

# LEXANTM COPOLYMER EXL1182T

## **REGION EUROPE**

## **DESCRIPTION**

LEXAN EXL1182T polycarbonate (PC) siloxane copolymer resin is a UV stabilized, enhanced release transparent injection molding (IM) grade. This resin offers good low temperature (-20 C) ductility in combination with high flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC resins and may be an excellent candidate for a broad range of applications.

#### TYPICAL PROPERTY VALUES

Revision 20240108

PROPERTIES     TYPICAL VALUES     UNITS     TEST METHODS       MECHANICAL "1"     ************************************				
Tensile Stress, bd. Type I, 50 mm/min     57     ASTM D63R       Tensile Stress, bd. Type I, 50 mm/min     57     ASTM D63R       Tensile Strain, bd. Type I, 50 mm/min     17.9     & ASTM D63R       Tensile Strain, bd. Type I, 50 mm/min     17.9     & ASTM D63R       Tensile Strain, bd. Type I, 50 mm/min     260     Mra     ASTM D63R       Tensile Strain, bd. Type I, 50 mm/min     220     Mra     ASTM D63R       Flexural Modulus, 13 mm/min, 50 mm span     57     Mra     ASTM D79Q       Tensile Stress, yield, 50 mm/min     56     Mra     S0 527       Tensile Stress, yield, 50 mm/min     54     Wra     S0 527       Tensile Strain, lyield, 50 mm/min     54     Wra     S0 527       Tensile Strain, break, 50 mm/min     194     Wra     S0 527       Tensile Strain, break, 50 mm/min     194     Wra     S0 527       Tensile Strain, break, 50 mm/min     194     Wra     S0 178       Tensile Strain, break, 50 mm/min     194     Wra     S0 178       Tensile Strain, break, 50 mm/min     194     Wra     S0 178       Tensile Strain, break,	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Stress, brk, Type I, 50 mm/min     57     MRIA     ASTM DGSR       Tensile Strain, Jrk, Type I, 50 mm/min     57     8     ASTM DGSR       Tensile Modulus, 50 mm/min     260     Ma     ASTM DGSR       Flexural Stress, Jrkd, 1,3 mm/min, 50 mm span     240     Ma     ASTM DGSR       Tensile Modulus, 1,3 mm/min, 50 mm span     240     Ma     ASTM DGS       Tensile Stress, Jred, 50 mm/min     5     Ma     SO 527       Tensile Stress, Jred, 50 mm/min     6     Ma     SO 527       Tensile Stress, Jred, 50 mm/min     54     8     SO 527       Tensile Stress, Jred, 50 mm/min     54     8     SO 527       Tensile Stress, Jred, 50 mm/min     54     8     SO 527       Tensile Stress, Jred, 50 mm/min     19,4     8     SO 527       Tensile Stress, Jred, 50 mm/min     19,4     8     SO 527       Tensile Stress, Jred, 50 mm/min     19,0     SO 527       Tensile Stress, Jred, 50 mm/min     19,0     SO 527       Tensile Stress, Jred, 50 mm/min     19,0     Mra     SO 152       Tensile Stress, Jred, 50 mm/m	MECHANICAL (1)			
Tensile Strain, yld, Yippe 1,50 mm/min     57     ASTM D638       Tensile Strain, brk, Type 1,50 mm/min     117.9     %     ASTM D638       Tensile Strain, brk, Type 1,50 mm/min     260     MPa     ASTM D638       Tensile Modulus, 50 mm/min     260     MPa     ASTM D790       Elexaral Modulus, 1.3 mm/min, 50 mm span     240     MPa     ASTM D790       Tensile Stress, yleid, 50 mm/min     5     MPa     SS 527       Tensile Stress, Deak, 50 mm/min     5     4     %     D5 527       Tensile Strain, Dreak, 50 mm/min     5     4     %     D5 527       Tensile Strain, Dreak, 50 mm/min     194     %     D5 527       Tensile Strain, Dreak, 50 mm/min     240     MPa     D5 527       Tensile Strain, Dreak, 50 mm/min     240     MPa     D5 527       Tensile Strain, Dreak, 50 mm/min     240     MPa     D5 527       Tensile Strain, Dreak, 50 mm/min     240     MPa     D5 178       Tensile Strain, Dreak, 50 mm/min     240     MPa     D5 178       Tensile Strain, Dreak, 50 mm/min     240     MPa     D5 1	Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D638
Tensile Strain, br., Type J, 50 mm/min     17.9     % Polame     ATM D638       Tensile Modulus, 50 mm/min     2260     MPa     ATM D638       Flexural Stress, yid. 1.3 mm/min, 50 mm span     94     MPa     ATM D790       Tensile Stress, yield, 50 mm/min     57     MPa     SD 527       Tensile Stress, yield, 50 mm/min     56     MPa     SD 527       Tensile Stress, yield, 50 mm/min     54     MPa     SD 527       Tensile Stress, yield, 50 mm/min     54     %     SD 527       Tensile Stress, yield, 50 mm/min     194     %     SD 527       Tensile Modulus, 1 mm/min     194     %     SD 527       Tensile Modulus, 1 mm/min     194     %     SD 527       Tensile Modulus, 1 mm/min     9     MPa     SD 527       Tensile Modulus, 1 mm/min     194     MPa     SD 178       Elevarl Stress, yield, 2 mm/min     8     9     MPa     SD 178       Elevarl Stress, yield, 2 mm/min     8     9     MPa     SD 178       Block Larry Stress, yield, 2 mm/min     4     MPa     SD 178     S	Tensile Stress, brk, Type I, 50 mm/min	57	MPa	ASTM D638
Tensile Modulus, 50 mm/min     2600     MPa     ASTM D638       Flexural Stress, yld, 1.3 mm/min, 50 mm span     94     MPa     ASTM D790       Flexural Modulus, 1.3 mm/min, 50 mm span     2240     MPa     ASTM D790       Tensile Stress, yled, 50 mm/min     56     MPa     S0 527       Tensile Stress, break, 50 mm/min     54     MPa     80 527       Tensile Strain, yield, 50 mm/min     19.4     %     105 27       Tensile Strain, break, 50 mm/min     54     MPa     80 527       Tensile Modulus, 1 mm/min     9.4     MPa     80 527       Tensile Strain, break, 50 mm/min     19.4     MPa     80 527       Tensile Modulus, 1 mm/min     9.4     NPa     80 527       Tensile Strain, break, 50 mm/min     19.4     MPa     80 527       Tensile Strain, preak, 50 mm/min     19.4     MPa     80 527       Tensile Strain, preak 50 mm/min     19.4     MPa     80 527       Tensile Strain, preak 50 mm/min     19.4     MPa     80 527       Tensile Strain, break 50 mm/min     40 50     MPa     80 50 78 <tr< th=""><th>Tensile Strain, yld, Type I, 50 mm/min</th><th>5.7</th><th>%</th><th>ASTM D638</th></tr<>	Tensile Strain, yld, Type I, 50 mm/min	5.7	%	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span     94     MPa     ASTM D790       Flexural Modulus, 1.3 mm/min, 50 mm span     2240     MPa     ASTM D790       Tensile Stress, yleid, 50 mm/min     56     MPa     050 527       Tensile Stress, break, 50 mm/min     54     %     050 527       Tensile Strain, break, 50 mm/min     19.4     %     050 527       Tensile Strain, break, 50 mm/min     2340     MPa     050 527       Tensile Modulus, 1 mm/min     2340     MPa     050 527       Flexural Stress, yleid, 2 mm/min     2340     MPa     050 527       Tensile Modulus, 1 mm/min     2340     MPa     050 72       Tensile Modulus, 1 mm/min     2340     MPa     050 72       Tensile Modulus, 2 mm/min     2340     MPa     050 72       Tensile Modulus, 1 mm/min     2340     MPa     050 72       Tensile Modulus, 1 mm/min     2340     MPa     050 72       Tensile Modulus, 1 mm/min     2340     MPa     050 78       Televactor     2 mm     1 mm     2 mm     2 mm       Televactor	Tensile Strain, brk, Type I, 50 mm/min	117.9	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span     2240     MPa     ASTM 0790       Tensile Stress, yield, 50 mm/min     57     MPa     50.527       Tensile Stress, break, 50 mm/min     56     MPa     50.527       Tensile Strain, yield, 50 mm/min     19.4     %     50.527       Tensile Modulus, 1 mm/min     240     MPa     05.527       Flexural Stress, yield, 2 mm/min     29     MPa     05.72       Flexural Modulus, 2 mm/min     240     MPa     05.72       Flexural Stress, yield, 2 mm/min     29     MPa     05.178       Brown Jame     2     10     MPa     05.78       Brown Jame     3     9     9     07.78     07.78     07.78       Brown Jame     3     9     9     10     08     07.78	Tensile Modulus, 50 mm/min	2260	MPa	ASTM D638
Tensile Stress, yield, 50 mm/min     57     MPa     100 527       Tensile Strain, yield, 50 mm/min     54     48     100 527       Tensile Strain, yield, 50 mm/min     54     8     100 527       Tensile Strain, break, 50 mm/min     119.4     8     100 527       Tensile Modulus, 1 mm/min     2340     MPa     100 527       Flexural Stress, yield, 2 mm/min     89     MPa     100 178       Flexural Modulus, 2 mm/min     140     MPa     101 78       Flexural Stress, yield, 2 mm/min     89     MPa     101 78       Flexural Modulus, 2 mm/min     19     40     100 178       Flexural Modulus, 2 mm/min     19     100 180     100 180       Instrumented Dart Impact, notched, 23°C     75     11     11     25     11     25     11     26     11     26     11     26     11     26     11     26     11     26     11     26     11     26     11     26     11     26     11     26     11     26     11     26 <t< th=""><th>Flexural Stress, yld, 1.3 mm/min, 50 mm span</th><th>94</th><th>MPa</th><th>ASTM D790</th></t<>	Flexural Stress, yld, 1.3 mm/min, 50 mm span	94	MPa	ASTM D790
Tensile Stress, break, 50 mm/min     56     MPa     ISO 527       Tensile Strain, yield, 50 mm/min     54     %     ISO 527       Tensile Strain, break, 50 mm/min     119.4     %     ISO 527       Tensile Modulus, 1 mm/min     2340     MPa     ISO 527       Elexural Stress, yield, 20 mm/min     89     MPa     ISO 178       Elexural Modulus, 2 mm/min     36     MPa     ISO 178       Elexural Modulus, 2 mm/min     43     MPa     ISO 178       Elexural Modulus, 2 mm/min     43     MPa     ISO 178       Elexural Modulus, 2 mm/min     43     MPa     ISO 180       Instruction Minary Minary Minary Minary Minary Minary Minary M	Flexural Modulus, 1.3 mm/min, 50 mm span	2240	MPa	ASTM D790
Tensile Strain, yield, 50 mm/min     5.4     %     50.527       Tensile Strain, break, 50 mm/min     119.4     %     50.527       Tensile Modulus, 1 mm/min     2340     MPa     50.527       Flexural Stress, yield, 2 mm/min     89     MPa     50.178       IMPACT <sup>(1)</sup> V     V     50.178       Impact, notched, 2°C     736     J/m     ASTM D256       Izod Impact, notched, 3°C     618     J/m     ASTM D256       Izod Impact, notched 80°10°4 +23°C     47     J/m²     S0 180/1A       Izod Impact, notched 80°10°4 sp=62mm     47     J/m²     S0 180/1A       Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm     17     S0 179/1eA       Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm     13     2     S0 179/1eA       THERMAL <sup>(1)</sup> V     S0 179/1eA     S0 179/1eA       THERMAL <sup>(1)</sup> Y     S0 179/1eA     S0 179/1eA       THERMAL <sup>(1)</sup> Y     S0 179/1eA     S0 179/1eA       THERMAL <sup>(1)</sup> Y     S0 179/1eA     S0 179/1eA       THERMAL <sup>(1)</sup> S0 179/1eA     S0 179/1e	Tensile Stress, yield, 50 mm/min	57	MPa	ISO 527
Tensile Strain, break, 50 mm/min     119.4     %     50.527       Tensile Modulus, 1 mm/min     2340     MPa     S0.527       Flexural Stress, yield, 2 mm/min     89     MPa     S0.178       Impact Policy     Use of Impact, notched, 2°C     36     MPa     S0.178       Izod Impact, notched, 30°C     376     J/m     ASTM D256       Izod Impact, notched, 30°C     46     J/m     ASTM D256       Izod Impact, notched, 80°10°4 + 23°C     74     J/m²     ASTM D256       Izod Impact, notched, 80°10°4 + 23°C     42     J/m²     S0.180/1A       Izod Impact, notched, 80°10°4 + 23°C     24     J/m²     S0.180/1A       Izod Impact, notched, 80°10°4 + 23°C     24     J/m²     S0.199/1eA       Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm     17     S0.179/1eA       Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm     13     °C     ASTM D1525       HDT, 1.82 MPa, 3.2mm, unannealed     12     °C     ASTM D256       HDT, 1.82 MPa, 3.2mm, unannealed     12     S0.1359.2     S0.11359.2       CTE, 23°C to 80°C, xflow     7.64e05     7.64e05 <th>Tensile Stress, break, 50 mm/min</th> <th>56</th> <th>MPa</th> <th>ISO 527</th>	Tensile Stress, break, 50 mm/min	56	MPa	ISO 527
Tensile Modulus, 1 mm/min     340     MPa     ISO 527       Flexural Stress, yield, 2 mm/min     89     MPa     ISO 178       Impact I Modulus, 2 mm/min     2140     MPa     ISO 178       IMPACT II     Use of Impact, notched, 23°C     36     J/m     ASTM D256       Izod Impact, notched, 30°C     618     J/m     ASTM D256       Izod Impact, notched 80°10°4 + 23°C     47     I/m     ISO 180/1A       Izod Impact, notched 80°10°4 spe 62mm     47     I/m     ISO 180/1A       Icony 23°C, V-notch Edgew 80°10°4 spe 62mm     16     I/m     ISO 180/1A       Charpy -30°C, V-notch Edgew 80°10°4 spe 62mm     17     I/m     ISO 179/1eA       THERMAL II     I     I/m     ISO 179/1eA       THERMAL II     2     ASTM D1525       PLD, 1.82 MPa, 3.2mm, unannealed     12     C     ASTM D468       CTE, -40°C to 95°C, flow     7.48-05     1/°C     ASTM E831       CTE, 20°C to 80°C, flow     7.48-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.48-05     1/°C     ASTM E831       CTE,	Tensile Strain, yield, 50 mm/min	5.4	%	ISO 527
Flexural Stress, yield, 2 mm/min     89     MPa     SO 178       Flexural Modulus, 2 mm/min     2140     MPa     SO 178       IMPACT (*)     US     SATM D256       Izod Impact, notched, 23°C     736     I/m     ASTM D256       Izod Impact, notched, 30°C     618     I/m     ASTM D3763       Izod Impact, notched 80°10°4 23°C     74     I/m     SO 180/1A       Izod Impact, notched 80°10°4 59°C     47     I/m     SO 180/1A       Izod Impact, notched 80°10°4 59°E02m     47     I/m     SO 180/1A       Charpy 23°C, V-notch Edgew 80°10°4 59°E02m     61     I/m     SO 179/1EA       Charpy 30°C, V-notch Edgew 80°10°4 59°E02m     17     SO 179/1EA       HDT, 1.82 MPa, 32mm, unannealed     18     °     ASTM D525       HDT, 1.82 MPa, 32mm, unannealed     1,26     ASTM D536       CTE, 24°C to 95°C, flow     4,280     1,2°C     ASTM D548       CTE, 24°C to 80°C, flow     4,280     1,2°C     SO 13359-2       CTE, 23°C to 80°C, flow     4,280     1,2°C     SO 13359-2       Vicas Softening Temp, Rate 8/50     18 <th>Tensile Strain, break, 50 mm/min</th> <td>119.4</td> <td>%</td> <td>ISO 527</td>	Tensile Strain, break, 50 mm/min	119.4	%	ISO 527
Fleaural Modulus, 2 mm/min 2140 MPa 1517 MPaCT 11 MPACT 11 MPACT 11 MPACT 11 MPACT 11 MPACT 12 MPACT 12 MPACT 13 MPACT 13 MPACT 14 MPACT 14 MPA MPA MPA MPACT 14 MPA MPA MPACT 14 MPA MPA MPA MPA MPA MPACT 15 MPA	Tensile Modulus, 1 mm/min	2340	MPa	ISO 527
MPACT (1)       tool Impact, notched, 23°C     736     J/m     ASTM 0256       tool Impact, notched, 30°C     618     J/m     ASTM 0256       tool Impact, notched 80°10°4 + 23°C     74     J     ASTM 03763       tool Impact, notched 80°10°4 + 23°C     47     kJ/m²     50 180/1A       tool Impact, notched 80°10°4 + 30°C     24     kJ/m²     50 180/1A       tool Impact, notched 80°10°4 + 30°C     34     kJ/m²     50 180/1A       tool Impact, notched 80°10°4 + 30°C     34     kJ/m²     50 180/1A       tool Impact, notched 80°10°4 + 30°C     34     kJ/m²     50 180/1A       tool Impact, notched 80°10°4 + 30°C     34     kJ/m²     50 19/1A       tool Impact, notched 80°10°4 + 30°C     34     50 19/1A     50 19/1A       tool Mary 30°C, V-notch Edgew 80°10°4 sp=62mm     18     °     60     ASTM 1525       total Softening Temp, Rate A/50     188     °     85 MT 1525     60       total Softening Temp, Rate B/50     748E-05     10°C     85 MT 1539-2     60     60     60     60     60     60     <	Flexural Stress, yield, 2 mm/min	89	MPa	ISO 178
Ized Impact, notched, 23°C     736     J/m     ASTM D256       Ized Impact, notched, -30°C     618     J/m     ASTM D256       Instrumented Dart Impact Total Energy, 23°C     74     J/m     ASTM D3763       Ized Impact, notched 80°10°4 + 23°C     47     Ix/m²     Ix/m²     ISO 180/1A       Ized Impact, notched 80°10°4 + 23°C     24     Ix/m²     Ix/m²     ISO 180/1A       Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm     61     Ix/m²     Ix/m²     ISO 179/1eA       Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm     17     Ix/m²     Ix/m²     IX/m²     IX/m²       Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm     138     °C     ASTM D1525     ASTM D1525       Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm     138     °C     ASTM D1525     ASTM D1525       HDT, 1.82 MPa, 3.2mm, unannealed     121     °C     ASTM D648     ASTM D648       CTE, 40°C to 95°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 40°C to 95°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.48E-05     1/°C     S0 306	Flexural Modulus, 2 mm/min	2140	MPa	ISO 178
Icod Impact, notched, -30°C     618     J/m     ASTM D256       Instrumented Dart Impact Total Energy, 23°C     74     J     ASTM D3763       Izod Impact, notched 80°10°4 +23°C     47     kl/m²     ISO 180/1A       Izod Impact, notched 80°10°4 -30°C     24     kl/m²     ISO 180/1A       Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm     61     kl/m²     ISO 179/1eA       Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm     17     kl/m²     ISO 179/1eA       Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm     17     C     ASTM D1525       Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm     138     °C     ASTM D1525       HDT, 1.82 MPa, 3.2mm, unannealed     138     °C     ASTM D1525       HDT, 1.82 MPa, 3.2mm, unannealed     7.48E-05     1/°C     ASTM D648       CTE, 40°C to 95°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.64E-05     1/°C     ISO 1359-2       CTE, 23°C to 80°C, flow     7.64E-05     1/°C     ISO 1359-2       Vicat Softening Temp, Rate B/50     138     °C     ISO 306       Vicat Softening Temp, Rate B/120	IMPACT (1)			
Instrumented Dart Impact Total Energy, 23°C     74     J     ASTM D3763       Izod Impact, notched 80°10°4 + 23°C     47     Ix/m²     ISO 180/1A       Izod Impact, notched 80°10°4 - 30°C     24     IX/m²     ISO 180/1A       Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm     61     IX/m²     ISO 179/1eA       Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm     17     IX/m²	Izod Impact, notched, 23°C	736	J/m	ASTM D256
Izod Impact, notched 80°10°4 +23°C     47     kl/m²     ISO 180/1A       Izod Impact, notched 80°10°4 -30°C     24     kl/m²     ISO 180/1A       Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm     61     kl/m²     ISO 179/1eA       Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm     17     kl/m²     ISO 179/1eA       THERMAL <sup>(1)</sup> Vicat Softening Temp, Rate A/50     188     °C     ASTM D1525       HDT, 1.82 MPa, 3.2mm, unannealed     121     °C     ASTM D648       CTE, -40°C to 95°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.64E-05     1/°C     ISO 11359-2       Vicat Softening Temp, Rate B/50     188     °C     ISO 306       Vicat Softening Temp, Rate B/120     198     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm     116     °C     ISO 75/Af	Izod Impact, notched, -30°C	618	J/m	ASTM D256
Izod Impact, notched 80*10*4 -30°C     24     kJ/m²     ISO 180/1A       Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm     61     kJ/m²     ISO 179/1eA       Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm     17     kJ/m²     ISO 179/1eA       THERMAL <sup>(1)</sup> Vicat Softening Temp, Rate A/50     138     °C     ASTM D1525       HDT, 1.82 MPa, 3.2mm, unannealed     121     °C     ASTM D648       CTE, 40°C to 95°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.64E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.64E-05     1/°C     ISO 11359-2       CTE, 23°C to 80°C, flow     7.64E-05     1/°C     ISO 11359-2       CTE, 23°C to 80°C, xflow     138     °C     ISO 306       Vicat Softening Temp, Rate B/50     138     °C     ISO 306       Vicat Softening Temp, Rate B/120     139     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     116     °C     ISO 75/Af	Instrumented Dart Impact Total Energy, 23°C	74	J	ASTM D3763
Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm     61     kJ m²     ISO 179/1eA       Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm     17     kJ m²     ISO 179/1eA       THERMAL¹¹¹       Vicat Softening Temp, Rate A/50     138     °C     ASTM D1525       HDT, 1.82 MPa, 3.2mm, unannealed     121     °C     ASTM D648       CTE, -40°C to 95°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.48E-05     1/°C     ISO 11359-2       CTE, 23°C to 80°C, flow     7.64E-05     1/°C     ISO 11359-2       Vicat Softening Temp, Rate B/50     138     °C     ISO 306       Vicat Softening Temp, Rate B/120     139     °C     ISO 306       HDT/Af, 1.8 MPa Flatuw 80°10°4 sp=64mm     116     °C     ISO 75/Af	Izod Impact, notched 80*10*4 +23°C	47	kJ/m²	ISO 180/1A
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm     17     kJ/m²     ISO 179/1eA       THERMAL <sup>(1)</sup> Vicat Softening Temp, Rate A/50     138     °C     ASTM D1525       HDT, 1.82 MPa, 3.2mm, unannealed     121     °C     ASTM D648       CTE, -40°C to 95°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.48E-05     1/°C     ISO 11359-2       CTE, 23°C to 80°C, xflow     7.64E-05     1/°C     ISO 306       Vicat Softening Temp, Rate B/50     138     °C     ISO 306       Vicat Softening Temp, Rate B/120     196     ISO 306     HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     116     °C     ISO 75/Af	Izod Impact, notched 80*10*4 -30°C	24	kJ/m²	ISO 180/1A
THERMAL (1)       Vicat Softening Temp, Rate A/50     138     °C     ASTM D1525       HDT, 1.82 MPa, 3.2mm, unannealed     121     °C     ASTM D648       CTE, -40°C to 95°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.48E-05     1/°C     ISO 11359-2       CTE, 23°C to 80°C, flow     7.64E-05     1/°C     ISO 306       Vicat Softening Temp, Rate B/50     138     °C     ISO 306       Wicat Softening Temp, Rate B/120     196     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     116     °C     ISO 75/Af	Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	61	kJ/m²	ISO 179/1eA
Vicat Softening Temp, Rate A/50     138     °C     ASTM D1525       HDT, 1.82 MPa, 3.2mm, unannealed     121     °C     ASTM D648       CTE, 40°C to 95°C, flow     7.48E-05     1,°C     ASTM E831       CTE, 23°C to 80°C, flow     7.64E-05     1,°C     ASTM E831       CTE, 23°C to 80°C, flow     7.64E-05     1,°C     SO 11359-2       Vicat Softening Temp, Rate B/50     138     °C     ISO 306       Vicat Softening Temp, Rate B/120     139     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     116     °C     ISO 75/Af	Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	17	kJ/m²	ISO 179/1eA
HDT, 1.82 MPa, 3.2mm, unannealed     121     °C     ASTM D648       CTE, -40°C to 95°C, flow     7.48E-05     1/°C     ASTM E831       CTE, 23°C to 95°C, xflow     7.64E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, xflow     7.48E-05     1/°C     ISO 11359-2       CTE, 23°C to 80°C, xflow     7.64E-05     1/°C     ISO 306       Vicat Softening Temp, Rate B/50     138     °C     ISO 306       Vicat Softening Temp, Rate B/120     139     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     116     °C     ISO 75/Af	THERMAL (1)			
CTE, -40°C to 95°C, flow   7.48E-05   1/°C   ASTM E831     CTE, -40°C to 95°C, xflow   7.64E-05   1/°C   ASTM E831     CTE, 23°C to 80°C, flow   7.48E-05   1/°C   ISO 11359-2     CTE, 23°C to 80°C, xflow   7.64E-05   1/°C   ISO 306     Vicat Softening Temp, Rate B/50   138   °C   ISO 306     Vicat Softening Temp, Rate B/120   139   °C   ISO 306     HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm   116   °C   ISO 75/Af	Vicat Softening Temp, Rate A/50	138	°C	ASTM D1525
CTE, -40°C to 95°C, xflow     7.64E-05     1/°C     ASTM E831       CTE, 23°C to 80°C, flow     7.48E-05     1/°C     ISO 11359-2       CTE, 23°C to 80°C, xflow     7.64E-05     1/°C     ISO 1359-2       Vicat Softening Temp, Rate B/50     138     °C     ISO 306       Vicat Softening Temp, Rate B/120     139     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     116     °C     ISO 75/Af	HDT, 1.82 MPa, 3.2mm, unannealed	121	°C	ASTM D648
CTE, 23°C to 80°C, flow   7.48E-05   1/°C   ISO 11359-2     CTE, 23°C to 80°C, xflow   7.64E-05   1/°C   ISO 11359-2     Vicat Softening Temp, Rate B/50   138   °C   ISO 306     Vicat Softening Temp, Rate B/120   139   °C   ISO 306     HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm   116   °C   ISO 75/Af	CTE, -40°C to 95°C, flow	7.48E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, xflow   7.64E-05   1/°C   ISO 11359-2     Vicat Softening Temp, Rate B/50   138   °C   ISO 306     Vicat Softening Temp, Rate B/120   139   °C   ISO 306     HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm   116   °C   ISO 75/Af	CTE, -40°C to 95°C, xflow	7.64E-05	1/°C	ASTM E831
Vicat Softening Temp, Rate B/50     138     °C     ISO 306       Vicat Softening Temp, Rate B/120     139     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     116     °C     ISO 75/Af	CTE, 23°C to 80°C, flow	7.48E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/120     139     °C     ISO 306       HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm     116     °C     ISO 75/Af	CTE, 23°C to 80°C, xflow	7.64E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 116 °C ISO 75/Af	Vicat Softening Temp, Rate B/50	138	°C	ISO 306
·	Vicat Softening Temp, Rate B/120	139	°C	ISO 306
Relative Temp Index, Elec <sup>(2)</sup> 130 °C UL 746B	HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	116	°C	ISO 75/Af
	Relative Temp Index, Elec <sup>(2)</sup>	130	°C	UL 746B



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Temp Index, Mech w/o impact (2)	130	°C	UL 746B
PHYSICAL (1)			
Specific Gravity	1.19	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup>	0.4 - 0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	20	g/10 min	ASTM D1238
Density	1.19	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.24	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.09	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	19	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
Glow Wire Ignitability Temperature, 3.0 mm	850	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	850	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 0.8 mm	850	°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	825	°C	IEC 60695-2-12
Glow Wire Flammability Index, 0.8 mm	825	°C	IEC 60695-2-12
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	

<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.

#### **MORE INFORMATION**

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

<sup>(2)</sup> 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.

<sup>(3)</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. 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.

<sup>(4)</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.



# **DISCLAIMER**

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.