °C         S075 JB           BOLD JB, LOS MPS Flatw 80°10°4 sp=64mm         175         °C         S075 JB           BOLD JB, LOS MPS Flatw 80°10°4 sp=64mm         15         S0	THERMAL (1)			
CTE, 40°C to 40°C, flow         2.706.05         1/°C         ASTM E831           CTE, 40°C to 40°C, flow         6.666.05         1/°C         ASTM E831           CTE, 40°C to 40°C, flow         2.706.05         1/°C         SO 11359-2           CTE, 40°C to 40°C, flow         6.606.05         1/°C         SO 17359-2           CTE, 40°C to 40°C, flow         6.606.05         1/°C         SO 75/81           DTD [81, 04.5 MPa Flatw 80°10°4 sp=64mm         175         °C         SO 75/81           HDT [81, 04.5 MPa Flatw 80°10°4 sp=64mm         175         °C         SO 75/81           HDT [81, 04.5 MPa Flatw 80°10°4 sp=64mm         175         °C         SO 75/81           HDT [81, 04.5 MPa Flatw 80°10°4 sp=64mm         175         °C         SO 75/81           HDT [81, 04.5 MPa Flatw 80°10°4 sp=64mm         175         °C         SO 75/81         CO 75/81           BDT [81, 04.5 MPa Flatw 80°10°4 sp=64mm         175         SO 75/81         CO 75/8	HDT, 0.45 MPa, 3.2 mm, unannealed	175	°C	ASTM D648
CTE, 40°C to 40°C, xflow         6.666.05         1°C         ASTM E31           CTE, 40°C to 40°C, xflow         2.706.05         1°C         SO 1135.92           CTE, 40°C to 40°C, xflow         6.606.05         1°C         SO 1135.92           CTE, 40°C to 40°C, xflow         6.606.05         1°C         SO 1135.92           DEDT/Bf, 1.8 MPa Flatw 80°10°4 spe4mm         175         °C         SO 75/Bf           HDT/Bf, 1.8 MPa Flatw 80°10°4 spe4mm         170         °C         SO 75/Bf           PHYSICAL ''         ************************************	HDT, 1.82 MPa, 3.2mm, unannealed	171	°C	ASTM D648
CTE, 40°C to 40°C, flow         2.70E05         1°C         151359-2           CTE, 40°C to 40°C, xflow         6.60E-05         1°C         151359-2           BIDT/BI, 0.45 MPa Flatw 80°10°4 sp=64mm         175         °C         150 (5) (5) (5) (6)           HDT/AI, 1.8 MPa Flatw 80°10°4 sp=64mm         175         °C         150 (5) (5) (6) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7	CTE, -40°C to 40°C, flow	2.70E-05	1/°C	ASTM E831
CFE, 40°C to 40°C, villow         6.66.65.0         1°C         ISS 1359-2           HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm         175         °C         150 75/BI           HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm         170         °C         150 75/BI           PHYSICAL <sup>11</sup> "STANDER         150 75/BI           Bonsity         556         9/m²         ASTM D570           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 0.7         \$         ASTM D570           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         \$         ASTM D955           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         \$         SO 294           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         \$         SO 294           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         \$         SO 294           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         \$         SO 294           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         \$         SO 294           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         \$         \$         STM D370 Modified: Manual Mold Miled: Mold Mile	CTE, -40°C to 40°C, xflow	6.66E-05	1/°C	ASTM E831
HDT/βf, 0.45 MPa Flatw 80°10°4 sp=64mm         175         °C         50.75 /βf           HDT/βf, 1.8 MPa Flatw 80°10°4 sp=64mm         170         °C         50.75 /βf           PHYSICAL <sup>11</sup> V         C         50.75 /βf           PHYSICAL <sup>11</sup> V         V         V           Density         1.56         g/cm²         ASTM D92           Moisture Absorption (23°C)50°R H/24 hrs)         0.3         %         ASTM D95           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         %         ASTM D95           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         %         ASTM D95           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         %         ASTM D95           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         %         ASTM D95           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         %         ASTM D95           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         %         ASTM D97           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 9         2.9         ASTM D97         ASTM D9	CTE, -40°C to 40°C, flow	2.70E-05	1/°C	ISO 11359-2
HoT/Ar, 1.8 MPa Flatw 80*10*4 sp=64mm         170         °C         ISO 75/AF           PHYSICAL (**)         U         Serial Ser	CTE, -40°C to 40°C, xflow	6.60E-05	1/°C	ISO 11359-2
PHYSICAL <sup>(1)</sup> Density         1.56         g/cm³         ASTM D792           Moisture Absorption, (23°C/50% RH/24 hrs)         0.3         \$         ASTM D955           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 0.7         \$         ASTM D955           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         \$         ASTM D955           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 0.73         \$         ISO 294           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 1.3         \$         SO 294           Mold Shrinkage, flow, 24 hrs <sup>(2)</sup> 0.3         \$         ASTM D3702 Modified: Manual           Wear Factor Washer         0.35         -         ASTM D3702 Modified: Manual           Static COF         0.35         ycm³         ISO 1183           ELECTRICAL <sup>(1)</sup> S         ASTM D3702 Modified: Manual           Burdace Resistivity         1.5         Q         ASTM D3702 Modified: Manual           NUECTION MOLDING <sup>(3)</sup> Surface Resistivity         ASTM D3702 Modified: Manual           Physiq Temperature         1.5         Q         ASTM D3702 Modified: Manual           Molified Physique Manual         Physique Manual         ASTM D3702 Modified: Manual	HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	175	°C	ISO 75/Bf
DensityJ.56g/cm³ASTM D792Moisture Absorption, (23°C/50°RH/24 hrs)0.3%ASTM D570Mold Shrinkage, flow, 24 hrs (2)1.3%ASTM D955Mold Shrinkage, flow, 24 hrs (2)1.3%ASTM D955Mold Shrinkage, flow, 24 hrs (2)1.3%S0 294Wear Factor Washer6910^10 in^5-min/ft-lb-hrASTM D3702 Modified: ManualDynamic COF0.35-ASTM D3702 Modified: ManualStatic COF0.32-ASTM D3702 Modified: ManualELECTRICAL (1)yASTM D3702 Modified: ManualBufface Resistivity1.5406yASTM D3702 Modified: ManualDiving Temperature1.5406QASTM D3702 Modified: ManualMINECTION MOLDING (3)1.5406QASTM D3702 Modified: ManualPring Temperature4HsMelt Temperature200-215C-Front - Zone 3 Temperature200-215C-Middle - Zone 2 Temperature195-205C-Moid Temperature195-205C-Moid Temperature80-110C-Bud I Temperature80-210C-Moid Temperature80-210C-Moid Temperature80-210C-Bud I Temperature80-210C-Mold Temperature80-210Mine 1-Mold Temperature80-210Mine 1-Mold Temperature80-210Mine 1-Mold T	HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	170	°C	ISO 75/Af
Moisture Absorption, (23°C/50% RH/24 hrs)0.3%ASTM D570Mold Shrinkage, flow, 24 hrs (2)0.7%ASTM D955Mold Shrinkage, Krlow, 24 hrs (2)0.73%ASTM D955Mold Shrinkage, Rflow, 24 hrs (2)0.73%SO 294Wear Factor Washer6910^-10 in/5-min/H-lb-hrASTM D3702 Modified: ManualDynamic COF0.35-ASTM D3702 Modified: ManualStatic COF0.32-ASTM D3702 Modified: ManualDensity1.55g/cm³STM D3702 Modified: ManualELECTRICAL (1)2XASTM D3702 Modified: ManualELECTRICAL (1)2XASTM D3702 Modified: ManualDying Temperature1.640\QASTM D3702 Modified: ManualDrying Time8\QSASTM D3702 Modified: ManualMelt Temperature9QSSFront - Zone 3 Temperature200 − 215\QCMiddle- Zone 2 Temperature105 − 205\QCMiddle- Zone 2 Temperature107 − 200\QCMold Temperature80 − 110\QCMold Temperatur	PHYSICAL (1)			
Mold Shrinkage, flow, 24 hrs (2).3.8 <t< td=""><td>Density</td><td>1.56</td><td>g/cm³</td><td>ASTM D792</td></t<>	Density	1.56	g/cm³	ASTM D792
Mold Shrinkage, xflow, 24 hrs (2)1.3%XSTM D955Mold Shrinkage, flow, 24 hrs (2)1.3%SO 294Mold Shrinkage, xflow, 24 hrs (2)1.3%SO 294Wear Factor Washer910~10 in/S-min /ft-lb-hrATM D3702 Modified: ManualDynamic COF0.35-ATM D3702 Modified: ManualStatic COF0.32-ATM D3702 Modified: ManualDensity1.55ycm³10.1183BLECTRICAL (1)LECTRICAL (1)Dyring Temperature1.6+06QATM D257Dyring Temperature80CATM D257Melt Temperature200~215C-Melt Temperature200~215C-Middle-Zone 3 Temperature105~205C-Middle-Zone 2 Temperature105~205C-Mold Temperature80~110C-Mold Temperature80~110C-Mold Temperature80~110C-Mold Temperature80~110C-Mold Temperature80~110MPa	Moisture Absorption, (23°C/50% RH/24 hrs)	0.3	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)0.73%So 294Mold Shrinkage, xflow, 24 hrs (2)1.3%So 294Wear Factor Washer6910^1 0 in^5 min/H:lb-lrASTM D3702 Modified: ManualDynamic COF0.35-ASTM D3702 Modified: ManualStatic COF0.32-ASTM D3702 Modified: ManualDensity1.55g/cm³So 1183ELECTRICAL (1)VXASTM D3702 Modified: ManualENJECTION MOLDING (3)-XASTM D3702 Modified: ManualDrying Temperature80CASTM D257Porjing Time4HrsMelt Temperature200 − 215CFront - Zone 3 Temperature200 − 215CMiddle - Zone 2 Temperature195 − 205CMiddle - Zone 2 Temperature175 − 190CMold Temperature80 − 110CMold Temperature80 − 110CBack Pressure90 − 203MPa	Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	0.7	%	ASTM D955
Moid Shrinkage, xflow, 24 hrs (2)1.3%150 294Wear Factor Washer6910^-10 in^-5-min/ft-lb-hrASTM D3702 Modified: ManualDynamic COF0.35-ASTM D3702 Modified: ManualEtatic COF0.32-ASTM D3702 Modified: ManualDensity1.55g/cm³150 1183ELECTRICAL (1)VXASTM D2702 Modified: ManualENJECTION MOLDING (3)LÉ+06ΩASTM D257Drying Temperature80°C-Drying Time44Hrs-Melt Temperature200 − 215°C-Front - Zone 3 Temperature200 − 215°C-Middle - Zone 2 Temperature195 − 205°C-Moid Temperature175 − 190°C-Bold Temperature80 − 110°CBold Temperature80 − 110°CBok Pressure80 − 110°C	Mold Shrinkage, xflow, 24 hrs (2)	1.3	%	ASTM D955
Wear Factor Washer6910-10 in √5-min /ft-lb-hrASTM D3702 Modiffed: ManualDynamic COF0.35-ASTM D3702 Modiffed: ManualStatic COF0.32-ASTM D3702 Modiffed: ManualDensity1.55g/cm³ISO 1183ELECTRICAL (¹¹)Surface Resistivity1.E+06ΩASTM D257Dying Temperature80°CDrying Time4HrsMelt Temperature200 - 215°CFront- Zone 3 Temperature210 - 220°CMiddle - Zone 2 Temperature175 - 190°CMiddle - Zone 1 Temperature80 - 110°CMold Temperature80 - 110°CBack Pressure80 - 110°C	Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	0.73	%	ISO 294
Dynamic COFASTM D3702 Modified: ManualStatic COF0.32-ASTM D3702 Modified: ManualDensity1.55g/cm³ISO 1183ELECTRICAL <sup>(1)</sup> Surface Resistivity1.E+06ΩASTM D257INJECTION MOLDING <sup>(3)</sup> Drying Temperature80°CDrying Time4HrsMelt Temperature200−215°CFront - Zone 3 Temperature210−220°CMiddle - Zone 2 Temperature195−205°CRear - Zone 1 Temperature175−190°CMold Temperature80−110°CMold Temperature80−110°CBack Pressure0.2−0.3MPa	Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	1.3	%	ISO 294
Static COF0.32-ASTM D3702 Modified: ManualDensity1.55g/cm³ISO 1183ELECTRICAL (¹)Surface Resistivity1.E+06ΩASTM D257INJECTION MOLDING (³)Drying Temperature80°C-Drying Time4HrsMelt Temperature200 − 215°CFront - Zone 3 Temperature210 − 220°CMiddle - Zone 2 Temperature195 − 205°CMear - Zone 1 Temperature175 − 190°CMold Temperature80 − 110°CBack Pressure0.2 − 0.3MPa	Wear Factor Washer	69	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Density1.55g/cm³ISO 1183ELECTRICAL (¹)Surface Resistivity1.6+062ASTM D257INJECTION MOLDING (³)Drying Temperature80°C'SDrying Time4HrsMelt Temperature200 − 215°CFront - Zone 3 Temperature210 − 220°CMiddle - Zone 2 Temperature195 − 205°CMear - Zone 1 Temperature175 − 190°CMold Temperature80 − 110°CBack Pressure0.2 − 0.3M/Pa	Dynamic COF	0.35		ASTM D3702 Modified: Manual
ELECTRICAL (1) Surface Resistivity  INJECTION MOLDING (3)  Drying Temperature  Melt Temperature  Front - Zone 3 Temperature  Middle - Zone 2 Temperature  Rear - Zone 1 Temperature  Mold Temper	Static COF	0.32	-	ASTM D3702 Modified: Manual
Surface Resistivity1.E+06ΩASTM D257INJECTION MOLDING (3)VDrying Temperature80°CDrying Time4HrsMelt Temperature200 − 215°CFront - Zone 3 Temperature210 − 220°CMiddle - Zone 2 Temperature195 − 205°CRear - Zone 1 Temperature175 − 190°CMold Temperature80 − 110°CBack Pressure0.2 − 0.3MPa	Density	1.55	g/cm³	ISO 1183
INJECTION MOLDING (3)           Drying Temperature         80         °C           Drying Time         4         Hrs           Melt Temperature         200 – 215         °C           Front - Zone 3 Temperature         210 – 220         °C           Middle - Zone 2 Temperature         195 – 205         °C           Rear - Zone 1 Temperature         175 – 190         °C           Mold Temperature         80 – 110         °C           Back Pressure         0.2 – 0.3         MPa	ELECTRICAL (1)			
Drying Temperature         80         °C           Drying Time         4         Hrs           Melt Temperature         200 – 215         °C           Front - Zone 3 Temperature         210 – 220         °C           Middle - Zone 2 Temperature         195 – 205         °C           Rear - Zone 1 Temperature         175 – 190         °C           Mold Temperature         80 – 110         °C           Back Pressure         0.2 – 0.3         MPa	Surface Resistivity	1.E+06	Ω	ASTM D257
Drying Time         Hrs           Melt Temperature         200 – 215         °C           Front - Zone 3 Temperature         210 – 220         °C           Middle - Zone 2 Temperature         195 – 205         °C           Rear - Zone 1 Temperature         175 – 190         °C           Mold Temperature         80 – 110         °C           Back Pressure         0.2 – 0.3         MPa	INJECTION MOLDING (3)			
Melt Temperature         200 – 215         °C           Front - Zone 3 Temperature         210 – 220         °C           Middle - Zone 2 Temperature         195 – 205         °C           Rear - Zone 1 Temperature         175 – 190         °C           Mold Temperature         80 – 110         °C           Back Pressure         0.2 – 0.3         MPa	Drying Temperature	80	°C	
Front - Zone 3 Temperature         210 – 220         °C           Middle - Zone 2 Temperature         195 – 205         °C           Rear - Zone 1 Temperature         175 – 190         °C           Mold Temperature         80 – 110         °C           Back Pressure         0.2 – 0.3         MPa	Drying Time	4	Hrs	
Middle - Zone 2 Temperature         195 – 205         °C           Rear - Zone 1 Temperature         175 – 190         °C           Mold Temperature         80 – 110         °C           Back Pressure         0.2 – 0.3         MPa	Melt Temperature	200 – 215	°C	
Rear - Zone 1 Temperature         175 – 190         °C           Mold Temperature         80 – 110         °C           Back Pressure         0.2 – 0.3         MPa	Front - Zone 3 Temperature	210 – 220	°C	
Mold Temperature         80 – 110         °C           Back Pressure         0.2 – 0.3         MPa	Middle - Zone 2 Temperature	195 – 205	°C	
Back Pressure         0.2 – 0.3         MPa	Rear - Zone 1 Temperature	175 – 190	°C	
	Mold Temperature	80 – 110	°C	
Screw Speed         30 – 60         rpm	Back Pressure	0.2 - 0.3	MPa	
	Screw Speed	30 – 60	rpm	

<sup>(1)</sup> 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.

## **DISCLAIMER**

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<sup>(2)</sup> 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.

<sup>(3)</sup> 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.