

LEXANTM COPOLYMER EXL1414

REGION EUROPE

DESCRIPTION

LEXAN EXL1414 polycarbonate (PC) siloxane copolymer resin is a medium flow opaque injection molding (IM) grade. This resin offers extreme low temperature (-40 C) ductility in combination with excellent processability and release with opportunities for shorter IM cycle times compared to standard PC. LEXAN EXL1414 resin is a product available in wide range of opaque colors and may be an excellent candidate for a wide variety of applications.

GENERAL INFORMATION	
Features	Impact resistant, Low temperature impact, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors, Automotive Under the Hood, Automotive Exteriors, Recreational/Specialty Vehicles
Building and Construction	Building Component, Water Management
Consumer	Ophthalmics, Sport/Leisure, Personal Accessory, Home Appliances, Personal Recreation, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets, Lighting
Hygiene and Healthcare	Surgical devices, General Healthcare, Patient Testing
Industrial	Electrical, Defense

TYPICAL PROPERTY VALUES

Revision 20241024

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL (1)			
Tensile Stress, yld, Type I, 50 mm/min	55	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	50	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	98	%	ASTM D638
Tensile Modulus, 50 mm/min	2020	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	92	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2230	MPa	ASTM D790
Hardness, Rockwell L	89	-	ASTM D785
Hardness, Rockwell R	121	-	ASTM D785
Tensile Stress, yield, 50 mm/min	57	MPa	ISO 527
Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	120	%	ISO 527
Tensile Modulus, 1 mm/min	2150	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	85	MPa	ISO 178
Flexural Modulus, 2 mm/min	2250	MPa	ISO 178
IMPACT (1)			



inclumpact, notched, 20°C 974 974 774 <th>PROPERTIES</th> <th>TYPICAL VALUES</th> <th>UNITS</th> <th>TEST METHODS</th>	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
instrumented Durt impact Total Energy, 23°C 70 15 AST MODED STATE AST MODED STATE SO 100 (1) load impact, unnotched 80°10°3 ±20°C NB 40 (1) 50 (10) (1) 100 (10)	Izod Impact, notched, 23°C	865	J/m	ASTM D256
izo dimpact, unnotched 80°10°3 +23°C N8 Jimmact, unnotched 80°10°3 +30°C N8 Jimmact, unnotched 80°10°3 +30°C N8 Jimmact, unnotched 80°10°3 +30°C R0 Jimmact, unnotched 80°10°3 +50°C R0 Jimmact, unnotched 80°00°3 +50°C R0 R0 Jimmact, unnotched 80°00°3 +50°C R0	Izod Impact, notched, -30°C	774	J/m	ASTM D256
ized impact, unotiched 80°10°3 -30°C 88 Min* 60.180/11 tood impact, notiched 80°10°3 -20°C 60 Min* 60.180/14 Change, 20°C, Vinotch Edgew 80°10°3 spe-62mm 65 Min* 50.179/1eA Charpy, 23°C, Unotch Edgew 80°10°3 spe-62mm 88 Min* 50.179/1eA Charpy, 30°C, Unotch Edgew 80°10°3 spe-62mm 88 30.00 30.179/1eB Charpy, 30°C, Unotch Edgew 80°10°3 spe-62mm 88 60.00 30.179/1eB Charpy, 30°C, Unotch Edgew 80°10°3 spe-62mm 88 60.00 30.179/1eB Charpy, 30°C, Unotch Edgew 80°10°3 spe-62mm 18 6 ASIM D152 CHARTY 40°C ASIM D152 40°C ASIM D152 CHARTY 40°C ASIM D152 40°C ASIM D152 RDT, 18,2 MPA, 3,2 mm, unameneled 19 6°C ASIM D152 40°C ASIM D152 CE, 29°C 80°C, How 7,2 E0 17°C ASIM B31 40°C ASIM B31 CE, 29°C 80°C, How 7,2 E0 12 6°C 00.306 40°C CE, 29°C 80°C, How	Instrumented Dart Impact Total Energy, 23°C	70	J	ASTM D3763
tzod impact, notched 80°10°3 - 22°C 70 Milm² 50 180 1/14 tzod impact, notched 80°10°3 - 30°C 60 Milm² 50 180 1/14 Charpy 23°C, Unnotch Edgew 80°10°3 spe-Earm 95 Milm² 50 179 1/16 Charpy 30°C, Unnotch Edgew 80°10°3 spe-Earm N8 Milm² 50 179 1/16 Charpy 30°C, Unnotch Edgew 80°10°3 spe-Earm N8 Milm² 50 179 1/16 THERMAL 10°C W C ASTM DES THERMAL 10°C MSTM DES ASTM DES THERMAL 10°C ASTM DES ASTM DES THERMAL 10°C ASTM DES ASTM DES THERMAL 10°C C ASTM DES THERMAL 10°C ASTM DES ASTM DES THERMAL 10°C ASTM DES ASTM DES THERMAL 10°C ASTM DES ASTM DES THE 20°C Low Cric Low Cri	Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
tzod impact, noticed 80°10°3-30°C 60 Min* 50 1891 IA Charpy 32°C, voncht Edgew 80°10°3 spreämm 70 kl/m² 50 1791 red Charpy 32°C, voncht Edgew 80°10°3 spreämm 80 kl/m² 50 1791 red Charpy 32°C, unnotch Edgew 80°10°3 spreämm N8 kl/m² 50 1791 red Charpy 30°C, unnotch Edgew 80°10°3 spreämm N8 kl/m² 50 1791 red Charpy 30°C, unnotch Edgew 80°10°3 spreämm N8 kl/m² 50 1791 red HERBAR II*** VC ASTM D1525 HOT, 458 MPs, 32°mm, unannealed 139 °C ASTM 651 HOT, 1.82 MPs, 32°mm, unannealed 139 °C ASTM 683 CTE, 40°C to 40°C, flow 7.4760 11°C ASTM 683 CTE, 23°C to 80°C, flow 7.4760 11°C ASTM 683 CTE, 23°C to 80°C, flow 7.2600 10 C 60 306 CTE, 23°C to 80°C, flow 12 60 0.00 10 60 10 60 10 60 10 10 60 10 60 10 60	Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m²	ISO 180/1U
Charpy 23°C, Vnotch Edgew 80°10°3 spe2amm 65 I/Im² 65179/16A Charpy 30°C, Unnotch Edgew 80°10°3 spe2amm 82 1/Im² 55179/16A Charpy 30°C, Unnotch Edgew 80°10°3 spe2amm 82 1/Im² 55179/16U Charpy 30°C, Unnotch Edgew 80°10°3 spe2amm 82 1/Im² 50°179/16U THESMALI** V 50° ASTM DEAS THE SAMPA, 3.2 mm, unannealed 139 °C ASTM DEAS HDT, 0.45 MPA, 3.2 mm, unannealed 124 °C ASTM DEAS CTE, 40°C to 40°C, flow 7.26°05 1/°C ASTM BAB CTE, 40°C to 40°C, flow 7.26°05 1/°C ASTM BAB CTE, 23°C to 80°C, flow 7.26°05 1/°C ASTM BAB CTE, 23°C to 80°C, flow 7.26°05 1/°C S0 1359/2 CTE, 23°C to 80°C, flow 1.26°0 2.0 S0 1359/2 CTE, 23°C to 80°C, flow 1.26°0 2.0 S0 306 CTE, 23°C to 80°C, flow 1.2 2.0 S0 306 CTE, 23°C to 80°C, flow 1.2 2.0 S0 306	Izod Impact, notched 80*10*3 +23°C	70	kJ/m²	ISO 180/1A
Charpy 30°C, Vanotch Edgew 80°10°3 sp=62mm 98 J/m² 50 179/1ed Charpy 32°C, Unnotch Edgew 80°10°3 sp=62mm N8 J/m² 50 179/1ed Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm N8 J/m² 50 179/1ed Charpy 30°C, Unnotch Edgew 80°10°3 sp=62mm 186 C ASTM DES HDT, Q45 MPB, 32°m, unannealed 189 °C ASTM DES HDT, 132 MPB, 32°m, unannealed 194 °C ASTM DES CTE, 40°C to 40°C, 10w 7.0°-05 1/°C ASTM DES CTE, 40°C to 80°C, 410w 7.2°-05 1/°C ASTM 1831 CTE, 23°C to 80°C, 410w 7.2°-05 1/°C 80 11399-2 CTE, 23°C to 80°C, 410w 7.2°-05 1/°C 80 11399-2 CTE, 23°C to 80°C, 410w 7.2°-05 1/°C 80 11399-2 CTE, 23°C to 80°C, 410w 1.2° 10° 80 1399-2 Vicat Softening Temp, Rate B/10° 146 °C 80 30 Vicat Softening Temp, Rate B/10° 180 °C 80 75/8e HDT/Rat, 1.5 MPa Edgew 120°10°4 sp=100mm 180 °C	Izod Impact, notched 80*10*3 -30°C	60	kJ/m²	ISO 180/1A
Charpy 23°C, Unnotch Edgew 80°10°3 sp=62mm NB Jim² 50 179/19 Charpy 20°C, Unnotch Edgew 80°10°3 sp=62mm NB Jim² 50 179/19 THERMAL**** V ASIM D1525 HOT, Oak MPa, 3.2 mm, unannealed 139 °C ASIM D648 HDT, 1.8.2 MPa, 3.2 mm, unannealed 7.060 1/°C ASIM D648 CTE, 40°C to 40°C, flow 7.060 1/°C ASIM E831 CTE, 40°C to 40°C, flow 7.4760 1/°C ASIM E831 CTE, 23°C to 80°C, flow 7.260 1/°C ASIM E831 CTE, 23°C to 80°C, flow 7.260 1/°C ASIM E831 CTE, 23°C to 80°C, flow 7.260 1/°C 80 13399-2 CTE, 23°C to 80°C, flow 6 80 13399-2 Vicat Softening Temp, Rate 8150 145 C 80 306 Vicat Softening Temp, Rate 8160 120 C 9.075/Be HDT/Jac, 0.45MPa Edgew 120°10*4 sp=100mm 128 C 9.075/Be Relative Temp Index, Mech w/b impact (a) 120 C 0.7468 Relative Temp Index, Mech w/b imp	Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	70	kJ/m²	ISO 179/1eA
Charpy 30°C, Unnotch Edgew 80°10°3 sp-62mm N8 Misman 15 (mismatter) THERMALI** 145 °C ASTM D648 HDT, 0.45 Maps, 3.2 mm, unamealed 139 °C ASTM D648 HDT, 1.82 Maps, 3.2 mm, unamealed 120 °C ASTM D648 CTE, 40°C to 40°C, flow 7.47E 0.9 11°C ASTM 831 CTE, 40°C to 40°C, flow 7.47E 0.9 11°C ASTM 831 CTE, 43°C to 80°C, flow 7.47E 0.9 11°C ASTM 831 CTE, 23°C to 80°C, flow 7.2E 0.9 11°C S0 113592 CTE, 23°C to 80°C, flow 145 °C 80 506 CTE, 23°C to 80°C, flow 145 °C 80 506 Vicat Softening Temp, Rate 8/50 145 °C 80 506 Vicat Softening Temp, Rate 8/120 146 °C 80 506 HDT/Re, 0.45Wha Edgew 120°10°4 sp=100mm 128 °C 80 50 56 Relative Temp Index, Mech w/ Impact **C** 130 °C 80 50 75/8e Relative Temp Index, Mech w/ Impact **C** 14°C X5TM D72 M	Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	65	kJ/m²	ISO 179/1eA
THERMAL (**) THERMAL (**) CC ASTM D125 HDT. 0.5 MPa, 3.2 mm, unannealed 139 **C ASTM D648 HDT. 1.32 MPa, 3.2 mm, unannealed 124 **C ASTM D648 CTE, 40°C to 40°C, flow 7.0e05 1/°C ASTM E831 CTE, 40°C to 40°C, flow 7.2e05 1/°C ASTM E831 CTE, 23°C to 80°C, flow 7.2e05 1/°C 8013992 CTE, 23°C to 80°C, flow 7.2e05 1/°C 8013992 Ball Pressure Test, 125°C +/-2°C 9xses - 60095102 Vicat Softening Temp, Rate 8 50 145 **C 80306 Vicat Softening Temp, Rate 8 50 146 **C 8075/ke HDT/ Je, 1.8 MPa Edgew 120°104 sp=100mm 140 **C 8075/ke Relative Temp Index, Elec ¹ 30 **C 10.76k Relative Temp Index, Elec ¹ 30 **C 10.746k Relative Temp Index, Elec ¹ 40 **C 10.746k Relative Temp Index, Elec ¹ 40 **C 35TM D792 Relative Temp In	Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
Victa Softening Temp, Rate 8/50 145 °C ASTM D648 HDT, 145 MPa, 3.2 mm, nannealed 139 °C ASTM D648 EDT, 140°C to 40°C, flow 7,000 10°C ASTM D648 CTE, 40°C to 40°C, flow 7,600 10°C ASTM B681 CTE, 23°C to 80°C, flow 7,600 10°C 80°11399-2 CTE, 23°C to 80°C, flow 2,200 10°C 80°1399-2 Ball Pressure Test, 125°C-17-2°C 2820 10°C 80°0306 Bull Pressure Test, 125°C-17-2°C 2820 6°C 80°306 Vicat Softening Temp, Rate 8/10 145 9°C 80°306 Vicat Softening Temp, Rate 8/10 146 9°C 80°306 PUT/Be, 0.45M Acide Seque 10°10°4 sp=100mm 128 9°C 80°306 Brotling Gene, Rate 8/10 16 9°C 10°76 Brotlage Lagon 10°10°4 sp=100mm 128 9°C 10°76 Relative Temp Index, Mech by Impact 130 9°C 10°76 Relative Temp Index, Mech by Impact 18 9°C 10°76 Mol	Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
HDT. 0.45 MPa. 3.2 mm, unannealed 199 ℃ ASTM D648 HDT. 1.82 MPa. 3.2 mm, unannealed 124 ℃ ASTM B648 CTE, 40°C to 40°C, flow 7.67-65 1/°C ASTM B631 CTE, 40°C to 40°C, flow 7.67-65 1/°C ASTM B631 CTE, 23°C to 80°C, flow 7.62-65 1/°C B0 11359-2 CTE, 23°C to 80°C, flow 7.62-65 1/°C B0 11359-2 CTE, 23°C to 80°C, flow 7.62-65 1/°C B0 11359-2 CTE, 23°C to 80°C, flow 7.62-65 1/°C B0 11359-2 CTE, 23°C to 80°C, flow 7.62-65 1/°C B0 11359-2 CTE, 23°C to 80°C, flow 7.62-65 1/°C B0 11359-2 CTE, 40°C to 40°C, flow 6 0.60-66 B0 11359-2 CTE, 40°C to 40°C, flow 6 0.00-6 B0 11359-2 CTE, 40°C to 40°C, flow 6 0.00-6 B0 50-6 CTE, 40°C to 40°C, flow 6 0.00-7 B0 50-6 LOT to 40°C to 40°C, flow 6 0.00-7 B0 50-7 Belative Temp Index,	THERMAL (1)			
HDT, 0.45 MPa, 3.2mm, unannealed 199 ℃ ASTM D648 HDT, 1.82 MPa, 3.2mm, unannealed 124 ℃ ASTM D648 CTE, 40°C to 40°C, flow 7.67 605 1°C ASTM B618 CTE, 40°C to 40°C, flow 7.67 605 1°C ASTM B81 CTE, 23°C to 80°C, flow 7.62 60 1°C B011359-2 CTE, 23°C to 80°C, flow 7.62 60 1°C B011359-2 CTE, 23°C to 80°C, flow 7.62 60 1°C B011359-2 CTE, 23°C to 80°C, flow 16 1°C B011359-2 CTE, 23°C to 80°C, flow 16 1°C B011359-2 CTE, 23°C to 80°C, flow 16 1°C B011359-2 CTE, 40°C to 40°C, flow 16 6 10.00 CTE, 40°C to 40°C, flow 16 6 0.00 CTE, 40°C to 40°C, flow 16 6 0.00 CALS ASM Base dependenced 16 6 0.00 0.00 Relative Temp Index, Mech w/impact (**) 10 0 0 0.00 0.00 Relative Temp		145	°C	ASTM D1525
HDT. 1.82 MPa, 3.2mm, unannealed 124 "C ASTM D64 CTE, 40°C to 40°C, flow 7.06 9.0 1/°C ASTM B831 CTE, 23°C to 80°C, flow 7.26 9.5 1/°C ASTM B831 CTE, 23°C to 80°C, flow 7.26 9.5 1/°C 10°C S0 11359-2 CTE, 23°C to 80°C, flow 7.26 9.0 1/°C 10°C			°C	
CTE, 40°C to 40°C, xflow 7.47E-05 1,°°C ASTM E831 CTE, 23°C to 80°C, flow 7.2E-05 1,°°C SO 11359-2 CTE, 23°C to 80°C, xflow 7.2E-05 1,°°C SO 11359-2 Ball Pressure Test, 125°C+/-2°C 9asse 15C-06695-10-2 Vicat Softening Temp, Rate B/50 145 °C SO 306 Vicat Softening Temp, Rate B/120 146 °C SO 306 HDT/Re, 0.45MPa Edgew 120°10°4 sp=100mm 140 °C SO 75/Be HDT/Re, 1.8 MPa Edgew 120°10°4 sp=100mm 128 °C U.7468 Relative Temp Index, Mech yimpact (²) 120 °C U.7468 Relative Temp Index, Mech yimpact (²) 120 °C U.7468 Relative Temp Index, Mech yimpact (²) 120 °C U.7468 Relative Temp Index, Mech yimpact (²) 120 °C U.7468 Relative Temp Index, Mech yimpact (²) 120 °C U.7468 Mold Shrinkage, flow, 3.2 mm (²) 40 0.0 \$MID P3 Mold Shrinkage, flow, 3.2 mm (²) 19 40 9	HDT, 1.82 MPa, 3.2mm, unannealed	124	°C	ASTM D648
CTE, 40°C to 40°C, xflow 7.47E-05 1°C ASTM E831 CTE, 23°C to 80°C, xflow 7.2E-05 1°C 50 11359-2 CTE, 23°C to 80°C, xflow 7.2E-05 1°C 50 11359-2 CTE, 23°C to 80°C, xflow 7.2E-05 1°C 50 11359-2 Ball Pressure Text, 125°C+1-2°C x8ses 1°C 50 306 Vicat Softening Temp, Rate 8/120 146 °C 50 306 HDT/Re, 0.45MPa Edgew 120°10°4 sp=100mm 140 °C 50 75/Re HDT/Re, 1.8 MPa Edgew 120°10°4 sp=100mm 120 °C U.7468 Relative Temp Index, Rice (20° 130 °C U.7468 Relative Temp Index, Mech w/Impact (21° 120 °C U.7468 Relative Temp Index, Mech w/Impact (21° 120 °C U.7468 Relative Temp Index, Mech w/Impact (21° 120 °C U.7468 Relative Temp Index, Mech w/Impact (21° 30 °C U.7468 Relative Temp Index, Mech w/Impact (21° 30 °C ASTM D792 Relative Temp Index, Mech w/Impact (21° 30 ASTM D792 <th>CTE, -40°C to 40°C, flow</th> <th>7.0E-05</th> <th>1/°C</th> <th>ASTM E831</th>	CTE, -40°C to 40°C, flow	7.0E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, xilow 7.26-50 1/°C IS011359-2 Ball Pressure Test, 125°C +/- 2°C Passe - 10C 60695-10-2 Vicat Softening Temp, Rate B/50 145 °C 150 306 Vicat Softening Temp, Rate B/120 146 °C 150 75/Be HDT/JRe, 0.45MPa Edgew 120°10°4 sp=100mm 140 °C 150 75/Be HDT/JRe, 1.8 MPa Edgew 120°10°4 sp=100mm 128 °C 150 75/Be Relative Temp Index, Elec (²) 130 °C 117 468 Relative Temp Index, Mech w/impact (²) 120 °C 117 468 Relative Temp Index, Mech w/impact (²) 120 °C 117 468 Relative Temp Index, Mech w/impact (²) 120 °C 147 468 Relative Temp Index, Mech w/impact (²) 120 °C 147 468 Relative Temp Index, Mech w/impact (²) 120 × × Mold Shrinkage, Mow, 3.2 mm (²) 40-2 8 × XIM 792 Mold Shrinkage, Mow, 3.2 mm (²) 1.9 2.0 √ XIM 1023 Mater Flow Rate, Solve, 1.2 seg	CTE, -40°C to 40°C, xflow	7.47E-05	1/°C	ASTM E831
Ball Pressure Test, 125°C + /- 2°C Passes - C ICC 6095-10-2 Vicat Softening Temp, Rate B/120 145 °C 150 306 Vicat Softening Temp, Rate B/120 146 °C 150 306 HDT/Be, 0.45MPa Edgew 120°10'4 sp=100mm 140 °C 150 75/Be HDT/Be, 1.8 MPa Edgew 120°10'4 sp=100mm 128 °C 150 75/Be Relative Temp Index, Bele M/G 120 °C UL 746B Relative Temp Index, Mech w/impact (2) 120 °C UL 746B Relative Temp Index, Mech w/impact (2) 120 °C UL 746B Relative Temp Index, Mech w/impact (2) 120 °C UL 746B Relative Temp Index, Mech w/impact (2) 120 °C UL 746B Relative Temp Index, Mech w/impact (2) 120 °C UL 746B Relative Temp Index, Mech w/impact (2) 120 Mechanism SMIT DES Booking Coration 1.8 2. SMIT DES Book (3) 3.0 3.0 3.0 3.0 Moli Shrinkage, flow 3.2 a zem (2) 3.0 3.0	CTE, 23°C to 80°C, flow	7.2E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/SO 145 °C ISO 306 Vicat Softening Temp, Rate B/120 146 °C ISO 306 HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 140 °C ISO 75/Be HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 128 °C ISO 75/Be Relative Temp Index, Mech w/Impact (²) 130 °C U.746B Relative Temp Index, Mech w/Impact (²) 130 °C U.746B Relative Temp Index, Mech w/Impact (²) 130 °C U.746B Relative Temp Index, Mech w/Impact (²) 130 °C U.746B Relative Temp Index, Mech w/Impact (²) 130 °C U.746B Relative Temp Index, Mech w/Impact (²) 130 °C U.746B Relative Temp Index, Mech w/Impact (²) 130 °C W.746B Belative Temp Index, Mech w/Impact (²) 1.18 °C S.5MD DY2 Mold Shrinkage, flow, 3.2 mm (³) 0.4-0.8 % S.8IC method Mold Shrinkage, flow, 3.2 mm (³) 0.4-0.8 % S.5IM D128 Water Absorption (23°C/sakl) 0.5		7.2E-05	,	ISO 11359-2
Vicat Softening Temp, Rate B/120 146 °C ISO 306 HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 140 °C ISO 75/Be HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 128 °C ISO 75/Ae Relative Temp Index, Elec ⁽²⁾ 130 °C U.7468 Relative Temp Index, Mech w/impact ⁽²⁾ 120 °C U.7468 Relative Temp Index, Mech w/o impact ⁽²⁾ 130 °C U.7468 Relative Temp Index, Mech w/o impact ⁽²⁾ 130 °C U.7468 Relative Temp Index, Mech w/o impact ⁽²⁾ 130 °C U.7468 Relative Temp Index, Mech w/o impact ⁽²⁾ 130 °C U.7468 Relative Temp Index, Mech w/o impact ⁽²⁾ 130 °C U.7468 Will Storic Temp Index, Mech w/o impact ⁽²⁾ 140 9 ASTM D792 Mold Shrinkage, stlow, 3.2 mm ⁽³⁾ 0.4 – 0.8 \$ SABIC method Mold Shrinkage, stlow, 3.2 mm ⁽³⁾ 0.4 – 0.8 \$ SIMD 1238 Water Absorption (23°C/skgth) 0.5 \$ SO 62-1 Melt Yolume Rate, MVR at 300°C/	Ball Pressure Test, 125°C +/- 2°C	Passes	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/120 146 °C ISO 306 HDT/Be, 0.45MPa Edgew 120°10°4 sp=100mm 140 °C ISO 75/Be HDT/Ae, 1.8 MPa Edgew 120°10°4 sp=100mm 128 °C ISO 75/Ae Relative Temp Index, Blec ⁽²⁾ 130 °C U. 7468 Relative Temp Index, Mech w/impact ⁽²⁾ 120 °C U. 7468 Relative Temp Index, Mech w/impact ⁽²⁾ 130 °C U. 7468 Relative Temp Index, Mech w/impact ⁽²⁾ 130 °C U. 7468 Relative Temp Index, Mech w/impact ⁽²⁾ 130 °C U. 7468 Relative Temp Index, Mech w/impact ⁽²⁾ 130 °C W. 1746 Relative Temp Index, Mech w/impact ⁽²⁾ 130 °C ASTM DES William State Mech w/impact ⁽²⁾ 1.8 °C ASTM DES Belative Temp Index, Mech w/impact ⁽²⁾ 1.8 °C ASTM DES Belative Temp Index, Mech w/impact ⁽²⁾ 1.8 °C ASTM DES Belative Absorption (23°C/12 kgf 1.9 2.9 2.0 2.0 2.0 2.0 2.0 </th <th>·</th> <th>145</th> <th>°C</th> <th>ISO 306</th>	·	145	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 140 °C ISO 75/Be HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 128 °C ISO 75/Ae Relative Temp Index, Elec ⁽²⁾ 130 °C U.746B Relative Temp Index, Mech w/impact ⁽²⁾ 120 °C U.746B Relative Temp Index, Mech w/impact ⁽²⁾ 130 °C U.746B Relative Temp Index, Mech w/impact ⁽²⁾ 120 °C U.746B Relative Temp Index, Mech w/impact ⁽²⁾ 130 °C U.746B Relative Temp Index, Mech w/impact ⁽²⁾ 120 °C U.746B Relative Temp Index, Mech w/impact ⁽²⁾ 1.8 °C ASTM DES British Segential (Active Temp Index, Mech w/impact ⁽²⁾) 1.8 °C ASTM DES Mold Shrinkage, xflow, 3.2 mm ⁽³⁾ 0.4 – 0.8 % ASIM DES Melt Flow Rate, 300°C/1.2 kgf 1.9 9.0 y.0 ASTM DES Water Absorption (23°C/saturated) 0.15 % 0.0 2.0 2.0 Melt Volume Rate, MVR at 300°C/1.2 kg 1.E+15 0.0 0.0		146	°C	ISO 306
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 128 °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) " UL 746B PHYSICAL (¹) " ASTM D792 Specific Gravity 1.8 * ASTM D792 Mold Shrinkage, flow, 3.2 mm (³) 0.4 - 0.8 * SABIC method Mold Shrinkage, xllow, 3.2 mm (³) 10 y[10 min ASTM D128 Melt Flow Rate, 300°C/1.2 kg 1.9 y[10 min ASTM D128 Water Absorption, (23°C/ Sox RH) 0.35 x[10 min ISO 62-1 Melt Volume Rate, MVR at 300°C/1.2 kg 1.5 x[10 min ISO 133 ELECTRICAL (¹) X[10 min ISO 133 X[10 min Volume Resistivity 1.E+15 X[10 min ASTM D257 Volume Resistivity 2.E X[10 min ASTM D150 Pelative Permittivity, 100 Hz 2.		140	°C	ISO 75/Be
Relative Temp Index, Mech w/impact (2)120°CUL 7468Relative Temp Index, Mech w/o impact (2)130°CUL 7468PHYSICAL (1)Specific Gravity1.18-ASTM D792Mold Shrinkage, flow, 3.2 mm (3)0.4 - 0.8\$SABIC methodMold Shrinkage, xflow, 3.2 mm (3)0.4 - 0.8\$SABIC methodMold Shrinkage, xflow, 3.2 mm (3)0.4 - 0.8\$SABIC methodMelt Flow Rate, 300°C/1.2 kgf1.9g/cm³STM D1238Water Absorption, (23°C/saturated)0.35\$SO 62-1Moisture Absorption (23°C/50%RH)0.15\$SO 62-1Melt Volume Rate, MVR at 300°C/1.2 kg9\$\$SO 62-1ELECTRICAL (1)\$\$\$\$Volume Resistivity> 1.£+15\$\$\$Surface Resistivity> 1.£+15\$\$\$Dielectric Strength, in oil, 0.8 mm16.2\$\$\$Relative Permittivity, 100 Hz2.64\$\$\$Relative Permittivity, 1 MHz2.64\$\$\$Dissipation Factor, 100 Hz0.0012\$\$\$Dissipation Factor, 101 Hz0.00120.0012\$\$Dissipation Factor, 1 MHz0.00120.0012\$\$		128	°C	ISO 75/Ae
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Relative Temp Index, Mech w/o impact (²) 130 °C Ut 746B PHYSICAL (¹) Specific Gravity 1.18 - ASTM D792 Mold Shrinkage, flow, 3.2 mm (³) 0.4 – 0.8 % ASIC method Mold Shrinkage, xflow, 3.2 mm (³) 0.4 – 0.8 % ASIC method Melt Flow Rate, 300°C/1.2 kg¹ 10 g/cm³ ASTM D1238 Water Absorption (23°C/saturated) 3.5 y 50 62-1 Moisture Absorption (23°C/saturated) 9.15 √m³/l 0 min SO 62-1 Melt Volume Rate, MVR at 300°C/1.2 kg 9.2 √m³/l 0 min SO 133 ELECTRICAL (¹) 2 √m²/l 0 min SO 133 Surface Resistivity 1.E+15 Ω cm ASTM D257 Dielectric Strength, in oil, 0.8 mm 16.2 √/mm ASTM D150 Relative Permittivity, 100 Hz 2.64 - ASTM D150 Beispiation Factor, 100 Hz 0.0012 - ASTM D150	-	120	°C	UL 746B
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Hot-Wire Ignition (HWI), PLC 0 ≥0.7 mm UL 746A			-	
	HOT-WIFE IGNITION (HWI), PLC 0	≥U./	mm	UL /46A



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
High Amp Arc Ignition (HAI), PLC 1	≥0.7	mm	UL 746A
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	<u>E45329-100079882</u>	-	-
UL Yellow Card Link 2	<u>E45329-457248</u>	-	
UL Recognized, 94HB Flame Class Rating	≥0.4	mm	UL 94
Glow Wire Ignitability Temperature, 3.0 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.0 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 0.8 mm	875	°C	IEC 60695-2-13
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 0.8 mm	850	°C	IEC 60695-2-12
UV-light, water exposure/immersion	F1	-	UL 746C
Oxygen Index (LOI)	35.0	%	ISO 4589
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.

MORE INFORMATION

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

⁽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.



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