

# LEXAN™ COPOLYMER HFD1711

REGION EUROPE

## DESCRIPTION

25 MFR LEXAN High Flow Ductile Copolymer

# TYPICAL PROPERTY VALUES

Revision 20240624

MECXAMUCAL <sup>(1)</sup> Viral         ATM D638           Tensils Strass, yik, Type I, S0 mm /min         60         M/a         ATM D638           Tensils Strain, yik, Type I, S0 mm /min         60         M/a         ATM D638           Tensils Strain, yik, Type I, S0 mm /min         132         %         ATM D638           Tensils Strain, yik, Type I, S0 mm /min         132         %         ATM D638           Tensils Strain, yik, Type I, S0 mm /min         2230         M/a         ATM D638           Tensils Korks, yik I, 3 mm /min, S0 mm span         2220         M/a         ATM D730           Flexard Moduku, 1 3 mm /min, S0 mm span         2220         M/a         ASTM D730           Tensils Korks, yik I, 50 mm /min         62         M/a         SD 527           Tensils Korks, yik I, 50 mm /min         61         M/a         SD 527           Tensils Korks, yik I, 50 mm /min         61         M/a         SD 527           Tensils Korks, yik I, 70 mm /min         100         M/a         SD 527           Tensils Korks, yik I, 70 mm /min         9         M/a         SD 527           Tensils Korks, yik I, 70 mm /min         10         N/a         SD 527           Tensils Korks, yik I, 70 mm /min         10         SD 180         SD 180	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Stress, birk, Type I, 50 mm/min60MPaASTM D638Tensile Strain, vid, Type I, 50 mm/min132%ASTM D638Tensile Strain, birk, Type I, 50 mm/min132%ASTM D638Tensile Modulus, 5 mm /min2230MPaASTM D638Revaral Stress, yid, 1.3 mm/min, 50 mm span220MPaASTM D790Revaral Modulus, 1.3 mm/min, 50 mm span220MPaASTM D790Revaral Modulus, 1.3 mm/min, 50 mm span220MPaASTM D790Tensile Stress, break, 50 mm/min62MPaBS0 527Tensile Stress, break, 50 mm/min63MPaBS0 527Tensile Stress, break, 50 mm/min123%BS0 527Tensile Strass, break, 50 mm/min123%BS0 527Tensile Strass, break, 50 mm/min1280MPaBS0 180Lod Impact, notched, 30°C78JJmASTM D256Lod Impact, notched, 30°C8JJmASTM D256Lod Impact, unotched S0°10'3 +22°C64JJm <sup>2</sup> BS0 180/14Lod I	MECHANICAL <sup>(1)</sup>			
Tensile Strain, Vid. Type I, 50 mm /min         6         %         ASIM D638           Tensile Strain, brk, Type I, 50 mm /min         122         %         ASIM D638           Tensile Modulus, 5 mm /min         2230         Ma         ASIM D638           Flexural Stees, (d, 1.3 mm /min, 50 mm span         9         Ma         ASIM D790           Hardness, Rockwell R         120         -         ASIM D785           Tensile Stees, yield, 50 mm /min         6         Ma         150 527           Tensile Stees, break, 50 mm /min         6         %         80 527           Tensile Stees, break, 50 mm /min         6         %         80 527           Tensile Stees, break, 50 mm /min         128         %         80 527           Tensile Stees, break, 50 mm /min         128         Ma         50 178           Flexural Modulus, 2 mm /min         9         Ma         50 178           Tensile Modulus, 2 mm /min         1280         Ma         50 178           Tensile Modulus, 2 mm /min         9         Ma         50 178           Tensile Modulus, 2 mm /min         9         Ma         50 178           Tensile Modulus, 2 mm /min         9         Ma         50 178           Tensile Modulus, 2 mm /min         <	Tensile Stress, yld, Type I, 50 mm/min	59	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 m/min         132         %         ASTM D638           Tensile Modulus, 5 mm/min         2230         MPa         ASTM D638           Flexural Modulus, 5 mm/min, 50 mm span         99         MPa         ASTM D790           Flexural Modulus, 1 mm/min, 50 mm span         2200         MPa         ASTM D790           Harciness, Rockwell R         120         -         ASTM D785           Tensile Stress, yield, 50 mm/min         62         MPa         Boo S27           Tensile Stress, break, 50 mm/min         63         MSa         Boo S27           Tensile Stress, yield, 50 mm/min         63         So S27         So S27           Tensile Modulus, 1 mm/min         123         %         Boo S27           Tensile Modulus, 2 mm/min         01         MPa         Boo S27           Tensile Modulus, 2 mm/min         1280         MPa         Boo S27           Tensile Modulus, 2 mm/min         1280         MPa         Boo S27           Ized Impact, notched, 23°C         812         J/m         ASTM D256           Ized Impact, notched, 32°C         78         J/m         ASTM D256           Ized Impact, notched, 910°3 - 23°C         67         J         ASTM D256           Ized Impact, no	Tensile Stress, brk, Type I, 50 mm/min	60	MPa	ASTM D638
Tensile Modulus, 5mm/min         2230         MPa         ASTM D638           Flexural Stress, yild, 1.3 mm/min, 50 mm span         99         MPa         ASTM D790           Flexural Modulus, 1.3 mm/min, 50 mm span         2200         MPa         ASTM D780           Tensile Stress, yield, 50 mm/min         62         MPa         S0 527           Tensile Stress, break, 50 mm/min         64         MPa         S0 527           Tensile Stress, break, 50 mm/min         62         MPa         S0 527           Tensile Stress, yield, 2 mm/min         61         %         S0 527           Tensile Stress, yield, 2 mm/min         2180         MPa         S0 527           Tensile Modulus, 1 mm/min         2180         MPa         S0 178           Flexural Stress, yield, 2 mm/min         90         MPa         S0 178           Tensile Modulus, 2 mm/min         2180         MPa         S0 178           MPACT <sup>11</sup> 10         MS1         S0 178           Ized Impact, notched, 30°C         125         JJm         ASTM 0256           Ized Impact, notched, 80°C 32°C         126         Jma         S0 180/10           Ized Impact, notched, 30°C         126         JJm         S0 180/10           Ized Impact, notched, 8	Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Flexural Xeress, yid, 1.3 mm/min, 50 mm span99MFaASTM D790Hardness, Rockwell R120MPaASTM D790Hardness, Rockwell R120%10S0527Tensile Stress, yield, 50 mm/min65MPaS0527Tensile Stress, bresk, 50 mm/min6%10S0527Tensile Stress, yield, 20 mm/min123%10S0527Tensile Stress, yield, 20 mm/min2180MPaS0527Tensile Stress, yield, 20 mm/min0MPaS0527Tensile Modulus, 1 mm/min90MPaS0578Hexural Xerss, yield, 20 mm/min90MPaS0178Hexural Modulus, 2 mm/min91MPaS0178Tensile Modulus, 2 mm/min90MPaS0178Hexural Xerss, yield, 20 mm/min91MPaS0178Ideau Tensile Modulus, 2 mm/min91MPaS0178Hexural Modulus, 2 mm/min91MPaS0178Ideau Tensile Antoched, 30°C812JJmASTM D256Izod Impact, notched, 30°C812JJmS0180Izod Impact, notched, 30°C81S0140S0180Izod Impact, unotched S010°3 +23°C64KJm²S0180/14Izod Impact, unotched S010°3 +23°C13KIm²S0180/14Izod Impact, unotched S010°3 +23°C13KIm²S0180/14Izod Impact, unotched S010°3 +23°C13KIm²S0180/14Izod Impact, unotched S010°3 +23°C13S0140S0140Izod Impact, unotched S010°3 +23°C <t< td=""><td>Tensile Strain, brk, Type I, 50 mm/min</td><td>132</td><td>%</td><td>ASTM D638</td></t<>	Tensile Strain, brk, Type I, 50 mm/min	132	%	ASTM D638
Hearral Modulus, 1.3 mm/min, 50 mm yan         2220         MPa         ASTM D790           Hardness, Rockwell R         120         ASTM D785           Tensile Stress, yield, 50 mm/min         62         MPa         50.527           Tensile Stress, break, 50 mm/min         63         K0.527         50.527           Tensile Strain, yield, 50 mm/min         123         %         50.527           Tensile Strain, break, 50 mm/min         2180         MPa         50.527           Tensile Strain, break, 50 mm/min         2180         MPa         50.527           Tensile Modulus, 1 mm/min         2180         MPa         50.178           Hexural Modulus, 2 mm/min         2180         MPa         50.178           Ideal Impact, notched, 23°C         812         J/m         ASTM 0256           Izod Impact, notched, 30°C         789         J/m         ASTM 0256           Izod Impact, notched 30°C         789         J/m         ASTM 0256           Izod Impact, unotched 80°10°3 + 23°C         81         M/m <sup>2</sup> 50.180/10           Izod Impact, unotched 80°10°3 + 23°C         81         M/m <sup>2</sup> 50.180/10           Izod Impact, unotched 80°10°3 + 23°C         81         M/m <sup>2</sup> 50.180/11A           Izod Impac	Tensile Modulus, 5 mm/min	2230	MPa	ASTM D638
Hardness, Rockweil R120ASTM D785Tensile Stress, yield, 50 mm/min62MPaIS0 527Tensile Stress, break, 50 mm/min65MPaIS0 527Tensile Strain, break, 50 mm/min123%IS0 527Tensile Strain, break, 50 mm/min123%IS0 527Tensile Strain, break, 50 mm/min2180MPaIS0 527Tensile Modulus, 1 mm/min2180MPaIS0 527Flexural Stress, yield, 2 mm/min90MPaIS0 178Tensile Kand, otched, 3277MPaIS0 178IMPACT <sup>10</sup> VVVVIzod Impact, notched, 30°C789J/mASTM D256Izod Impact, notched, 30°C10JIS0 6063Instrumented Dart Impact Total Energy, 23°CN8K//m2IS0 180/10Izod Impact, unotched 80°10°3 +23°C64K//m2IS0 180/10Izod Impact, unotched 80°10°3 +23°C13K//m2IS0 180/14Izod Impact, unotched 80°10°3 +23°C13K//m2IS0 180/14Izod Impact, unotched 80°10°3 -23°C13K//m2IS0 180/14Izod Impact, unotched 80°10°3 -23°C13ISO 179/14AISO 179/14AIzod Impact, unotched 80°10°3 -26°Cm	Flexural Stress, yld, 1.3 mm/min, 50 mm span	99	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min52MPa50 527Tensile Strain, yield, 50 mm/min6%50 527Tensile Strain, yield, 50 mm/min123%50 527Tensile Strain, break, 50 mm/min123%50 527Tensile Modulus, 1 mm/min180MPa50 527Flexural Kross, yield, 2 mm/min90MPa50 178Flexural Kross, yield, 2 mm/min180MPa50 577Flexural Kross, yield, 2 mm/min180MPa50 178Flexural Kross, yield, 2 mm/min180MPa50 178Idoulus, 2 mm/min180MPa50 178Idoulus, 2 mm/min180MPa50 178Idoulus, 2 mm/min180MPa50 178Idoulus, 2 mm/min180MPa50 178Idoulpact, notched, 30°C8121/mASTM D256Izod Impact, notched, 9°C7891/mMSTM D256Izod Impact, notched 80°10°3 +23°C67JS0 180/10Izod Impact, notched 80°10°3 +23°CNBK/m²50 180/10Izod Impact, notched 80°10°3 +262mm<	Flexural Modulus, 1.3 mm/min, 50 mm span	2220	MPa	ASTM D790
Tensile Strain, yield, 50 mm/min         65         MPa         ISO 527           Tensile Strain, yield, 50 mm/min         6         %         ISO 527           Tensile Strain, break, 50 mm/min         123         %         ISO 527           Tensile Strain, break, 50 mm/min         2180         MPa         ISO 527           Tensile Strain, break, 50 mm/min         2180         MPa         ISO 527           Flexual Modulus, 2 mm/min         0         MPa         ISO 178           Flexual Modulus, 2 mm/min         2180         MPa         ISO 178           Inscription         1         1         ISO 178           Isod Impact, notched, 23°C         812         J/m         ASTM 0256           Izod Impact, notched, 30°C         789         J/m         ASTM 0256           Izod Impact, notched 80°10°3 + 23°C         67         J         ASTM 0256           Izod Impact, notched 80°10°3 + 23°C         8         KJ/m²         ISO 180/10           Isod Impact, notched 80°10°3 + 23°C         64         KJ/m²         ISO 180/14           Izod Impact, notched 80°10°3 + 23°C         64         KJ/m²         ISO 180/14           Izod Impact, notched 80°10°3 + 23°C         64         KJ/m²         ISO 180/14           Charpy	Hardness, Rockwell R	120		ASTM D785
Tensile Strain, yield, 50 mm/min6%%0 527Tensile Strain, break, 50 mm/min123%150 527Tensile Modulus, 1 mm/min2180MPa50 527Flexural Stress, yield, 2 mm/min90MPa50 178Flexural Modulus, 2 mm/min2180MPa50 178Impact, notched, 23°C310MPa50 178Lood Impact, notched, 30°C789J/mASTM D256Izod Impact, notched, 30°C125J/mASTM D256Izod Impact, notched 80°10°3 +23°C67JS0 6603Izod Impact, notched 80°10°3 +32°CNBKl/m²50 180/14Izod Impact, notched 80°10°3 +32°C13Kl/m²50 180/14Izod Impact, notched 80°10°3 +32°C13Kl/m²50 180/14Izod Impact, notched 80°10°3 +32°C88Kl/m²50 180/14Izod Impact, notched 80°10°3 +32°C13Kl/m²50 179/1eAIzod Impact, notched 80°10°3 +32°C13Kl/m²50 179/1eAIcod Impact, notched 80°10°3 +32°C13Kl/m²50 179/1eAIcod Impact, notched 80°10°3 +52°C13Kl/m²50 179/1eAIcod Impact, notche	Tensile Stress, yield, 50 mm/min	62	MPa	ISO 527
Tensile Strain, break, 50 mm/min123%ISO 527Tensile Modulus, 1 mm/min2180MPaISO 527Hexural Stress, yield, 2 mm/min90MPaISO 178Hexural Modulus, 2 mm/min2180MPaISO 178Impact, notched, 23°C812J/mASTM D256Izod Impact, notched, 0°C789J/mASTM D256Izod Impact, notched, 30°C125J/mASTM D256Ikutiaxial Impact10JSO 180/10Instrumented Dart Impact Total Energy, 23°C67J/mASTM D3763Izod Impact, notched 80°10°3 +23°CNBKJ/m²ISO 180/10Izod Impact, notched 80°10°3 +23°C64KJ/m²ISO 180/10Izod Impact, notched 80°10°3 -30°C13KJ/m²ISO 180/1AIzod Impact, notched 80°10°3 -sp-62mm73KJ/m²ISO 180/1AIcod Impact, notched 80°10°3 -sp-62mmNBKJ/m²ISO 180/1AIcod Impact, Othotch Edgew 80°10°3 sp-62mmNBKJ/m²ISO 180/1AIchary 23°C, Unnotch Edgew 80°10°3 sp-62mmNBKJ/m²ISO 179/1eAChary 23°C, Unnotch Edgew 80°10°3 sp-62mm<	Tensile Stress, break, 50 mm/min	65	MPa	ISO 527
Tensile Modulus, 1 mm/min2180MPaISO 527Flexural Stress, yield, 2 mm/min90MPaISO 178Flexural Modulus, 2 mm/min2180MPaISO 178IMPACT <sup>(1)</sup> ISO 178ISO 178Izod Impact, notched, 23°C8121/mASTM D256Izod Impact, notched, 30°C7891/mASTM D256Multiaxial Impact10JISO 6603Instrumented Darl Impact, Total Energy, 23°C67JASTM D3763Izod Impact, unotched 80°10°3 +23°CNBkl/m²ISO 180/10Izod Impact, unotched 80°10°3 +23°C64kl/m²ISO 180/10Izod Impact, unotched 80°10°3 sp=62mm73kl/m²ISO 180/1AIzod Impact, otched 60°10°3 sp=62mm13kl/m²ISO 179/1eACharpy 23°C, Unotch Edgew 80°10°3 sp=62mmNBkl/m²ISO 179/1eACharpy 30°C, Vnotch Edgew 80°10°3 sp=62mmNBkl/m²ISO 179/1eACharpy 30°C, Unotch Edgew 80°10°3 sp=62mm13Kl/m²ISO 179/1eACharpy 30°C, Unotch Edgew 80°10°3 sp=62mmNBkl/m²ISO 179/1eACharpy 30°C, Unotch Edgew 80°10°3 sp=62mmNBkl/m²ISO 179/1eATHERML <sup>(1)</sup> VVXIM D1525ISOHDT, 0.45 MFR, 3.2 mm, unannealed122°CASTM D1525HDT, 0.45 MFR, 3.2 mm, unannealed111°CASTM D648HDT, 0.45 MFR, 3.2 mm, unannealed111°CASTM D648HDT, 0.45 MFR, 3.2 mm, unannealed111°CASTM D648HDT,	Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Hexural Stress, yield, 2 mm/min90MPa50 178Hexural Modulus, 2 mm/min2180MPa50 178IMPACT <sup>(1)</sup> Impact, notched, 23°C812J/mASTM D256Izod Impact, notched, 0°C789J/mASTM D256Izod Impact, notched, 30°C10JS0 6603Multiaxial Impact10JS0 6603Instrumented Dart Impact Total Energy, 23°C67JASTM D363Izod Impact, unotched 80°10°3 +23°CNBKJ/m2S0 180/10Izod Impact, notched 80°10°3 +23°CNBKJ/m2S0 180/10Izod Impact, notched 80°10°3 spe32m73KJ/m2ISO 180/14Izod Impact, notched 80°10°3 spe32m73KJ/m2ISO 179/1eAIzod Impact, notched 80°10°3 spe32m73KJ/m2ISO 179/1eACharpy 30°C, Unotch Edgew 80°10°3 spe62mNBKJ/m2ISO 179/1eACharpy 30°C, Unotch Edgew 80°10°3 spe62mNBKJ/m2S0 179/1eACharpy 30°C, Unotch Edgew 80°10°3 spe62mNBKJ/m2KJ/m2S0 179/1eACha	Tensile Strain, break, 50 mm/min	123	%	ISO 527
Hexural Modulus, 2 mm/n2180MPaIsO 178IMPACT <sup>(1)</sup> Exod Impact, notched, 23°C8121/mASTM D256Izod Impact, notched, 0°C7891/mASTM D256Izod Impact, notched, 30°C1251/mASTM D256Multiaxial Impact110JIsO 6603Instrumented Dart Impact Total Energy, 23°C67JASTM D3763Izod Impact, unnotched 80°10°3 +23°CNBKl/m²IsO 180/10Izod Impact, unnotched 80°10°3 -30°CNBKl/m²IsO 180/10Izod Impact, notched 80°10°3 -30°C13Kl/m²IsO 180/14Izod Impact, notched 80°10°3 spe62mm73Kl/m²IsO 179/1eACharpy 30°C, Unnotch Edgew 80°10°3 spe62mm73Kl/m²IsO 179/1eACharpy 30°C, Unnotch Edgew 80°10°3 spe62mm73Kl/m²IsO 179/1eACharpy 30°C, Unnotch Edgew 80°10°3 spe62mm735%CASTM D1525THERMAL <sup>(1)</sup> YYYYYKas MID 1525Vicat Softening Temp, Rate B/50135°CASTM D1525HDT, 0.45 MPa, 3.2 mm, unannealed122°CASTM D648HDT, 1.82 MPa, 3.2 mm, unannealed111°CASTM D648HDT, 0.45 Choro°C, flow8£051/°CASTM E831	Tensile Modulus, 1 mm/min	2180	MPa	ISO 527
Impact         "Impact           Izod Impact, notched, 23°C         812         J/m         ASTM D256           Izod Impact, notched, 0°C         789         J/m         ASTM D256           Izod Impact, notched, 30°C         125         J/m         ASTM D256           Multiaxial Impact         10         J         S0 603           Istrumented Dat Impact Total Energy, 23°C         67         J         ASTM D3763           Izod Impact, notched 80°10°3 + 23°C         NB         KJ/m²         S0 180/10           Izod Impact, notched 80°10°3 + 23°C         64         KJ/m²         S0 180/14           Izod Impact, notched 80°10°3 + 23°C         64         KJ/m²         S0 180/14           Izod Impact, notched 80°10°3 - 23°C         13         KJ/m²         S0 180/14           Charpy 23°C, Vnotch Edgew 80°10°3 sp=62mm         73         KJ/m²         S0 179/14           Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         KJ/m²         S0 179/14           Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         KJ/m²         S0 179/14           Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         KJ/m²         S0 179/14           Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         KJ/m²         S0 179/14 <tr< td=""><td>Flexural Stress, yield, 2 mm/min</td><td>90</td><td>MPa</td><td>ISO 178</td></tr<>	Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Izod impact, notched, 23°C812J/mASTM D256Izod impact, notched, 0°C789J/mASTM D256Izod impact, notched, 30°C125J/mASTM D256Multiaxial Impact100JISO 6603Instrumented Dart Impact Total Energy, 23°C67JASTM D3763Izod Impact, unnotched 80°10°3 +23°CNBKJ/m²ISO 180/10Izod Impact, notched 80°10°3 +23°C64KJ/m²ISO 180/10Izod Impact, notched 80°10°3 -30°C13KJ/m²ISO 180/1AIzod Impact, notched 80°10°3 -sp=62mm73KJ/m²ISO 180/1ACharpy 23°C, V-notch Edgew 80°10°3 sp=62mmNBKJ/m²ISO 179/1eACharpy 30°C, Unnotch Edgew 80°10°3 sp=62mmNBKJ/m²ISO 179/1eACharpy 30°C, Unnotch Edgew 80°10°3 sp=62mmNBKJ/m²ISO 179/1eATHERMAL <sup>(1)</sup> VISO 179/1eAISO 179/1eATHERMAL <sup>(1)</sup> TISO 179/1eAISO 179/1eATHERMAL <sup>(1)</sup> VISO 179/1eAISO 179/1eATHERMAL <sup>(1)</sup> ISO 179/1eAISO 179/1eATHERMAL <sup>(1)</sup>	Flexural Modulus, 2 mm/min	2180	MPa	ISO 178
Izod impact, notched, 23°C812J/mASTM D256Izod impact, notched, 0°C789J/mASTM D256Izod impact, notched, 30°C125J/mASTM D256Multiaxial Impact100JISO 6603Instrumented Dart Impact Total Energy, 23°C67JASTM D3763Izod Impact, unnotched 80°10°3 +23°CNBKJ/m²ISO 180/10Izod Impact, notched 80°10°3 +23°C64KJ/m²ISO 180/10Izod Impact, notched 80°10°3 -30°C13KJ/m²ISO 180/1AIzod Impact, notched 80°10°3 -sp=62mm73KJ/m²ISO 180/1ACharpy 23°C, V-notch Edgew 80°10°3 sp=62mmNBKJ/m²ISO 179/1eACharpy 30°C, Unnotch Edgew 80°10°3 sp=62mmNBKJ/m²ISO 179/1eACharpy 30°C, Unnotch Edgew 80°10°3 sp=62mmNBKJ/m²ISO 179/1eATHERMAL <sup>(1)</sup> VISO 179/1eAISO 179/1eATHERMAL <sup>(1)</sup> TISO 179/1eAISO 179/1eATHERMAL <sup>(1)</sup> VISO 179/1eAISO 179/1eATHERMAL <sup>(1)</sup> ISO 179/1eAISO 179/1eATHERMAL <sup>(1)</sup>	IMPACT <sup>(1)</sup>			
Izod Impact, notched, -30°C         125         J/m         ASTM D256           Multiaxial Impact         100         J         ISO 6603           Instrumented Dart Impact Total Energy, 23°C         67         J         ASTM D3763           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, notched 80°10°3 +23°C         NB         Kl/m²         ISO 180/10           Izod Impact, notched 80°10°3 +23°C         O         ASTM D256         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         G4         Kl/m²         ISO 180/14           Izod Impact, notched 80°10°3 +23°C         G4         Kl/m²         ISO 180/14           Izod Impact, notched 80°10°3 sp=62mm         TG         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           THERMAL <sup>(1)</sup> T         T         Store 179/1eA         Store 179/1eA           Vicat Softening Temp, Rate		812	J/m	ASTM D256
Multiaxial Impact         110         J         ISD 6603           Instrumented Dart Impact Total Energy, 23°C         67         J         ASTM D3763           Izod Impact, unnotched 80°10°3 +23°C         NB         kJ/m²         ISD 180/1U           Izod Impact, unnotched 80°10°3 +23°C         NB         kJ/m²         ISD 180/1U           Izod Impact, unnotched 80°10°3 +23°C         64         kJ/m²         ISD 180/1A           Izod Impact, notched 80°10°3 +23°C         13         kJ/m²         ISD 180/1A           Izod Impact, notched 80°10°3 -30°C         13         kJ/m²         ISD 180/1A           Izod Impact, notched 80°10°3 sp=62mm         73         kJ/m²         ISD 179/1eA           Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISD 179/1eA           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kJ/m²         ISD 179/1eU           THERMAL <sup>(1)</sup> NB         kJ/m²         ISD 179/1eU           Vicat Softening Temp, Rate B/50         135         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 m, unannealed         122         °C         ASTM D648           HDT, 1.82 MPa, 3.2 m, unannealed         111         °C         ASTM D648	Izod Impact, notched, 0°C	789	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 180/10           Izod Impact, unnotched 80°10°3 -30°C         NB         kl/m2         ISO 180/10           Izod Impact, notched 80°10°3 -30°C         64         kl/m2         ISO 180/1A           Izod Impact, notched 80°10°3 -30°C         13         kl/m2         ISO 180/1A           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         73         kl/m2         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         13         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 179/1eU           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kl/m2         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kl/m2         ISO 179/1eU           THERMAL <sup>(1)</sup> ISO         ISO 179/1eU         ISO 179/1eU         ISO 179/1eU           Vicat Softening Temp, Rate B/50         135         C         ASTM D1525         ID           HDT, 1.82 MPa, 3.2 mm, unannealed         111         C	Izod Impact, notched, -30°C	125	J/m	ASTM D256
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 180/1U           Izod Impact, notched 80°10°3 -30°C         64         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°3 -30°C         13         kl/m²         ISO 180/1A           Izod Impact, notched 80°10°3 sp=62mm         73         kl/m²         ISO 179/1eA           Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm         13         kl/m²         ISO 179/1eA           Charpy 23°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         NB         kl/m²         ISO 179/1eA           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kl/m²         ISO 179/1eU           THERMAL <sup>(1)</sup> NB         SO 179/1eA         ISO 179/1eU         ISO 179/1eU           Vicat Softening Temp, Rate B/50         135         °C         ASTM D1525           HDT, 1.82 MPa, 3.2mm, unannealed         122         °C         ASTM D648           HDT, 4.82 MPa, 3.2mm, unannealed         111         °C         ASTM D648 <td>Multiaxial Impact</td> <td>110</td> <td>J</td> <td>ISO 6603</td>	Multiaxial Impact	110	J	ISO 6603
Izod Impact, unnotched 80*10*3 -30°C         NB         kl/m2         ISO 180/1U           Izod Impact, notched 80*10*3 -23°C         64         kl/m2         ISO 180/1A           Izod Impact, notched 80*10*3 -30°C         13         kl/m2         ISO 180/1A           Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm         73         kl/m2         ISO 179/1eA           Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm         13         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 179/1eU           THERMAL <sup>(1)</sup> Vicat Softening Temp, Rate B/50         NB         kl/m2         ISO 179/1eU           Vicat Softening Temp, Rate B/50         135         °C         ASTM D1525           HDT, 1.82 MPa, 3.2 mm, unannealed         122         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         111         °C         ASTM D648	Instrumented Dart Impact Total Energy, 23°C	67	J	ASTM D3763
Izod Impact, notched 80*10*3 +23°C         64         kJ m²         ISO 180/1A           Izod Impact, notched 80*10*3 +23°C         13         kJ m²         ISO 180/1A           Izod Impact, notched 80*10*3 -30°C         13         kJ m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm         73         kJ m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm         13         kJ m²         ISO 179/1eA           Charpy -30°C, Unnotch 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           THERMAL <sup>(1)</sup> Vicat Softening Temp, Rate B/50         NB         kJ m²         ISO 179/1eU           Vicat Softening Temp, Rate B/50         135         °C         ASTM D1525           HDT, 1.82 MPa, 3.2 mm, unannealed         122         °C         ASTM D648           HDT, 1.82 MPa, 3.2 mm, unannealed         111         °C         ASTM D648           CTE, -40°C to 40°C, flow         8E: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         13         k/m²         ISO 180/1A           Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm         73         kl/m²         ISO 179/1eA           Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm         13         kl/m²         ISO 179/1eA           Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kl/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kl/m²         ISO 179/1eU           THERMAL <sup>(1)</sup> NB         kl/m²         ISO 179/1eU           Vicat Softening Temp, Rate B/50         135         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         122         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         111         °C         ASTM D648           CTE, -40°C to 40°C, flow         8:05         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         73         kl/m²         ISO 179/1eA           Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm         13         kl/m²         ISO 179/1eA           Charpy 23°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kl/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kl/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm         NB         kl/m²         ISO 179/1eU           Vicat Softening Temp, Rate B/50         135         SS 0179/1eU         ISO 179/1eU           Vicat Softening Temp, Rate B/50         135         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         122         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         111         °C         ASTM D648           CTE, -40°C to 40°C, flow         8.E-05         1/°C         ASTM E831	Izod Impact, notched 80*10*3 +23°C	64	kJ/m²	ISO 180/1A
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm         13         kl/m²         ISO 179/1eA           Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kl/m²         ISO 179/1eU           Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm         NB         kl/m²         ISO 179/1eU           THERMAL <sup>(1)</sup> NB         kl/m²         ISO 179/1eU           Vicat Softening Temp, Rate B/50         135         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         122         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         111         °C         ASTM D648           CTE, -40°C to 40°C, flow         8.E·05         1/°C         ASTM E831	Izod Impact, notched 80*10*3 -30°C	13	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 <sup>(1)</sup> ISO 179/1eU         ISO 179/1eU         ISO 179/1eU           Vicat Softening Temp, Rate B/50         135         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         122         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         111         °C         ASTM D648           CTE, -40°C to 40°C, flow         8.E·05         1/°C         ASTM E831	Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	73	kJ/m²	ISO 179/1eA
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       135       °C       ASTM D1525         HDT, 0.45 MPa, 3.2 mm, unannealed       122       °C       ASTM D648         HDT, 1.82 MPa, 3.2mm, unannealed       111       °C       ASTM D648         CTE, -40°C to 40°C, flow       8.E-05       1/°C       ASTM E831	Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	13	kJ/m²	ISO 179/1eA
THERMAL <sup>(1)</sup> °C         ASTM D1525           Vicat Softening Temp, Rate B/50         135         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         122         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         111         °C         ASTM D648           CTE, -40°C to 40°C, flow         8.E-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         135         °C         ASTM D1525           HDT, 0.45 MPa, 3.2 mm, unannealed         122         °C         ASTM D648           HDT, 1.82 MPa, 3.2mm, unannealed         111         °C         ASTM D648           CTE, -40°C to 40°C, flow         8.E·05         1/°C         ASTM E831	Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
HDT, 0.45 MPa, 3.2 mm, unannealed       122       °C       ASTM D648         HDT, 1.82 MPa, 3.2mm, unannealed       111       °C       ASTM D648         CTE, -40°C to 40°C, flow       8.E-05       1/°C       ASTM E831	THERMAL <sup>(1)</sup>			
HDT, 1.82 MPa, 3.2mm, unannealed         111         °C         ASTM D648           CTE, -40°C to 40°C, flow         8.E·05         1/°C         ASTM E831	Vicat Softening Temp, Rate B/50	135	°C	ASTM D1525
CTE, -40°C to 40°C, flow         8.E-05         1/°C         ASTM E831	HDT, 0.45 MPa, 3.2 mm, unannealed	122	°C	ASTM D648
· · · · · · · · · · · · · · · · · · ·	HDT, 1.82 MPa, 3.2mm, unannealed	111	°C	ASTM D648
<b>CTE, -40°C to 40°C, xflow</b> 8.E-05 1/°C ASTM E831	CTE, -40°C to 40°C, flow	8.E-05	1/°C	ASTM E831
	CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ASTM E831

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	8.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASS	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	129	°C	ISO 306
Vicat Softening Temp, Rate B/120	130	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	115	°C	ISO 75/Af
Relative Temp Index, Elec <sup>(2)</sup>	105	°C	UL 746B
Relative Temp Index, Mech w/impact <sup>(2)</sup>	105	°C	UL 746B
Relative Temp Index, Mech w/o impact <sup>(2)</sup>	105	°C	UL 746B
PHYSICAL <sup>(1)</sup>			
Specific Gravity	1.2		ASTM D792
Density	1.2	g/cm <sup>3</sup>	ASTM D792
Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup>	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	25	g/10 min	ASTM D1238
Density	1.2	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/saturated)	0.3	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	23	cm³/10 min	ISO 1133
OPTICAL <sup>(1)</sup>			
Light Transmission, 2.54 mm	88	%	ASTM D1003
Haze, 2.54 mm	<1	%	ASTM D1003
Refractive Index	1.582	-	ASTM D542
ELECTRICAL <sup>(1)</sup>			
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1.1	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 1	≥1.1	mm	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	<u>E45329-100911709</u>	-	
UL Recognized, 94HB Flame Class Rating	≥0.7	mm	UL 94
INJECTION MOLDING <sup>(4)</sup>			
Drying Temperature	105 – 110	°C	
Drying Time	3 - 4	Hrs	
Drying Time (Cumulative)	24	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	260 - 305	°C	
Nozzle Temperature	255 – 300	°C	
Front - Zone 3 Temperature	260 - 305	°C	
Middle - Zone 2 Temperature	250 - 295	°C	
Rear - Zone 1 Temperature	240 – 280	°C	
Mold Temperature	50 - 80	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	35 – 75	rpm	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Shot to Cylinder Size	40 - 60	%	
Vent Depth	0.038 – 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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