

# LEXANTM COPOLYMER EXL1434

## **REGION EUROPE**

## **DESCRIPTION**

LEXAN EXL1434 polycarbonate (PC) siloxane copolymer resin is a medium flow opaque injection molding (IM) grade and is UV stabilized. This resin offers extreme low temperature (-40 C), exhibits excellent processability and release with opportunities for shorter IM cycle times compared to standard PC. LEXAN EXL1434 resin is a product available in wide range of opaque colors and may be an excellent candidate for a wide variety of applications.

#### TYPICAL PROPERTY VALUES

Revision 20230607

PROPERTIES         TYPICAL VALUES         UNITS         TEST METHODS           MECHANICAL <sup>19</sup> TEST METHODS           MECHANICAL <sup>19</sup> MPa         ASIM D638           Tensile Stress, yid., Type I, 50 mm/min         50         MPa         ASIM D638           Tensile Stress, yid., Type I, 50 mm/min         6         8         ASIM D638           Tensile Strotlan, Drix, Type I, 50 mm/min         98         %         ASIM D638           Tensile Strotlan, So fmm/min         2020         MPa         ASIM D638           Flexural Stress, yid. 1,3 mm/min, 50 mm span         92         MPa         ASIM D789           Flexural Modulus, 1,3 mm/min, 50 mm span         92         MPa         ASIM D789           Hardness, Rockwell         121         -         ASIM D785           Hardness, Rockwell         19         -         ASIM D785           Tensile Stress, break, 50 mm/min         50         MPa         805 227           Tensile Stress, break, 50 mm/min         10         MPa         805 227           Tensile Stress, break, 50 mm/min         120         MPa         805 227           Tensile Strass, break, 50 mm/min         120         MPa         805 227           Tensile Strass, break, 50 mm/min         120				
Tensile Stress, yld, Type I, 50 mm/min         55         MFa         ASTM D638           Tensile Stress, brk, Type I, 50 mm/min         6         M3         ASTM D638           Tensile Strain, ykt, Type I, 50 mm/min         8         %         ASTM D638           Tensile Strain, jkt, Type I, 50 mm/min         98         %         ASTM D638           Tensile Modulus, 50 mm/min         2020         Mfa         ASTM D638           Tensile Modulus, 50 mm/min         2220         Mfa         ASTM D790           Hardness, Rockwell I.         89         -         ASTM D785           Hardness, Rockwell R         211         -         ASTM D785           Hardness, Rockwell R         121         -         ASTM D785           Hardness, Rockwell R         60         Mfa         605 27           Tensile Stress, break, 50 mm/min         60         Mfa         60 527           Tensile Stress, break, 50 mm/min         120         Mfa         60 527           Tensile Stress, break, 50 mm/min         2150         Mfa         60 527           Tensile Stress, break, 50 mm/min         2150         Mfa         60 527           Tensile Stress, break, 50 mm/min         2150         Mfa         60 527           Tensile Stress, brea	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Stress, br. Y. Type I, 50 mm/min         50         MPa         ASTM D638           Tensile Strain, Jrd. Y. Type I, 50 mm/min         6         %         ASTM D638           Tensile Modulus, 50 mm/min         2020         MPa         ASTM D638           Flexural Stress, Y. J. 1.3 mm/min, 50 mm span         92         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         92         MPa         ASTM D795           Hardness, Rockwell I.         99         ASTM D785         ASTM D785           Hardness, Rockwell S. Omm/min         57         MPa         ASTM D785           Tensile Stress, Dreak, 50 mm/min         60         MPa         B0 527           Tensile Stress, Dreak, 50 mm/min         120         MPa         B0 527           Tensile Stress, Dreak, 50 mm/min         120         MPa         B0 527           Tensile Stress, Lyeld, 25 mm/min         120         MPa         B0 527           Tensile Stress, Lyeld, 25 mm/min         120         MPa         B0 527           Tensile Stress, Lyeld, 25 mm/min         250         MPa         B0 527           Tensile Stress, Lyeld, 25 mm/min         250         MPa         B0 527           Tensile Stress, Lyeld, 25 mm/min         250         MPa         B0 52	MECHANICAL (1)			
Tensile Strain, yld. Type I, 50 mm/min         6         %         ASTM D638           Tensile Strain, brk, Type I, 50 mm/min         98         %         ASTM D638           Tensile Modulus, 50 mm/min         2020         MPa         ASTM D638           Flexural Modulus, 1.3 mm/min, 50 mm span         220         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         2230         MPa         ASTM D785           Hardness, Rockwell I         89         -         ASTM D785           Hardness, Rockwell R         211         20         ASTM D785           Hardness, Rockwell R         212         APP         B0527           Tensile Stress, yeld, 50 mm/min         60         MPa         B0527           Tensile Stress, break, 50 mm/min         120         MPa         B0527           Tensile Stress, break, 50 mm/min         210         MPa         B0527           Tensile Stress, yeld, 2 mm/min         85         MPa         B0527           Tensile Stress, yeld, 2 mm/min         85         MPa         B0178           Ewural Stress, yeld, 2 mm/min         85         MPa         B0178           Ewural Stress, yeld, 2 mm/min         85         MPa         B0178           Ewural Stress, yeld, 2	Tensile Stress, yld, Type I, 50 mm/min	55	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min         98         %         ASTM D638           Tensile Modulus, 50 mm/min         2020         MPa         ASTM D638           Flexural Modulus, 50 mm/min         2230         MPa         ASTM D638           Flexural Modulus, 13 mm/min, 50 mm span         2230         MPa         ASTM D790           Hardness, Rockwell I         89         -         ASTM D785           Hardness, Rockwell R         121         -         ASTM D785           Tensile Stress, yelds, 50 mm/min         60         MPa         SO 527           Tensile Strain, break, 50 mm/min         60         %         SO 527           Tensile Strain, break, 50 mm/min         120         %         SO 527           Tensile Strain, break, 50 mm/min         85         MPa         SO 527           Tensile Strain, break, 50 mm/min         85         MPa         SO 527           Tensile Strain, break, 50 mm/min         85         MPa         SO 527           Tensile Strain, break, 50 mm/min         85         MPa         SO 178           Tensile Strain, break, 50 mm/min         85         MPa         SO 178           Tensile Strain, break, 50 mm/min         85         MPa         SO 178           Becural Strain, bre	Tensile Stress, brk, Type I, 50 mm/min	50	MPa	ASTM D638
Tensile Modulus, 90 mm/min         2020         MPa         ASTM D638           Flexural Stress, yld, 1.3 mm/min, 50 mm span         92         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         2230         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         2230         MPa         ASTM D785           Hardness, Rockwell R         121         -         ASTM D785           Hardness, Rockwell R         121         MPa         ISO 527           Tensile Stress, break, 50 mm/min         60         MPa         ISO 527           Tensile Stress, break, 50 mm/min         120         %         ISO 527           Tensile Modulus, 1 mm/min         120         %         ISO 527           Tensile Stress, pield, 50 mm/min         120         MPa         ISO 127           Tensile Modulus, 1 mm/min         120         MPa         ISO 527           Tensile Stress, pield, 50 mm/min         120         MPa         ISO 127           Tensile Stress, pield, 50 mm/min         120         MPa         ISO 127           Tensile Stress, pield, 50 mm/min         120         MPa         ISO 127           Tensile Stress, pield, 50 mm/min         120         MPa         ISO 127	Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Flexural Stress, yid. 1.3 mm/min, 50 mm span         92         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         2230         MPa         ASTM D785           Hardness, Rockwell L         89         -         ASTM D785           Hardness, Rockwell R         121         STM D785           Tensile Stress, yield, 50 mm/min         60         MPa         SO 527           Tensile Strain, yield, 50 mm/min         120         %         SO 527           Tensile Strain, break, 50 mm/min         120         %         SO 527           Tensile Strain, yield, 50 mm/min         120         %         SO 527           Tensile Strain, Dreak, 50 mm/min         120         %         SO 527           Tensile Strain, Dreak, 50 mm/min         250         MPa         SO 178           Elevarial Stress, yield, 2 mm/min         85         MPa         SO 178           Flexural Stress, yield, 2 mm/min         85         MPa         SO 178           Flexural Modulus, 2 mm/min         85         MPa         SO 178           Flexural Modulus, 2 mm/min         85         MPa         SO 178           Instrumented Dart Impact, notched, 23°C         70         July         ASTM D256           Ization Impact, unnotched 80	Tensile Strain, brk, Type I, 50 mm/min	98	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span         2330         MPa         ASTM D795           Hardness, Rockwell L         89         -         ASTM D785           Hardness, Rockwell R         121         -         ASTM D785           Hardness, Rockwell R         121         -         ASTM D785           Tensile Stress, yeld, 50 mm/min         60         MPa         S0 527           Tensile Strain, yeld, 50 mm/min         120         %         S0 527           Tensile Modulus, 1 mm/min         2150         MPa         S0 527           Tensile Strain, break, 50 mm/min         250         MPa         S0 527           Tensile Modulus, 2 mm/min         250         MPa         S0 527           Tensile Modulus, 2 mm/min         250         MPa         S0 178           Flexural Modulus, 2 mm/min         250         MPa         S0 178           Tensile Modulus, 2 mm/min         250         MPa         S0 178           Instrumental Stress, yeld, 2 mm/min         250         MPa         S0 178           Instrumental Stress, yeld, 2 mm/min         85         J/m         MPa         S0 178           Izod Impact, notched, 23°C         70         J/m         ASTM D256           Izod Impact, unnotched 80°10°3 -23°	Tensile Modulus, 50 mm/min	2020	MPa	ASTM D638
Hardness, Rockwell L         89         -         ASTM D785           Hardness, Rockwell R         121         -         ASTM D785           Tensile Stress, yield, 50 mm/min         57         MPa         ISO 527           Tensile Stress, break, 50 mm/min         60         MPa         ISO 527           Tensile Strein, break, 50 mm/min         120         %         ISO 527           Tensile Modulus, 1 mm/min         120         MPa         ISO 527           Flexural Stress, yield, 2 mm/min         85         MPa         ISO 178           Flexural Modulus, 2 mm/min         85         MPa         ISO 178           Flexural Modulus, 2 mm/min         85         MPa         ISO 178           Instrumented Stress, yield, 2 mm/min         85         MPa         ASTM D256           Instrumented Dart Impact, notched, 3°°C         774         JIm         ASTM D256           Izod Impact, notched 80°10°3 +23°C         NB         IJ/m²         ISO 180/14           Izod Impact, notched 8	Flexural Stress, yld, 1.3 mm/min, 50 mm span	92	MPa	ASTM D790
Hardness, Rockwell R         121         - Common Moral         ASTM D785           Tensile Stress, yield, 50 mm/min         57         MPa         ISO 527           Tensile Stress, break, 50 mm/min         60         MPa         ISO 527           Tensile Strain, yield, 50 mm/min         120         %         ISO 527           Tensile Modulus, 1 mm/min         2150         MPa         ISO 527           Flexural Stress, yield, 2 mm/min         250         MPa         ISO 178           Flexural Modulus, 2 mm/min         85         MPa         ISO 178           Flexural Modulus, 2 mm/min         85         MPa         ISO 178           Impact, notched, 23°C         MPa         ASTM D256           Instrumented Dart Impact, notched, 30°C         774         Jim         ASTM D256           Izod Impact, notched 80°10°3 +23°C         70         Jim         SI 0180/10           Izod Impact, notched 80°10°3 +23°C         70         Jim         SI 0180/10           Izod Impact, notched 80°10°3 +23°C         70         Jim         SI 0180/10           Izod Impact, notched 80°10°3 +23°C         70         Jim         SI 0180/10           Izod Impact, notched 80°10°3 +23°C         70         Jim         SI 0180/10           Izod I	Flexural Modulus, 1.3 mm/min, 50 mm span	2230	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min         57         MPa         ISO 527           Tensile Stress, break, 50 mm/min         60         MPa         ISO 527           Tensile Strain, yield, 50 mm/min         6         %         ISO 527           Tensile Strain, break, 50 mm/min         120         %         ISO 527           Tensile Modulus, 1 mm/min         2150         MPa         ISO 527           Tensile Modulus, 2 mm/min         250         MPa         ISO 178           Flexural Modulus, 2 mm/min         2250         MPa         ISO 178           Impact Ti         V         V         V           Izod Impact, notched, 23°C         865         J/m         ASTM D256           Izod Impact, notched, 30°C         774         J/m         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         NB         I/m²         ISO 180/10           Izod Impact, notched 80°10°3 +23°C         70         I/m²         ISO 180/10           Izod Impact, notched 80°10°3 +23°C         70         I/m²         ISO 180/10           Izod Impact, notched 80°10°3 +23°C         80         I/m²         ISO 180/10           Charpy 30°C, V-notch Edgew 80°10°3 sp=62mm         70         I/m²         ISO 180/10           Charpy 30°C,	Hardness, Rockwell L	89	-	ASTM D785
Tensile Stress, break, 50 mm/min         60         MPa         ISO 527           Tensile Strain, yield, 50 mm/min         120         %         ISO 527           Tensile Strain, break, 50 mm/min         120         %         ISO 527           Tensile Modulus, 1 mm/min         2150         MPa         ISO 527           Flexural Stress, yield, 2 mm/min         85         MPa         ISO 178           Flexural Modulus, 2 mm/min         2250         MPa         ISO 178           Impact, 10°         V         ASTM D256         ISO 178           Impact, 10°         1/m         ASTM D256         ASTM D256           Instrumented Dart Impact, 10°         774         J/m         ASTM D256           Instrumented Dart Impact Total Energy, 23°C         70         J         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         NB         kJ/m²         ISO 180/10           Izod Impact, notched 80°10°3 +23°C         70         kJ/m²         ISO 180/10           Izod Impact, notched 80°10°3 +23°C         60         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°3 sp=62mm         70         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°3 sp=62mm         65         kJ/m²         ISO 180/1A	Hardness, Rockwell R	121	-	ASTM D785
Tensile Strain, yield, 50 mm/min         6         %         ISO 527           Tensile Strain, break, 50 mm/min         120         %         ISO 527           Tensile Modulus, 1 mm/min         2150         MPa         ISO 527           Flexural Stress, yield, 2 mm/min         85         MPa         ISO 178           Impact of Impact, notched, 23°C         250         MPa         ISO 178           Impact (1)**         V         V         ASTM D256           Izod Impact, notched, 23°C         865         J/m         ASTM D256           Izod Impact, notched, 30°C         774         J/m         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         70         J         ASTM D3763           Izod Impact, notched 80°10°3 +23°C         70         J/m²         ISO 180/14           Izod Impact, notched 80°10°3 +23°C         70         J/m²         ISO 180/14           Izod Impact, notched 80°10°3 +23°C         70         J/m²         ISO 180/14           Izod Impact, notched 80°10°3 +23°C         60         J/m²         ISO 180/14           Izod Impact, notched 80°10°3 spe62mm         70         J/m²         ISO 180/14           Izod Impact, notched 80°10°3 spe62mm         86         J/m²         ISO 180/14	Tensile Stress, yield, 50 mm/min	57	MPa	ISO 527
Tensile Strain, break, 50 mm/min         120         %         ISO 527           Tensile Modulus, 1 mm/min         2150         MPa         ISO 527           Flexural Stress, yield, 2 mm/min         85         MPa         ISO 178           Flexural Modulus, 2 mm/min         2250         MPa         ISO 178           IMPACT (¹)         V         V         V           Izod Impact, notched, 23°C         865         J/m         ASTM D256           Izod Impact, notched, 30°C         774         J/m         ASTM D256           Izod Impact, unnotched 80°10°3 +23°C         NB         kl/m²         ISO 180/10           Izod Impact, unnotched 80°10°3 +23°C         NB         kl/m²         ISO 180/10           Izod Impact, unnotched 80°10°3 +23°C         NB         kl/m²         ISO 180/10           Izod Impact, untotched 80°10°3 +23°C         70         kl/m²         ISO 180/10           Izod Impact, notched 80°10°3 +23°C         70         kl/m²         ISO 180/10           Izod Impact, notched 80°10°3 sp=62mm         60         kl/m²         ISO 180/10           Charpy 23°C, Vnotch Edgew 80°10°3 sp=62mm         65         kl/m²         ISO 179/1e           Charpy 23°C, Unnotch Edgew 80°10°3 sp=62mm         MB         kl/m²         ISO 179/1e	Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Modulus, 1 mm/min         2150         MPa         ISO 527           Flexural Stress, yield, 2 mm/min         85         MPa         ISO 178           Flexural Modulus, 2 mm/min         2250         MPa         ISO 178           IMPACT (¹)         ASTM D256         IMPACT (¹)         IMPACT (¹)         ASTM D256         IMPACT (¹)         IMPACT (¹)         ASTM D256         IMPACT (²)	Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Flexural Stress, yield, 2 mm/min         85         MPa         ISO 178           Flexural Modulus, 2 mm/min         2250         MPa         ISO 178           IMPACT (1)         IMPACT (2004)           Izod Impact, notched, 23°C         865         J/m         ASTM D256           Izod Impact, notched, 30°C         774         J/m         ASTM D256           Izod Impact, unnotched 80°10°3 +23°C         NB         kJ/m²         ISO 180/10           Izod Impact, unnotched 80°10°3 +23°C         NB         kJ/m²         ISO 180/10           Izod Impact, notched 80°10°3 -23°C         70         kJ/m²         ISO 180/10           Izod Impact, notched 80°10°3 -30°C         60         kJ/m²         ISO 180/10           Izod Impact, notched 80°10°3 -30°C         60         kJ/m²         ISO 180/10           Izod Impact, notched 80°10°3 -30°C         60         kJ/m²         ISO 180/10           Izod Impact, notched 80°10°3 -30°C         70         kJ/m²         ISO 180/10           Izod Impact, notched 80°10°3 -30°C         80         kJ/m²         ISO 179/10A           Izod Impact, notched 80°10°3 -30°C         NB         kJ/m²         ISO 180/10A           Izod Impact, notched 80°10°3 -30°C         NB         kJ/m²         ISO 179/10A <td>Tensile Strain, break, 50 mm/min</td> <td>120</td> <td>%</td> <td>ISO 527</td>	Tensile Strain, break, 50 mm/min	120	%	ISO 527
Flexural Modulus, 2 mm/min         2250         MPa         ISO 178           IMPACT (1)         IMPACT (2)         IMPACT (2)         IMPACT (3)         IMPACT (3)         ASTM D256           Izod Impact, notched, 23°C         865         J/m         ASTM D256           Instrumented Dart Impact Total Energy, 23°C         70         J         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         NB         kl/m²         ISO 180/10           Izod Impact, notched 80°10°3 +23°C         NB         kl/m²         ISO 180/10           Izod Impact, notched 80°10°3 +23°C         70         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°3 +23°C         70         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°3 +23°C         70         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°3 sp=62mm         70         kl/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         70         kl/m²         ISO 179/1eA           Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kl/m²         ISO 179/1eA           Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kl/m²         ISO 179/1eA           Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm         145         °C         ASTM D525	Tensile Modulus, 1 mm/min	2150	MPa	ISO 527
IMPACT (1)           Izod Impact, notched, 23°C         865         J/m         ASTM D256           Izod Impact, notched, -30°C         774         J/m         ASTM D256           Instrumented Dart Impact Total Energy, 23°C         70         J/m         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         NB         kJ/m²         ISO 180/1U           Izod Impact, notched 80°10°3 +23°C         70         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°3 +23°C         70         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°3 +23°C         70         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°3 +23°C         70         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°3 sp=62mm         70         kJ/m²         ISO 179/1eA           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eA           Charpy 23°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eU           THERMAL (1)         Y         C         ASTM D1525	Flexural Stress, yield, 2 mm/min	85	MPa	ISO 178
Izad Impact, notched, 23°C         865         J/m         ASTM D256           Izad Impact, notched, -30°C         774         J/m         ASTM D256           Instrumented Dart Impact Total Energy, 23°C         70         J         ASTM D3763           Izad Impact, unnotched 80°10°3 + 23°C         NB         kJ/m²         ISO 180/1U           Izad Impact, unnotched 80°10°3 - 30°C         NB         kJ/m²         ISO 180/1A           Izad Impact, notched 80°10°3 - 30°C         70         kJ/m²         ISO 180/1A           Izad Impact, notched 80°10°3 - 30°C         60         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         70         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eA           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         SO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         SO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         KJ         R         KJ         R         SO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         145	Flexural Modulus, 2 mm/min	2250	MPa	ISO 178
Izod Impact, notched, -30°C         774         J/m         ASTM D256           Instrumented Dart Impact Total Energy, 23°C         70         J         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         NB         kJ/m²         ISO 180/1U           Izod Impact, unnotched 80°10°3 +23°C         NB         kJ/m²         ISO 180/1U           Izod Impact, notched 80°10°3 +23°C         70         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°3 sp=62mm         60         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         70         kJ/m²         ISO 179/1eA           Charpy 30°C, V-notch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eA           Charpy 23°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         SO 179/1eU           THERMAL (¹)         Y         C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         145         °         C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         124         °         C         ASTM D648	IMPACT (1)			
Instrumented Dart Impact Total Energy, 23°C         70         J         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         NB         kJ/m²         ISO 180/1U           Izod Impact, unnotched 80°10°3 -30°C         NB         kJ/m²         ISO 180/1U           Izod Impact, notched 80°10°3 +23°C         70         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°3 -30°C         60         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         70         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISO 179/1eU           THERMAL (¹)         Vicat Softening Temp, Rate B/50         145         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         124         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         7.0E-05         1/°C         ASTM E831	Izod Impact, notched, 23°C	865	J/m	ASTM D256
Izod Impact, unnotched 80°10'3 +23°C         NB         kJ/m²         ISO 180/1U           Izod Impact, unnotched 80°10'3 -30°C         NB         kJ/m²         ISO 180/1U           Izod Impact, notched 80°10'3 +23°C         70         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10'3 -30°C         60         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10'3 sp=62mm         70         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80°10'3 sp=62mm         65         kJ/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10'3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10'3 sp=62mm         NB         kJ/m²         ISO 179/1eU           THERMAL <sup>(1)</sup> Vicat Softening Temp, Rate B/50         145         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         139         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         124         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.0E-05         1/°C         ASTM E831	Izod Impact, notched, -30°C	774	J/m	ASTM D256
Izod Impact, unnotched 80*10*3 -30°C         NB         kJ/m²         ISO 180/1U           Izod Impact, notched 80*10*3 -23°C         70         kJ/m²         ISO 180/1A           Izod Impact, notched 80*10*3 -30°C         60         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm         70         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm         65         kJ/m²         ISO 179/1eA           Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kJ/m²         ISO 179/1eU           THERMAL <sup>(1)</sup> Vicat Softening Temp, Rate B/50         145         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         139         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         124         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.0E-05         1/°C         ASTM E831	Instrumented Dart Impact Total Energy, 23°C	70	J	ASTM D3763
Izod Impact, notched 80°10°3 +23°C   70   KJ/m²   ISO 180/1A     Izod Impact, notched 80°10°3 -30°C   60   KJ/m²   ISO 180/1A     Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm   70   KJ/m²   ISO 179/1eA     Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm   65   KJ/m²   ISO 179/1eA     Charpy 23°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   KJ/m²   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   NB   ISO 179/1eU     Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm   ISO 179/1eU     Charpy -30°C, Unnotch	Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*3 -30°C         60         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm         70         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm         65         kJ/m²         ISO 179/1eA           Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kJ/m²         ISO 179/1eU           THERMAL (1)           Vicat Softening Temp, Rate B/50         145         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         139         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         124         °C         ASTM D648           HDT, 0.45°C to 40°C, flow         7.0E-05         1/°C         ASTM E831	Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm         70         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm         65         kJ/m²         ISO 179/1eA           Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kJ/m²         ISO 179/1eU           THERMAL (1)           Vicat Softening Temp, Rate B/50         145         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         139         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         124         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         7.0E-05         1/°C         ASTM E831	Izod Impact, notched 80*10*3 +23°C	70	kJ/m²	ISO 180/1A
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm         65         kJ/m²         ISO 179/1eA           Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kJ/m²         ISO 179/1eU           THERMAL (¹)           Vicat Softening Temp, Rate B/50         145         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         139         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         124         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.0E-05         1/°C         ASTM E831	Izod Impact, notched 80*10*3 -30°C	60	kJ/m²	ISO 180/1A
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kJ/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kJ/m²         ISO 179/1eU           THERMAL (1)           Vicat Softening Temp, Rate B/50         145         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         139         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         124         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.0E-05         1/°C         ASTM E831	Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	70	kJ/m²	ISO 179/1eA
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kJ/m²         ISO 179/1eU           THERMAL (1)           Vicat Softening Temp, Rate B/50         145         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         139         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         124         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.0E-05         1/°C         ASTM E831	Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	65	kJ/m²	ISO 179/1eA
THERMAL (1)           Vicat Softening Temp, Rate B/50         145         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         139         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         124         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.0E-05         1/°C         ASTM E831	Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
Vicat Softening Temp, Rate B/50         145         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         139         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         124         °C         ASTM D648           CTE, -40 °C to 40 °C, flow         7.0E-05         1/°C         ASTM E831	Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
Vicat Softening Temp, Rate B/50         145         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         139         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         124         °C         ASTM D648           CTE, -40 °C to 40 °C, flow         7.0E-05         1/°C         ASTM E831	THERMAL (1)			
HDT, 1.82 MPa, 3.2mm, unannealed       124       °C       ASTM D648         CTE, -40°C to 40°C, flow       7.0E-05       1/°C       ASTM E831	Vicat Softening Temp, Rate B/50	145	°C	ASTM D1525
CTE, -40°C to 40°C, flow 7.0E-05 1/°C ASTM E831	HDT, 0.45 MPa, 3.2 mm, unannealed	139	°C	ASTM D648
	HDT, 1.82 MPa, 3.2mm, unannealed	124	°C	ASTM D648
CTE, -40°C to 40°C, xflow 7.47E-05 1/°C ASTM E831	CTE, -40°C to 40°C, flow	7.0E-05	1/°C	ASTM E831
	CTE, -40°C to 40°C, xflow	7.47E-05	1/°C	ASTM E831

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, 23°C to 80°C, flow	7.2E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.2E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Passes	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	145	°C	ISO 306
Vicat Softening Temp, Rate B/120	146	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	140	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	128	°C	ISO 75/Ae
Relative Temp Index, Elec <sup>(2)</sup>	130	°C	UL 746B
Relative Temp Index, Mech w/impact (2)	120	°C	UL 746B
Relative Temp Index, Mech w/o impact (2)	130	°C	UL 746B
PHYSICAL (1)			
Specific Gravity	1.18	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup>	0.4 - 0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm (3)	0.4 - 0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	10	g/10 min	ASTM D1238
Density	1.19	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.35	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	9	cm <sup>3</sup> /10 min	ISO 1133
ELECTRICAL (1)			.5055
	\$1.EU1E	0	ACTM DOET
Volume Resistivity	>1.E+15	Ω.cm	ASTM D257
Surface Resistivity	>1.E+15 16.2	Ω	ASTM D257
Dielectric Strength, in oil, 0.8 mm	2.68	kV/mm	ASTM D149
Relative Permittivity, 100 Hz		•	ASTM D150
Relative Permittivity, 1 MHz	2.64	•	ASTM D150
Dissipation Factor, 100 Hz	0.0012	•	ASTM D150
Dissipation Factor, 1 MHz	0.0093	-	ASTM D150
Hot-Wire Ignition (HWI), PLC 0	≥0.7	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 1	≥0.7	mm	UL 746A
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	E45329-100079886	-	•
UL Yellow Card Link 2	<u>E45329-514823</u>		
UL Recognized, 94HB Flame Class Rating	≥0.7	mm	UL 94
Glow Wire Ignitability Temperature, 3.0 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.0 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 0.8 mm	875	°C	IEC 60695-2-13
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 0.8 mm	850	°C	IEC 60695-2-12
UV-light, water exposure/immersion	F1	-	UL 746C
Oxygen Index (LOI)	37	%	ISO 4589
INJECTION MOLDING (4)			
Drying Temperature	120	°C	



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	290 – 310	°C	
Front - Zone 3 Temperature	295 – 315	°C	
Middle - Zone 2 Temperature	280 – 305	°C	
Rear - Zone 1 Temperature	270 – 295	°C	
Mold Temperature	70 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

- (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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
- (3) 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. 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.
- (4) 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.

#### MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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