

# LEXANTM COPOLYMER EXL9112

## REGION EUROPE

## **DESCRIPTION**

Opaque PC-Siloxane copolymer with excellent processability. Improved flow, low temp. ductility. Non-chlorinated, non-brominated flame retardant product. UL rated V-0/5VA.

# **TYPICAL PROPERTY VALUES**

Revision 20241022

PROFERTIES         TYPICAL VALUES         UNITS         TEST METHODS           MECHANICAL. <sup>10</sup> TESTIAL STRESS, yell, Type I, 50 mm/min         88         MPa         ASTM DG38           Tensile Stress, lych, Type I, 50 mm/min         5.8         MPa         ASTM DG38           Tensile Stress, lych, Type I, 50 mm/min         103         \$         ASTM DG38           Tensile Strain, lych, Type I, 50 mm/min         103         \$         ASTM DG38           Tensile Strain, lych, Type I, 50 mm/min         260         MPa         ASTM DG38           Flexural Stress, yeld, 13 mm/min, 50 mm span         230         MPa         ASTM DG38           Flexural Modulus, 1.3 mm/min, 50 mm span         2330         MPa         ASTM DG90           Tensile Stress, lych, 50 mm/min         5         MPa         BO 527           Tensile Stress, lych, 50 mm/min         100         %         BO 527           Tensile Strain, break, 50 mm/min         100         %         BO 527           Tensile Strain, break, 50 mm/min         200         MPa         BO 527           Tensile Strain, break, 50 mm/min         200         MPa         BO 527           Tensile Strain, break, 50 mm/min         200         MPa         BO 527           Tensile Strain, break, 50 mm/min				
Tensile Stress, bft, Type I, 50 mm/min         98         MPG         ASIM D638           Tensile Strain, bft, Type I, 50 mm/min         58         x         ASIM D638           Tensile Strain, bft, Type I, 50 mm/min         103         x         ASIM D638           Tensile Strain, bft, Type I, 50 mm/min         2290         Mma         ASIM D638           Tensile Strain, bft, Type I, 50 mm/min         2290         Mma         ASIM D638           Flexural Modulus, 13 mm/min, 50 mm span         2330         Mma         ASIM D709           Tensile Stress, break, 50 mm/min         59         Mm²         50.527           Tensile Stress, break, 50 mm/min         10         \$         50.527           Tensile Strain, yledt, 50 mm/min         200         Mm²         50.527           Tensile Strain, yledt, 50 mm/min         10         \$         50.527           Tensile Strain, break, 50 mm/min         200         Mm²         50.527           Tensile Strain, break, 50 mm/min         10         \$         50.527           Tensile Strain, break, 50 mm/min         200         Mm²         50.527           Tensile Strain, break, 50 mm/min         10         Xm²         50.527           Tensile Strain, break, 50 mm/min         50         50         5	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Stress, brk, Type I, 50 mm/min         58         MPa         ASTM D638           Tensile Strain, Jrk, Type I, 50 mm/min         5.8         %         ASTM D638           Tensile Modulus, 50 mm/min         260         MPa         ASTM D638           Flexural Stress, yidd, 1.3 mm/min, 50 mm span         95         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         93         MPa         ASTM D790           Tensile Stress, yield, 50 mm/min         5         MPa         05.27           Tensile Stress, break, 50 mm/min         5         MPa         05.27           Tensile Stress, break, 50 mm/min         200         MPa         05.27           Tensile Stress, break, 50 mm/min         8         MPa         05.27           Tensile Stress, break, 50 mm/min         8         MPa         05.27           Tensile Stress, break, 50 mm/min         8         MPa         05.17	MECHANICAL (1)			
Tensile Strain, lyd. Type I, 50 mm/min         5.8         %         ASTM D638           Tensile Strain, brk, Type I, 50 mm/min         103         %         ASTM D638           Tensile Modulus, 50 mm/min         2260         MPa         ASTM D638           Flexural Modulus, 1.3 mm/min, 50 mm span         2330         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         2330         MPa         ASTM D790           Tensile Stress, yield, 50 mm/min         5         MPa         05.527           Tensile Stress, break, 50 mm/min         100         %         05.527           Tensile Strain, break, 50 mm/min         100         %         05.527           Tensile Strain, break, 50 mm/min         200         MPa         05.527           Tensile Modulus, 1 mm/min         200         MPa         05.527           Tensile Modulus, 2 mm/min         8         MPa         05.527           Tensile Strain, break, 50 mm/min         200         MPa         05.527           Tensile Strain, break, 50 mm/min         8         MPa         05.527           Tensile Strain, break, 50 mm/min         100         MPa         05.527           Tensile Strain, break, 50 mm/min         200         MPa         05.527 <tr< td=""><td>Tensile Stress, yld, Type I, 50 mm/min</td><td>58</td><td>MPa</td><td>ASTM D638</td></tr<>	Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D638
Tensile Strain, br.k. Type I, 50 mm/min         103         \$         ASTM D638           Tensile Modulus, 50 mm/min         2260         MPs         ASTM D638           Flexural Modulus, 50 mm/min         250         MPs         ASTM D638           Elexural Stress, yld, 1.3 mm/min, 50 mm span         2330         MPs         ASTM D790           Tensile Stress, break, 50 mm/min         59         MPs         ISO 527           Tensile Stress, break, 50 mm/min         100         %         ISO 527           Tensile Stress, break, 50 mm/min         100         %         ISO 527           Tensile Modulus, 1 mm/min         200         MPs         ISO 527           Flexural Modulus, 2 mm/min         88         MPs         ISO 178           Flexural Modulus, 2 mm/min         88         MPs         ISO 178           Elexural Modulus, 2 mm/min         9         MPs         ISO 178           Elexural Modulus, 2 mm/min         8         MPs         ISO 178           Elexural Modulus, 2 mm/min         9         10         ASTM D256           Elexural Modulus, 2 mm/min         8         MPs         ISO 178           Elexural Modulus, 2 mm/min         8         MPs         ISO 178           Elexural Modulus, 2 mm/min	Tensile Stress, brk, Type I, 50 mm/min	58	MPa	ASTM D638
Tensile Modulus, 50 mm/min         260         MPa         ASTM D638           Flexural Stress, yld, 1.3 mm/min, 50 mm span         95         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         2330         MPa         ASTM D790           Tensile Stress, yled, 50 mm/min         55         MPa         150 527           Tensile Stress, break, 50 mm/min         5         MPa         150 527           Tensile Stresh, break, 50 mm/min         100         \$         150 527           Tensile Stresh, break, 50 mm/min         100         \$         150 527           Tensile Stresh, break, 50 mm/min         100         \$         150 527           Tensile Stresh, break, 50 mm/min         100         \$         150 527           Tensile Stresh, break, 50 mm/min         100         \$         150 527           Tensile Stresh, break, 50 mm/min         100         \$         150 527           Tensile Stresh, yleid, 50 mm/min         8         150 527         150 527           Tensile Stresh, yleid, 50 mm/min         8         150 518         150 527           Tensile Stresh, yleid, 50 mm/min         8         150 527         150 527           Tensile Stresh, yleid, 50 mm/min         8         150 527         150 527	Tensile Strain, yld, Type I, 50 mm/min	5.8	%	ASTM D638
Flexural Stress, yiel, 1.3 mm/min, 50 mm span         95         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         2330         MPa         ASTM D790           Tensile Stress, yield, 50 mm/min         59         MPa         ISO 527           Tensile Stress, break, 50 mm/min         55         MPa         ISO 527           Tensile Strain, yield, 50 mm/min         100         %         ISO 527           Tensile Strain, break, 50 mm/min         200         MPa         ISO 527           Flexural Stress, yield, 2 mm/min         88         MPa         ISO 178           Flexural Modulus, 2 mm/min         95         MPa         ISO 178           Ball Indentation Hardness, H358/30         95         WPa         ISO 178           Ball Indentation Hardness, H358/30         95         WPa         SO 2029-1           Izod Impact, notched, 23°C         731         J/m         ASTM D256           Isot Impact, notched, 30°C         88         J/m         ASTM D256           Izod Impact, unnotched 80°10°3 -23°C         88         J/m²         ASTM D256           Izod Impact, unnotched 80°10°3 -23°C         98         J/m²         SO 180/10           Izod Impact, unnotched 80°10°3 -23°C         98         J/m²         SO	Tensile Strain, brk, Type I, 50 mm/min	103	%	ASTM D638
Elexaral Modulus, 1.3 mm/min, 50 mm span         2330         MPa         ASTM D790           Tensile Stress, yield, 50 mm/min         59         MPa         ISO 527           Tensile Stress, break, 50 mm/min         55         MPa         ISO 527           Tensile Strain, break, 50 mm/min         100         %         ISO 527           Tensile Strain, break, 50 mm/min         100         %         ISO 527           Tensile Modulus, 1 mm/min         2000         MPa         ISO 178           Elexural Modulus, 2 mm/min         88         MPa         ISO 178           Elexural Modulus, 2 mm/min         200         MPa         SO 178           Elexural Modulus, 2 mm/min         200         MPa         SO 178           Elexural Modulus, 2 mm/min         200         MPa         SO 178           Elexural Modulus, 2 mm/min         40         MPa         ASTM D256           Elexural Modulus, 2 mm/min         40         MPa         ASTM D256           Elexural Modulus, 2 mm/min	Tensile Modulus, 50 mm/min	2260	MPa	ASTM D638
Tensile Stress, yield, 50 mm/min         59         MPa         ISO 527           Tensile Strain, yield, 50 mm/min         55         MPa         ISO 527           Tensile Strain, yield, 50 mm/min         5         %         ISO 527           Tensile Strain, piedk, 50 mm/min         100         %         ISO 527           Tensile Modulus, 1 mm/min         200         MPa         ISO 128           Flexural Stress, yield, 2 mm/min         88         MPa         ISO 178           Flexural Modulus, 2 mm/min         2300         MPa         ISO 178           Ball Indentation Hardness, H358 (30         95         MPa         ISO 178           Impact, notched, 23°C         731         J/m         ASTM D256           Izo di Impact, notched, 30°C         731         J/m         ASTM D256           Izo di Impact, notched 80°10°3 +23°C         80         J/m²         ASTM D256           Izo di Impact, notched 80°10°3 +23°C         80         J/m²         ISO 180/14           Izo di Impact, notched 80°10°3 +23°C         55         J/m²         ISO 180/14           Izo di Impact, notched 80°10°3 +23°C         18         J/m²         ISO 180/14           Izo di Impact, notched 80°10°4 -23°C         18         J/m²         ISO 180/14	Flexural Stress, yld, 1.3 mm/min, 50 mm span	95	MPa	ASTM D790
Tensile Stress, break, 50 mm/min         55         MPa         ISO 527           Tensile Strain, yield, 50 mm/min         50         %         ISO 527           Tensile Strain, break, 50 mm/min         100         %         ISO 527           Tensile Modulus, 1 mm/min         2000         MPa         ISO 527           Flexural Modulus, 2 mm/min         88         MPa         ISO 178           Ball Indenation Hardness, H358/30         95         MPa         ISO 178           Ball Indenation Hardness, H358/30         731         J/m         ASTM D256           Izod Impact, notched, 23°C         731         J/m         ASTM D256           Izod Impact, notched, 30°C         731         J/m         ASTM D256           Izod Impact, unnotched 80°10°3 +23°C         66         J/m         ASTM D256           Izod Impact, unnotched 80°10°3 +23°C         NB         kJ/m²         ISO 180/14           Izod Impact, unnotched 80°10°3 +23°C         9         kJ/m²         ISO 180/14           Izod Impact, notched 80°10°3 -23°C         9         kJ/m²         ISO 180/14           Izod Impact, notched 80°10°3 -30°C         18         kJ/m²         ISO 180/14           Izod Impact, notched 80°10°3 -30°C         18         kJ/m²         ISO 180/14	Flexural Modulus, 1.3 mm/min, 50 mm span	2330	MPa	ASTM D790
Tensile Strain, yield, 50 mm/min         5         8         Sio 527           Tensile Strain, break, 50 mm/min         100         %         50 527           Tensile Modulus, 1 mm/min         2200         MPa         ISO 527           Flexural Stress, yield, 2 mm/min         88         MPa         ISO 178           Flexural Modulus, 2 mm/min         2300         MPa         ISO 178           Ball Indentation Hardness, H358/30         9         20         MPa         ISO 178           Ball Indentation Hardness, H358/30         3         3         MPa         ISO 189         ISO 189           Ball Indentation Hardness, H358/30         3         3         MPa         ISO 189         ISO 189           Ball Indentation Hardness, H358/30         3         3         MPa         ASTM D256         ISO 189           Ball Indentation Hardness, H358/30         3         3         MPa         ASTM D256         ISO 189         ISO 189           Bub Jank         4         MPa         ASTM D256         ISO 189	Tensile Stress, yield, 50 mm/min	59	MPa	ISO 527
Tensile Strain, break, 50 mm/min         100         %         SO 527           Tensile Modulus, 1 mm/min         2200         MPa         ISO 527           Flexural Stress, yield, 2 mm/min         88         MPa         ISO 178           Flexural Modulus, 2 mm/min         2300         MPa         ISO 178           Ball Indentation Hardness, H358/30         55         MPa         ISO 2039-1           IMPACT (*)**         ****         ****         ****           Izod Impact, notched, 23°C         731         J/m         ASTM D256           Izod Impact, notched, 30°C         560         J         ASTM D256           Izod Impact, unnotched 80°10°3 +23°C         76         J         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         NB         I/m²         ISO 180/10           Izod Impact, notched 80°10°3 +23°C         55         I/m²         ISO 180/1A           Izod Impact, notched 80°10°4 +23°C         53         I/m²         ISO 180/1A           Izod Impact, notched 80°10°4 +23°C         18         I/m²         ISO 180/1A           Izod Impact, notched 80°10°4 +23°C         18         I/m²         ISO 180/1A           Izod Impact, notched 80°10°4 +23°C         18         I/m²         ISO 180/1A	Tensile Stress, break, 50 mm/min	55	MPa	ISO 527
Tensile Modulus, 1 mm/min         2200         MPa         ISO 527           Flexural Stress, yield, 2 mm/min         88         MPa         ISO 178           Flexural Modulus, 2 mm/min         2300         MPa         ISO 178           Ball Indentation Hardness, H358/30         95         MPa         ISO 2039-1           IMPACT <sup>(1)</sup> V         V         V           Izod Impact, notched, 2°C         731         J/m         ASTM D256           Izod Impact, notched, 30°C         560         J/m         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         NB         I/m²         ISO 180/1U           Izod Impact, unnotched 80°10°3 +23°C         NB         I/m²         ISO 180/1U           Izod Impact, unnotched 80°10°3 +23°C         NB         I/m²         ISO 180/1U           Izod Impact, notched 80°10°3 +23°C         55         I/m²         ISO 180/1A           Izod Impact, notched 80°10°3 +23°C         18         I/m²         ISO 180/1A           Izod Impact, notched 80°10°3 +23°C         18         I/m²         ISO 180/1A           Izod Impact, notched 80°10°3 +23°C         18         I/m²         ISO 180/1A           Izod Impact, notched 80°10°3 +23°C         18         I/m²         ISO 180/1A	Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Flexural Stress, yield, 2 mm/min         88         MPa         ISO 178           Flexural Modulus, 2 mm/min         2300         MPa         ISO 178           Ball Indentation Hardness, H358/30         95         MPa         ISO 2039-1           IMPACT (¹¹         Use of Impact, notched, 23°C         731         J/m         ASTM D256           Izod Impact, notched, 30°C         560         J/m         ASTM D256           Izod Impact, unnotched 80°10°3 + 23°C         NB         I/m²         ISO 180/10           Izod Impact, unnotched 80°10°3 + 23°C         NB         I/m²         ISO 180/10           Izod Impact, unnotched 80°10°3 + 23°C         NB         I/m²         ISO 180/10           Izod Impact, notched 80°10°3 + 23°C         55         I/m²         ISO 180/10           Izod Impact, notched 80°10°3 - 30°C         33         I/m²         ISO 180/1A           Izod Impact, notched 80°10°3 - 30°C         36         I/m²         ISO 180/1A           Izod Impact, notched 80°10°3 - 30°C         36         I/m²         ISO 180/1A           Izod Impact, notched 80°10°3 - 30°C         36         I/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         60         I/m²         ISO 180/1A           Charpy - 30°C, V-notch Edgew 80	Tensile Strain, break, 50 mm/min	100	%	ISO 527
Flexural Modulus, 2 mm/min         2300         MPa         ISO 178           Ball Indentation Hardness, H358/30         95         MPa         ISO 2039-1           IMPACT (*)*         Use of Impact, notched, 23°C         731         J/m         ASTM D256           Izod Impact, notched, -30°C         560         J/m         ASTM D256           Istrumented Dart Impact Total Energy, 23°C         67         J/m         ASTM D3763           Izod Impact, unnotched 80°10°3 -23°C         NB         J/m²         ISO 180/10           Izod Impact, notched 80°10°3 -23°C         NB         J/m²         ISO 180/10           Izod Impact, notched 80°10°3 -23°C         NB         J/m²         ISO 180/10           Izod Impact, notched 80°10°3 -23°C         20         Kl/m²         ISO 180/10           Izod Impact, notched 80°10°3 -23°C         20         Kl/m²         ISO 180/10           Izod Impact, notched 80°10°4 -23°C         33         Kl/m²         ISO 180/10           Izod Impact, notched 80°10°4 -30°C         18         J/m²         ISO 180/10           Izod Impact, notched 80°10°4 -30°C         18         J/m²         ISO 180/10           Charpy 23°C, Vnotch Edgew 80°10°3 sp=62mm         60         J/m²         ISO 180/10           Charpy 23°C, Vnotch Edgew	Tensile Modulus, 1 mm/min	2200	MPa	ISO 527
Ball Indentation Hardness, H358/30         95         MPa         SO 2039-1           IMPACT (1)         IMPACT (2)         IMPACT (3)         IMPACT (3)         IMPACT (3)         ASTM D256           Izod Impact, notched, 23°C         560         J/m         ASTM D256           Instrumented Dart Impact Total Energy, 23°C         67         J         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         NB         I/m²         ISO 180/1U           Izod Impact, notched 80°10°3 +23°C         NB         I/m²         ISO 180/1U           Izod Impact, notched 80°10°3 +23°C         55         I/m²         ISO 180/1A           Izod Impact, notched 80°10°3 +23°C         20         I/m²         ISO 180/1A           Izod Impact, notched 80°10°4 +23°C         33         I/m²         ISO 180/1A           Izod Impact, notched 80°10°4 +23°C         18         I/m²         ISO 180/1A           Izod Impact, notched 80°10°4 +23°C         18         I/m²         ISO 180/1A           Izod Impact, notched 80°10°4 specim         2         I/m²         ISO 180/1A           Izod Impact, notched 80°10°4 specim         3         I/m²         ISO 180/1A           Izod Impact, notched 80°10°4 specim         3         I/m²         ISO 180/1A           Izod Im	Flexural Stress, yield, 2 mm/min	88	MPa	ISO 178
IMPACT (1)           Izod Impact, notched, 23°C         731         J/m         ASTM D256           Izod Impact, notched, 30°C         560         J/m         ASTM D256           Instrumented Dart Impact Total Energy, 23°C         67         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         NB         kJ/m²         ISO 180/10           Izod Impact, notched 80°10°3 +23°C         20         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 +23°C         33         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 +23°C         3         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -30°C         18         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -30°C         18         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -30°C         18         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -30°C         18         kJ/m²         ISO 180/1A           Izod Longey 30°C, V-notch Edgew 80°10°3 sp=62mm         60         kJ/m²         ISO 179/1eA           Charpy 30°C, V-notch Edgew 80°10°3 sp=62mm         143         °C         ASTM D648	Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Fixed Impact, notched, 23°C   731	Ball Indentation Hardness, H358/30	95	MPa	ISO 2039-1
Izod Impact, notched, -30°C         560         J/m         ASTM D256           Instrumented Dart Impact Total Energy, 23°C         67         J         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         NB         kl/m²         ISO 180/1U           Izod Impact, unnotched 80°10°3 -30°C         NB         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°3 -23°C         20         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         53         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         18         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         18         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         18         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         18         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         18         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         18         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         18         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         19         RO 19         RO 19           Izod Impact, notched 80°10°4 -23°C	IMPACT (1)			
Instrumented Dart Impact Total Energy, 23°C         67         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         55         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°3 -30°C         20         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         53         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -30°C         18         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -30°C         18         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         60         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         25         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         143         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         143         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         123         °C         ASTM D648           CTE, 40°C to 40°C, flow         7.2E-05         1/°C         ASTM EB31           CTE, 40°C to 40	Izod Impact, notched, 23°C	731	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         55         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         20         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -23°C         53         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -30°C         18         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         60         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         25         kJ/m²         ISO 179/1eA           THERMAL (¹)           Vicat Softening Temp, Rate B/50         143         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         136         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         123         °C         ASTM D648           CTE, 40°C to 40°C, flow         7.2E-05         1/°C         ASTM E831           CTE, 40°C to 40°C, xflow         7.2E-05         1/°C         ASTM E831	Izod Impact, notched, -30°C	560	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         55         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°3 -30°C         20         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 +23°C         53         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -30°C         18         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         60         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         25         kJ/m²         ISO 179/1eA           THERMAL (¹)           Vicat Softening Temp, Rate B/50         143         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         136         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         123         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.2E-05         1/°C         ASTM E831           CTE, -40°C to 40°C, xflow         7.2E-05         1/°C         ASTM E831	Instrumented Dart Impact Total Energy, 23°C	67	J	ASTM D3763
Izod Impact, notched 80*10*3 +23°C         55         kJ/m²         ISO 180/1A           Izod Impact, notched 80*10*3 -30°C         20         kJ/m²         ISO 180/1A           Izod Impact, notched 80*10*4 +23°C         53         kJ/m²         ISO 180/1A           Izod Impact, notched 80*10*4 -30°C         18         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm         60         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm         25         kJ/m²         ISO 179/1eA           THERMAL (1)           Vicat Softening Temp, Rate B/50         143         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         136         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         123         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.2E-05         1/°C         ASTM E831           CTE, -40°C to 40°C, xflow         7.2E-05         1/°C         ASTM E831	Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80°10°3 -30°C         20         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 +23°C         53         kJ/m²         ISO 180/1A           Izod Impact, notched 80°10°4 -30°C         18         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         60         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         25         kJ/m²         ISO 179/1eA           THERMAL <sup>(1)</sup> Vicat Softening Temp, Rate B/50         143         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         136         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         123         °C         ASTM E831           CTE, -40°C to 40°C, flow         7.2E-05         1/°C         ASTM E831	Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C         53         kJ/m²         ISO 180/1A           Izod Impact, notched 80*10*4 -30°C         18         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm         60         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm         25         kJ/m²         ISO 179/1eA           THERMAL <sup>(1)</sup> Vicat Softening Temp, Rate B/50         143         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         136         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         123         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.2E-05         1/°C         ASTM E831           CTE, -40°C to 40°C, xflow         7.2E-05         1/°C         ASTM E831	Izod Impact, notched 80*10*3 +23°C	55	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4-30°C         18         kJ/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm         60         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm         25         kJ/m²         ISO 179/1eA           THERMAL (1)           Vicat Softening Temp, Rate B/50         143         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         136         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         123         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.2E-05         1/°C         ASTM E831           CTE, -40°C to 40°C, xflow         3.2E-05         1/°C         ASTM E831	Izod Impact, notched 80*10*3 -30°C	20	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         60         kJ/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         25         kJ/m²         ISO 179/1eA           THERMAL (1)           Vicat Softening Temp, Rate B/50         143         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         136         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         123         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.2E-05         1/°C         ASTM E831           CTE, -40°C to 40°C, xflow         3.2E-05         1/°C         ASTM E831	Izod Impact, notched 80*10*4 +23°C	53	kJ/m²	ISO 180/1A
Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         25         kJ/m²         ISO 179/1eA           THERMAL <sup>(1)</sup> Vicat Softening Temp, Rate B/50         143         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         136         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         123         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.2E-05         1/°C         ASTM E831           CTE, -40°C to 40°C, xflow         7.2E-05         1/°C         ASTM E831	Izod Impact, notched 80*10*4 -30°C	18	kJ/m²	ISO 180/1A
THERMAL (1)           Vicat Softening Temp, Rate B/50         143         °C         ASTM D648           HDT, 0.45 MPa, 3.2 mm, unannealed         136         °C         ASTM D648           CTE, -40°C to 40°C, flow         7.2E-05         1/°C         ASTM E831           CTE, -40°C to 40°C, xflow         7.2E-05         1/°C         ASTM E831	Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	60	kJ/m²	ISO 179/1eA
Vicat Softening Temp, Rate B/50       143       °C       ASTM D1525         HDT, 0.45 MPa, 3.2 mm, unannealed       136       °C       ASTM D648         HDT, 1.82 MPa, 3.2mm, unannealed       123       °C       ASTM D648         CTE, -40°C to 40°C, flow       7.2E-05       1/°C       ASTM E831         CTE, -40°C to 40°C, xflow       7.2E-05       1/°C       ASTM E831	Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	25	kJ/m²	ISO 179/1eA
HDT, 0.45 MPa, 3.2 mm, unannealed       136       °C       ASTM D648         HDT, 1.82 MPa, 3.2 mm, unannealed       123       °C       ASTM D648         CTE, -40°C to 40°C, flow       7.2E-05       1/°C       ASTM E831         CTE, -40°C to 40°C, xflow       7.2E-05       1/°C       ASTM E831	THERMAL (1)			
HDT, 1.82 MPa, 3.2mm, unannealed       123       °C       ASTM D648         CTE, -40°C to 40°C, flow       7.2E-05       1/°C       ASTM E831         CTE, -40°C to 40°C, xflow       7.2E-05       1/°C       ASTM E831	Vicat Softening Temp, Rate B/50	143	°C	ASTM D1525
CTE, -40°C to 40°C, flow       7.2E-05       1/°C       ASTM E831         CTE, -40°C to 40°C, xflow       7.2E-05       1/°C       ASTM E831	HDT, 0.45 MPa, 3.2 mm, unannealed	136	°C	ASTM D648
CTE, -40°C to 40°C, xflow 7.2E-05 1/°C ASTM E831	HDT, 1.82 MPa, 3.2mm, unannealed	123	°C	ASTM D648
•	CTE, -40°C to 40°C, flow	7.2E-05	1/°C	ASTM E831
<b>CTE, 23°C to 80°C, flow</b> 7.5E-05 1/°C ISO 11359-2	CTE, -40°C to 40°C, xflow	7.2E-05	1/°C	ASTM E831
	CTE, 23°C to 80°C, flow	7.5E-05	1/°C	ISO 11359-2



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, 23°C to 80°C, xflow  Ball Pressure Test, 125°C +/- 2°C	7.5E-05 PASSES	1/°C	ISO 11359-2 IEC 60695-10-2
		°C	
Vicat Softening Temp, Rate B/50	143		ISO 306
Vicat Softening Temp, Rate B/120	144	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	136	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	124	°C	ISO 75/Ae
Relative Temp Index, Elec (2)	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	17	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	16	cm³/10 min	ISO 1133
ELECTRICAL (1)		,	
Dielectric Strength, in oil, 3.2 mm	19	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.7	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.0004	-	IEC 60250
	0.004	-	IEC 60250
Dissipation Factor, 1 MHz		V	
Comparative Tracking Index	175	·	IEC 60112
Relative Permittivity, 50/60 Hz	2.7		IEC 60250
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥0.8	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 3	≥0.8	mm	UL 746A
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	<u>E45329-100079884</u>	-	•
UL Yellow Card Link 2	E45329-488773	-	-
UL Recognized, 94-5VA Flame Class Rating	≥3	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	≥2.5	mm	UL 94
UL Recognized, 94HB Flame Class Rating	≥0.8	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
Glow Wire Ignitability Temperature, 3.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.5 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.0 mm	825	°C	IEC 60695-2-13
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 2.5 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 2.0 mm	960	°C	IEC 60695-2-12



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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
Oxygen Index (LOI)	40	%	ISO 4589
UV-light, water exposure/immersion	F1	-	UL 746C
INJECTION MOLDING (4)			
Drying Temperature	120	°C	
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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