# سابک ےندائے

## LEXAN™ FR RESIN LF1520A

#### DESCRIPTION

LEXAN LF1520A is a compound based on Polycarbonate (PC) resin containing 20% glass fiber and 15% PTFE. Added features of this material include: flame retardant, wear resistant and tight tolerance.

### TYPICAL PROPERTY VALUES

MECHANICAL <sup>(1)</sup> ViewViewTensile Stress, vid., Type I, S mm / min93MPaATM D038Tensile Strass, vid., Type I, S mm / min93MPaATM D038Tensile Strain, vid., Type I, S mm / min58ATM D038Tensile Strain, vid., Type I, S mm / min58ATM D038Tensile Strain, vid., Type I, S mm / min58ATM D038Tensile Strain, vid., Type I, S mm / min6200MPaATM D038Rexard Strain, brit, Type I, S mm / min6200MPaATM D036Iberard Module, J S mm / min6200MPaATM D048Iberard Module, J S mm / min6200MPaATM D048Iberard Module, J S mm / min53MPaATM D048Iberard Module, J S mm / min53MPaATM D048Iberard Module, J S mm / min53MPaATM D048Iberard Module, J S mm / min10ATM D048MPaIberard Module, J S mm / min12MPaATM D048Iberard Module, J S mm / min12MPaMPaIberard Module, J S mm / min12MPaMPaIberard Module, J S mm / min12MPaMPaIberard Module, Life Modul	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Inclustors, bir, Type 1, 5 mm/min9 3MPaASTM D638Tensile Strain, vid, Type 1, 5 mm/min5%ASTM D638Tensile Strain, bir, Type 1, 5 mm/min5%ASTM D638Tensile Strain, bir, Type 1, 5 mm/min5%ASTM D638Tensile Strain, bir, Type 1, 5 mm/min5%ASTM D638Flexard Stress, bir, Type 1, 5 mm/min6200MPaASTM D790Flexard Stress, bir, Type 1, 5 mm/min6200MPaASTM D790IMPACT <sup>11</sup> MSTM D4812MSTM D4812Lood Impact, unotched, 23°C112JmASTM D648Instrumented Dart Impact Total Energy, 23°C12JmASTM D648HDT, 145 MPa, 3.2 mm, unannealed133°CASTM D648HDT, 145 MPa, 3.2 mm, unannealed138°CASTM D648CTE, 40°C to 40°C, flow3060:051/°CASTM D648Relative Tem Index, Mech µ/impact <sup>101</sup> 80°CU17468Relative Tem Index, Belen <sup>101</sup> 80°CU17468Relative Tem Index, Mech µ/impact <sup>101</sup> 80°CMSTM D792Mold Shrinkage, flow, 3.2 mm <sup>101</sup> 0.15-0.25%SalC methodMold Shrinkage, flow, 3.2 mm <sup>101</sup> 0.15-0.25%MSTM D792Mold Shrinkage, flow, 3.2 mm <sup>101</sup> 0.15-0.25%MSTM D792Mold Shrinkage, flow, 3.2 mm <sup>101</sup> 0.15-0.25%MSTM D792Hot Wire Ignition (MVI), PLC <sup>101</sup> 1.5-0.25%MSTM D792Hot Wire Ignition (MVI), PLC <sup>101</sup> 1.5-0.5MSTM D493<	MECHANICAL <sup>(1)</sup>			
Tensile Strain, Mr. Yape I, S mm/minS%A SIM D638Tensile Strain, Mr, Yape I, S mm/min, S0 mm span148%MatolHexaral Modules, J. 3 mm/min, S0 mm span2600MaaA SIM D790Internal Stress, Mr, I. 3 mm /min, S0 mm span2600MaaA SIM D790Internal Stress, Mr, J. 3 mm /min, S0 mm span534J/mA SIM D638MPACT <sup>(1)</sup> 1SIM D648SIM D648SIM D648Ized Impact, unotched, 23°C112JA SIM D636Instrumented Datu Impact Total Energy, 23°C17JA SIM D648TERMAL <sup>(1)</sup> 12SIM D648SIM D648HOT, D.45 MFa, 3.2 mm, unannealed133°CA SIM D648CTE, 40°C tota'C, flow0.606051/°CA SIM D648CTE, 40°C tota'C, flow0.806051/°CA SIM D648Relative Tem Jindex, Meten // Jinget <sup>(2)</sup> 80°CU 7468Relative Tem Jindex, Meten // Jinget <sup>(2)</sup> 80°CU 7468Relative Tem Jindex, Meten // Jinget <sup>(2)</sup> 80°CU 7468Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.15 - 0.25%Sim CentholMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.20.45%Sim CentholMold Shrinkage, flow, J.2 mm <sup>(3)</sup> 3.16IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Tensile Stress, yld, Type I, 5 mm/min	93	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm, Jmin5%A STM D638Flexural Stress, brk, 1.3 mm /min, 50 mm span148MPaASTM D790Flexural Modulu, 1.3 mm /min, 50 mm span6200MPaMTD790IMPACT '0SIM D790MPAIzed Impact, unnotched, 23°C534I/mASTM D256Instrumented Dart Impact Total Energy, 23°C112I/mASTM D256Instrumented Dart Impact Total Energy, 23°C17JASTM D256HDT, 0.45 MPa, 3.2 mm, unannealed133°CASTM D648HDT, 1.82 MPa, 3.2 mm, unannealed128°CASTM D648HDT, 0.45 MPa, 3.2 mm, unannealed3.066051/°CMTD648HDT, 0.45 MPa, 3.2 mm, unannealed0.066051/°CMTD648Relative Temp Index, Mech w/jmgat ( <sup>20</sup> )80°CU.7468Relative Temp Index, Mech w/jmgat ( <sup>20</sup> )80°CU.7468Nodd Shrinkage, flow, 3.2 mm ( <sup>20</sup> )0.15 - 0.25%CMID 02Mold Shrinkage, flow, 3.2 mm ( <sup>20</sup> )0.15 - 0.25%ISABC methodMold Shrinkage, flow, 3.2 mm ( <sup>20</sup> )0.15 - 0.25%IMID 02Mold Shrinkage, flow, 3.2 mm ( <sup>20</sup> )0.15 - 0.25%IMID 02HotWire Ignition (HW), PCC ( <sup>20</sup> )3MID 02MID 02HotWire Ignition (HW), PCC ( <sup>20</sup> )3 <td>Tensile Stress, brk, Type I, 5 mm/min</td> <td>93</td> <td>MPa</td> <td>ASTM D638</td>	Tensile Stress, brk, Type I, 5 mm/min	93	MPa	ASTM D638
Hexaral Stress, brk, 1.3 mm/min, 50 mm span148MPaASTM D790Flexaral Modulus, 1.3 mm/min, 50 mm span200MPaA TM D790IMPACT "STM D4812Isod Impact, unotoked, 23°C12JmmASTM D4812Isod Impact, notoked, 23°C12JmmASTM D565Instrumented Dat Impact Total Energy, 23°C7JmmASTM D4812Ito Statumented Dat Impact Total Energy, 23°C13Statumented Statumented Dat Impact Total Energy, 23°CStatumented Statumented Dat Impact Total Energy, 23°CStatumented Statumented Dat Impact Total Energy, 23°CIto Statumented Dat Impact Total Energy, 23°C33Statumented Statumented Statumented Dat Impact Statumented Dat	Tensile Strain, yld, Type I, 5 mm/min	5	%	ASTM D638
Hearal Modulas, 1.3 mm/min, 50 mm span6200MPaATM D790IMPACT <sup>10</sup> 544.0001/mATM D4812Izod Impact, nonotched, 23°C544.0001/mATM D4812Izod Impact, notched, 23°C120.0001/mATM D256Instrumented Data Impact Total Energy, 23°C73.000ATM D256Instrumented Data Impact Total Energy, 23°C13.3°CASTM D648IDT, 450 MB, 3.2 mm, nannealed138°CASTM D648IDT, 40°C to 40°C, flow524.051/°CASTM D648CTE, 40°C to 40°C, flow524.051/°CASTM D648Relative Temp Index, Elec <sup>(2)</sup> 806.051/°CMIB 8.01Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°C10.7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°C10.7468Physick1 <sup>(1)</sup> 1.50.2581.00010.7468Mod Shrinkage, flow, 3.2 mm <sup>(2)</sup> 1.50.2581.00010.7468Index Index Index Impact <sup>10</sup> 1.50.251.60.0001.746AHordyner Jander Tacking Index (UT) (PC) <sup>(2)</sup> 3.011.746AHordyner Jander Tacking Index (UT) (PC) <sup>(2)</sup> 1.50.0001.60.0001.746AHordyner Jander Tacking Index (UT) (PC) <sup>(2)</sup> 1.50.0001.764Hordyner Jander Tacking Index (UT) (PC) <sup>(2)</sup> 1.50.0001.764 </td <td>Tensile Strain, brk, Type I, 5 mm/min</td> <td>5</td> <td>%</td> <td>ASTM D638</td>	Tensile Strain, brk, Type I, 5 mm/min	5	%	ASTM D638
IMPACTIzed Impact, unnotched, 23°C534//mASTM D4812Ized Impact, notched, 23°C12//mASTM D256Instrumented Dart Impact Total Energy, 23°C17//mASTM D363THERNAL <sup>11</sup> 7ASTM D4812//mASTM D4812THERNAL <sup>11</sup> 7STM D4813STM D4813HDT, 458 MPA, 3.2 mm, unannealed128°CASTM D648HDT, 452 MPA, 3.2 mm, unannealed2806051/°CASTM D648CTE, 40°C to 40°C, flow52E051/°CASTM E831CTE, 40°C to 40°C, flow60°CU.7468Relative Temp Index, Elerg <sup>(2)</sup> 80°CU.7468Relative Temp Index, Methy (Impact <sup>16)</sup> 80°CU.7468Relative Temp Index, Methy (Impact <sup>16)</sup> 16.0.25%SASM D492Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.16.0.25%SASM D492Hot Shrinkage, flow, 3.2 mm <sup>(3)</sup> 1.5.0.25mmU.746AHot Shrinkage, flow, 3.2 mm <sup>(3)</sup> 1.5.0.25MindMindHot Shrinkage, flow, 4.10(HC) <sup>(2)</sup> 1.5.0.25MindU.746AHot Shrinkage, flow, 4.10(HC) <sup>(2)</sup> 1.5.0.25mmU.746AHot Shrinkage, flow, 4.10(HQ), P.C.0 <sup>(2)</sup> 1	Flexural Stress, brk, 1.3 mm/min, 50 mm span	148	MPa	ASTM D790
ized inpact, unotched, 23°C534J/mATM 24812ized inpact, notched, 23°C12J/mATM 256instruented Dat Impact Toil Energy, 23°C77373737HTM, 0413778787HTM, 0413077878787HTM, 042377878787HTM, 042377878787HTM, 042326177878787HTM, 04287787878787CTE, 40°C toil C, flow30677878787CTE, 40°C toil C, flow3082787878787CTE, 40°C toil C, flow3082808787878787Relative Timplex, Med Vingtaf30808087 <th< td=""><td>Flexural Modulus, 1.3 mm/min, 50 mm span</td><td>6200</td><td>MPa</td><td>ASTM D790</td></th<>	Flexural Modulus, 1.3 mm/min, 50 mm span	6200	MPa	ASTM D790
Ized Injact, notched, 23°C112I/mASIM D256Instrumented Dart Impact Total Energy, 23°C173ASIM D3763HERMAL <sup>(1)</sup> 133°CASIM D3763HDT, 0.458 MPa, 3.2 mm, unannealed133°CASIM D648HDT, 182 MPa, 3.2 mm, unannealed128°CASIM D648CTE, 40°C to 40°C, flow306c D51/°CASIM D648Relative Temp Index, Elec <sup>(2)</sup> 3026 D51/°CASIM D648Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°CU. 7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°CU. 7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 1.47SSMold Shrinkage, flow, 3.2 m <sup>(3)</sup> 1.47°CU. 7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 1.47SSMold Shrinkage, flow, 3.2 m <sup>(3)</sup> 1.47SSSMold Shrinkage, flow, 3.2 m <sup>(3)</sup> 0.20%CSSMold Shrinkage, flow, 2.2 m <sup>(3)</sup> 1.47SSSHottyre Ignition (HWI), PLC 1 <sup>(2)</sup> 3MIMIMIHigh And ra Ignition (HWI), PLC 1 <sup>(2)</sup> 1.5mmU. 746AHigh Ang Are Ignition (HMI), PLC 4 <sup>(2)</sup> 1.5MIMIHigh More Ignition (HMI), P	IMPACT <sup>(1)</sup>			
Instrumented Dart Impact Total Energy, 23°C1717171717HERMAL. <sup>(1)</sup> 133°CASTM D5648HDT, 1.45 MPa, 3.2 mm, unannealed133°CASTM D648HDT, 1.82 MPa, 3.2 mm, unannealed128°CASTM D648CTE, 40°C to 40°C, flow3066051/°CASTM E831Relative Temp Index, Elec <sup>(2)</sup> 80°CU.7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°CU.7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°CU.7468Nold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 1.47°CU.7468Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 1.50.25%CMSIC methodMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.15 -0.25%CMSIC methodMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 3.5MSIC methodMSIC methodHot-Wire Ignition (HUI), PLC 0 <sup>(2)</sup> 3mmU.746AHot-Wire Ignition (HUI), PLC 0 <sup>(2)</sup> 1.5mmU.746AHigh Ang Act Ignition (HUI), PLC 4 <sup>(2)</sup> 1.5mmU.746AHigh Ang Act Ignition (HUI), PLC 4 <sup>(2)</sup> 3mmU.746AHigh Voltage Act Tack Kate (PLC) <sup>(2)</sup> 3mmU.746AHigh Voltage Act Tack Kate (PLC) <sup>(2)</sup> 1.5mmU.746AHigh Voltage Act Tack Kate (PLC) <sup>(2)</sup> 3mmU.746AHigh Voltage Act Tack Kate (PLC) <sup>(2)</sup> 1.5mmU.746AHigh Voltage Act Tack Kate (PLC) <sup>(2)</sup> 1.5mmU.746AHigh Voltage Act Tack Kate (PLC) <sup>(2)</sup> 1.5mm <td>Izod Impact, unnotched, 23°C</td> <td>534</td> <td>J/m</td> <td>ASTM D4812</td>	Izod Impact, unnotched, 23°C	534	J/m	ASTM D4812
THERNAL. <sup>(1)</sup> HDT, 0.45 MPa, 3.2 mm, unannealed133°CASTM D648HDT, 1.82 MPa, 3.2 mm, unannealed128°CASTM D648CTE, 40°C to 40°C, flow3.066:051/°CASTM E831CTE, 40°C to 40°C, flow5.22:051/°CASTM E831Relative Temp Index, Klech W/impact <sup>(2)</sup> 80°C0.17468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°C0.17468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°C0.17468PhysiCAL. <sup>(1)</sup> 1.475.02Mol Shrinkage, flow, 3.2 mm <sup>(3)</sup> ASTM CP32Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.15 - 0.25%1SABIC methodMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.2 - 0.45%2SABIC methodHot-Wire Ignition (HU), PLC <sup>(2)</sup> 3Mol Shrinkage, flow 3.2 mm <sup>(3)</sup> NI 746AHot-Wire Ignition (HU), PLC <sup>(2)</sup> 1.5mm0.1746AHot-Wire Ignition (HU), PLC <sup>(2)</sup> 3.16mm0.1746AHigh Ang Are Ignition (HU), PLC <sup>(2)</sup> 3.16mm0.1746AHigh Vange Arc Track Rate (PLC)5.15mm0.1746AHut-Wire Ignition (HU), PLC <sup>(2)</sup> 3.16NI 746AHigh Vange Arc Track Rate (PLC)5.15NI 746AHut-Wire Ignition (HU), PLC <sup>(2)</sup> 1.5NI 746AHut-Wire Ignition (HU), PLC <sup>(2)</sup> 1.5N	Izod Impact, notched, 23°C	112	J/m	ASTM D256
HDT, 0.45 MPa, 3.2 mm, unannealed133°CASTN D648HDT, 1.82 MPa, 3.2mm, unannealed128°CASTN D648GTE, 40°C to 40°C, flow3.066051/°CASTN E831GTE, 40°C to 40°C, flow5.226051/°CASTN E831Relative Temp Index, Elec <sup>(2)</sup> 80°CU.7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°CU.7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°CMathematicaPersical:1.47-ASTN D792Prostore1.50.25%10ASIC methodMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.15 - 0.25%10ASIC methodMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.15 - 0.25%10ASIC methodMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.15 - 0.25%10MathematicaMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.15 - 0.25%10MathematicaHord Maph C Ign (10)1.5 - 0.05%10MathematicaHord Maph C Ign (10), PLC (1 <sup>°</sup> )3.16%10MathematicaHord Maph C Ign (10), PLC (1 <sup>°</sup> )1.5%10MathematicaHord Maph C Ign (10), PLC (1 <sup>°</sup> )1.5%10%10Hord Maph C Ign (10), PLC (1 <sup>°</sup> )1.5%10%10Hord Maph C Ign (10), PLC (1 <sup>°</sup> )1.5%10%10 </td <td>Instrumented Dart Impact Total Energy, 23°C</td> <td>17</td> <td>1</td> <td>ASTM D3763</td>	Instrumented Dart Impact Total Energy, 23°C	17	1	ASTM D3763
Init of a constraint of a cons	THERMAL <sup>(1)</sup>			
CTE, 40°C to 40°C, flow3.06E051/°CSTM E831CTE, 40°C to 40°C, xflow5.2E051/°CSTM E831Relative Temp Index, Elec <sup>(2)</sup> 80°CU.7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°CU.7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°CU.7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°CU.7468PhysicAL <sup>(1)</sup> -STM D792SMBC methodMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.15 - 0.25%1SABC methodMold Shrinkage, sflow, 3.2 mm <sup>(3)</sup> 0.2 - 0.45%1SABC methodMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 3.2MC Code1/ 46AMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 1.5mmU.746AMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 3.4MC Code1/ 46AMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 3.4MC CodeU.746AMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 3.4MC CodeU.746AMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 3.5mmU.746AHigh Map Are Child In (HM), PLC <sup>(2)</sup> 3.5mmU.746AHigh Amp Are Lightion (HM), PLC <sup>(2)</sup> 3.5MC CodeJ.T4AAHigh Voltage Are Track Rate (PLC) <sup>(2)</sup> 3.6MC CodeJ.T4AAHigh Voltage Are Track Rate (PLC) <sup>(2)</sup> 3.6MC CodeJ.T4AAHigh Voltage Are Track Rate (PLC) <sup>(2)</sup> 3.6MC CodeJ.T4AAHigh Voltage Are Track Rate (PLC) <sup>(2)</sup> 1.5MC CodeJ.T4AAHigh Voltage Are Track Rate (PLC) <sup>(2)</sup> 1.	HDT, 0.45 MPa, 3.2 mm, unannealed	133	°C	ASTM D648
CTE, 40°C to 40°C, flow5,226051/°CASTM E831Relative Temp Index, Kelc <sup>(2)</sup> 80°C0.7468Relative Temp Index, Mech w/ impact <sup>(2)</sup> 80°C0.7468Relative Temp Index, Mech w/ impact <sup>(2)</sup> 80°C0.7468PHYSICAL <sup>(1)</sup> -SATM D792Mod SAIM SAIM SAIM SAIM SAIM SAIM SAIM SAIM	HDT, 1.82 MPa, 3.2mm, unannealed	128	°C	ASTM D648
Relative Temp Index, Cle <sup>(2)</sup> 80°C10.7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°C10.7468Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°C10.7468PHYSICAL <sup>(1)</sup>	CTE, -40°C to 40°C, flow	3.06E-05	1/°C	ASTM E831
Relative Temp Index, Mech w/impact <sup>(2)</sup> 80°C1.7468Relative Temp Index, Mech w/o impact <sup>(2)</sup> 80°C1.7468PHYSICAL <sup>(1)</sup> Specific Gravity1.47Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.15 - 0.25%10%301.Mold Shrinkage, stlow, 3.2 mm <sup>(3)</sup> 0.25-0.45%10%10.Bergräuf Terck <sup>(1)</sup> Comparative Tracking Index (UL) (LPL) <sup>(2)</sup> Hot-Wire Ignition (HW), PLC 0 <sup>(2)</sup> Hot-Wire Ignition (HW), PLC 1 <sup>(2)</sup> </td <td></td> <td>5.22E-05</td> <td>1/°C</td> <td>ASTM E831</td>		5.22E-05	1/°C	ASTM E831
Relative Temp Index, Mech w/nippet (2)80°CU.7488PHYSICAL <sup>(1)</sup>	Relative Temp Index, Elec <sup>(2)</sup>	80	°C	UL 746B
PHYSICAL <sup>(1)</sup> STACE ConstructionSTACE ConstructionSTACE ConstructionSpecific Gravity1.47.6.5 <t< td=""><td>Relative Temp Index, Mech w/impact<sup>(2)</sup></td><td>80</td><td>°C</td><td>UL 746B</td></t<>	Relative Temp Index, Mech w/impact <sup>(2)</sup>	80	°C	UL 746B
Specific Gravity1.47.47ATM D792Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.15 - 0.25%SABC methodMold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.2 - 0.45%%SABC methodEtertRick1 <sup>(1)</sup> Comparative Tracking Index (UL) (PC) <sup>(2)</sup> 3Mod SandMC OdeM.746AHot-Wire Ignition (HWI), PLC 0 <sup>(2)</sup> Min MadeHot-Wire Ignition (HWI), PLC 0 <sup>(2)</sup> Min MadeHot-Mark Are (PLC) <sup>(2)</sup> Min MadeHot Mark Are (PLC) <sup>(2)</sup> Min MadeHot Mark Are (PLC) <sup>(2)</sup> Hot Mark Are (PLC) <sup>(2)</sup> Hot Mark	Relative Temp Index, Mech w/o impact <sup>(2)</sup>	80	°C	UL 746B
Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup> 0.15 - 0.25%SABIC methodMold Shrinkage, xflow, 3.2 mm <sup>(3)</sup> 0.2 - 0.45%SABIC methodELECTRICAL <sup>(1)</sup>	PHYSICAL <sup>(1)</sup>			
Mold Shrinkage, sflow, 3.2 mm0.2 - 0.45%SABC methodELECTRICAL	Specific Gravity	1.47	-	ASTM D792
ELECTRICAL <sup>(1)</sup> Comparative Tracking Index (UL) {PLC ( <sup>2</sup> )3PLC OdeU.746AHot-Wire Ignition (HW), PLC 0 <sup>(2)</sup> >1MmU.746AHot-Wire Ignition (HAI), PLC 1 <sup>(2)</sup> >1.5MmU.746AHigh Amp Are Ignition (HAI), PLC 1 <sup>(2)</sup> 3PLC OdeU.746AHigh Voltage Arc Track Rate (PLC) <sup>(2)</sup> 3PLC OdeU.746AHigh Voltage Arc Track Rate (PLC) <sup>(2)</sup> 5PLC OdeNT D495Hu Yellow Card LinkE12156220960LU Yellow Card Link 2£07780-228438UL Network Track Rate (PLC)\$1.5MmU.940-U Yellow Card Link 2£07780-228438MmU.940-U Network Card Link 2\$1.5MmU.940-U Yellow Card Link 2£1.5MmU Yellow Card Link 2£1.5MmMm-U Yellow Card Link 2£1.5MmMm-U Yellow Card Link 2£1.5MmMm-U Yellow Card Link 2£1.5	Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup>	0.15 – 0.25	%	SABIC method
Comparative Tracking Index (UL) (PLC) <sup>(2)</sup> 3PLC CodeUL 746AHot-Wire Ignition (HWI), PLC 0 <sup>(2)</sup> >3mmUL 746AHot-Wire Ignition (HWI), PLC 1 <sup>(2)</sup> >1.5mmUL 746AHigh Amp Arc Ignition (HAI), PLC 4 <sup>(2)</sup> 3PLC CodeUL 746AHigh Voltage Arc Track Rate (PLC) <sup>(2)</sup> 3PLC CodeUL 746AHigh Voltage Arc Track Rate (PLC) <sup>(2)</sup> 3PLC CodeUL 746AHigh Voltage Arc Track Rate (PLC) <sup>(2)</sup> 3PLC CodeUL 746AHigh Voltage Arc Track Rate (PLC) <sup>(2)</sup> 5PLC Code03High Voltage Arc Track Rate (PLC) <sup>(2)</sup> 1111High Voltage Arc Track Rate (PLC) <sup>(2)</sup> 11111High Voltage Arc Trac	Mold Shrinkage, xflow, 3.2 mm <sup>(3)</sup>	0.2 - 0.45	%	SABIC method
Hot-Wire Ignition (HWI), PLC 0 <sup>(2)</sup> ≥3mmU.746AHot-Wire Ignition (HWI), PLC 1 <sup>(2)</sup> ≥1.5mmU.746AHigh Amp Arc Ignition (HAI), PLC 4 <sup>(2)</sup> ≥1.5mmU.746AHigh Voltage Arc Track Rate (PLC) <sup>(2)</sup> 3PLC CodeU.746AArc Resistance, Tungsten (PLC)5PLC CodeU.746AFLAME CHARACTERISTICS <sup>(2)</sup> U.746APLC CodeU.746AU. Yellow Card Link 2E1256209609.69.69.6UL Yellow Card Link 2E107780-2284389.09.09.0UL Recognized, 94V-0 Figme Class Rating≥1.5mmU.94	ELECTRICAL <sup>(1)</sup>			
Hot-Wire Ignition (HWI), PLC 1≥1.5mmUL 746AHigh Amp Arc Ignition (HAI), PLC 4≥1.5mmUL 746AHigh Voltage Arc Track Rate {PLC}3PL CodeUL 746AArc Resistance, Tungsten {PLC}5PL CodeATM D495FLAME CHARACTERISTICS <sup>(2)</sup> IIIIUL Yellow Card Link 2E1256220960IUL Yellow Card Link 2E207780-228438IIUL Recognized, 94V-0 Flame Class Rating≥1.5mmUL 940UL 940	Comparative Tracking Index (UL) {PLC} (2)	3	PLC Code	UL 746A
High Amp Arc Ignition (HAI), PLC 4 <sup>(2)</sup> ≥1.5mmUL 746AHigh Voltage Arc Track Rate {PLC} <sup>(2)</sup> 3PL CodeU. 746AArc Resistance, Tungsten {PLC}5PL CodeASTM D495FLAME CHARACTERISTICS <sup>(2)</sup> E12150209609.09.09.0UL Yellow Card Link 2E207780-284389.09.09.0Lu Recognized, 94V-0 Flame Class Rating≥1.5mmUL 940	Hot-Wire Ignition (HWI), PLC 0 <sup>(2)</sup>	≥3	mm	UL 746A
High Voltage Arc Track Rate {PLC}3PLC CodeUL 746AArc Resistance, Tungsten {PLC}5PLC CodeASTM D495FLAME CHARACTERISTICS <sup>(2)</sup> IIIIUL Yellow Card Link 2E12156220960-IIUL Yellow Card Link 2E207780-228438-IIUL Recognized, 94V-0 Flame Class Rating>1.5mm<UL 94	Hot-Wire Ignition (HWI), PLC 1 <sup>(2)</sup>	≥1.5	mm	UL 746A
Arc Resistance, Tungsten {PLC} STM D495   FLAME CHARACTERISTICS <sup>(2)</sup> FILSE FILSE   UL Yellow Card Link 2 E121562-220960 - - - -   UL Yellow Card Link 2 E07780-228438 -	High Amp Arc Ignition (HAI), PLC 4 <sup>(2)</sup>	≥1.5	mm	UL 746A
FLAME CHARACTERISTICS <sup>(2)</sup> E121562-220960 - -   UL Yellow Card Link 2 E207780-228438 - -   UL Recognized, 94V-0 Flame Class Rating >1.5 mm UL 94	High Voltage Arc Track Rate {PLC} (2)	3	PLC Code	UL 746A
UL Yellow Card Link E121562-220960 -    <	Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D495
UL Yellow Card Link 2 E207780-228438 - -   UL Recognized, 94V-0 Flame Class Rating >1.5 mm UL 94	FLAME CHARACTERISTICS (2)			
UL Recognized, 94V-0 Flame Class Rating ≥1.5 mm UL 94	UL Yellow Card Link	E121562-220960	-	
UL Recognized, 94V-0 Flame Class Rating 21.5 mm UL 94	UL Yellow Card Link 2	E207780-228438	-	
	UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
	INJECTION MOLDING <sup>(4)</sup>			

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CHEMISTRY THAT MATTERS

Revision 20231109



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	290 – 310	°C	
Nozzle Temperature	280 – 305	°C	
Front - Zone 3 Temperature	290 – 310	°C	
Middle - Zone 2 Temperature	275 – 300	°C	
Rear - Zone 1 Temperature	265 – 290	°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.

(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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