

# VALOX<sup>TM</sup> RESIN 815

**REGION AMERICAS** 

### DESCRIPTION

15% GR PBT+ PET, excellent surface finish. Typical applications are hot air gun housing assemblies, industrial glue guns, appliance housings and handles.

### TYPICAL PROPERTY VALUES

| PROPERTIESTYPICAL VALUESUNITSTEST METHODSMECLAWICAL9MainSTM 0790MECURA MECK, Type 1, 5 mm/min om span9MainSTM 0 790Revaral Mesck, 13 mm/min, 50 mm span4480MainSTM 0 790Hardnes, Rackwell R19-STM 0 790MERCE19-STM 0 780Kontonel, 23*C37MainSTM 0 780MERCE101/mSTM 0 780Kontonel, 23*C37J/mSTM 0 781Kontonel, 23*C101/mSTM 0 781Kontonel, 23*C101/mSTM 0 782Kontonel, 23*C101/mSTM 0 782Kontonel, 24*C101/mSTM 0 782Kontonel, 25*C1/m1/mSTM 0 782Kontonel, 26*C1/m1/mSTM 0 782Kontonel,  |  |                |          |              |
|---|--|----------------|----------|--------------|
| Testile Stress, bri, T. Jam (min, S0 mm span89MFaMFaSTM D 59Rexural Modules, 1.3 mm/min, 50 mm span137MFaSTM D 79Returates, Sockwell R19MFaSTM D 78Hardness, Rockwell R19STM D 78STM D 78Internet, Sockwell R267J/maSTM D 78Internet, Sockwell R27J/maSTM D 78Internet, Sockwell R10MFaSTM D 64Internet, Sockwell R10STM D 64STM D 64Relative Temp Index, Mechy Impact10StM D 70STM D 70Relative Temp Index, Mechy Impact10StM D 70StM D 70Internet, Sockwell R0.4StM D 70StM D 70Specific Volume0.4StM D 70StM D 70Mold Shrinkape, Noh, Si-3, Zam G0.4StM D 70StM D 70Internet, Sockwell R0.4StM D 70StM D 70Mold Shrinkape, Noh, Si-3, Zam G0.4StM D 70StM D 70Internet, Sockwell R0.4StM D 70StM D 70Internet, Sockwell R0.5 <td< td=""><td>PROPERTIES</td><td>TYPICAL VALUES</td><td>UNITS</td><td>TEST METHODS</td></td<>  | PROPERTIES                                   | TYPICAL VALUES | UNITS    | TEST METHODS |
| Hexural Xess, birk, 1.3 mm /min, 50 mm span137MPaASIM D 790Rexural Modulus, 1.3 mm /min, 50 mm span4480MPaASIM D 790Hardnes, Rockwell R190NPaASIM D 780Hardnes, Rockwell R267J/mASIM D 4812Ized Impact, unotched, 23°C27J/mASIM D 4812Hort, Asim Managaled10°CASIM D 4812HTC, 40% Cto 40% C, flow60°CASIM D 648HDT, 142 MPa, 64 mm, unannealed10°CASIM D 648HTC, 40% Cto 13% C, flow6400°CASIM D 648HOT, 142 MPa, 64 mm, unannealed10°CASIM D 648HTC, 40% Cto 13% C, flow5400°CASIM D 648Relative Temp Index, Elec12°CMTM 648Relative Temp Index, Mech w/impact10°CMTM 648Relative Temp Index, Mech w/impact10°CMTM 648Specific Grouty10°CMTM 648Relative Temp Index, Elec12WTM 648Specific Volume62MTM 648Mold Shrinkage, flow, 15.24 cm0.6SM 0570Mold Shrinkage, flow, 15.24 cm0.6MTM 0570<  | MECHANICAL                                   |                |          |              |
| Hardnesk, Rockwell R4480MFaSTM D 790Hardnesk, Rockwell R19.ATM D 785IMPAC.MTM D 785Load Impact, unotched, 23°C267   | Tensile Stress, brk, Type I, 5 mm/min        | 89             | MPa      | ASTM D 638   |
| Hardness, Rockwell R19- OASMD 785IAPACTIIIzod Impact, unnotched, 23°C267I/IASMD 245Izod Impact, unnotched, 23°C27I/IASMD 25I TEMMLI/II/IASMD 25I TEMMLII/IASMD 26I TEMML210°CASMD 26I TEMMLII/IASMD 648I TEMML210°CASMD 648I TE, 40°C to 40°C, flow540540740Relative Temp Index, Menh winnanceled100°CASMD 648Relative Temp Index, Mech w/Impact10262011/ICRelative Temp Index, Mech w/Impact10362011/ICRelative Temp Index, Mech w/Impact103103103/ICRelative Temp Index, Mech w/Impact103103/IC10/ICRelative Temp Index, Mech w/Impact103103/IC103/ICRelative Temp Index, Mech w/Impact103103/IC103/ICRelative Temp Index, Mech w/Impact103/IC103/IC103/ICRelative Temp Index, Mech w/Impact103/IC103/IC103/ICRelative Temp Index, Mech w/Impact103/IC103/IC103/ICRelative Temp Index, Iffon103/  | Flexural Stress, brk, 1.3 mm/min, 50 mm span | 137            | MPa      | ASTM D 790   |
| INACTIzod Impact, notoched, 23°C2671/mASTM 0 4812Izod Impact, notoched, 23°C371/mASTM 0 265Itomact, notoched, 23°C371/mASTM 0 256THERMAL10°CASTM 0 648HDT, 145 MFa, 64 mm, unannealed100°CASTM 0 648CTE, 40°C to 40°C, flow45001/°CASTM 18 831CTE, 60°C to 138°C, flow54001/°C01070Relative Temp Index, Mech w/impact100°CU 7468Relative Temp Index, Mech w/impact10°CU 7468Relative Temp Index, Mech w/impact010°CU 7468Specific Consity0.60mmlSTM 0 592Specific Consity0.60%1SAID 0 592Mold Shrinkage, flow, 1.5-3.2 mm0.61%1SAID resMold Shrinkage, flow, 3.2-46 mm0.60%2SAIC methodMold Shrinkage, flow, 3.2-46 mm0.61%1SAID resBolic Construk22SAID resSAID resIde Strinkage, flow, 3.2-46 mm0.61%1SAID resBolic Stringth, ind 1, fand5616MinSAID 104Dielectric Strength, ind 1, fand3.61MinMin 104Relative Permitivity, 10Hz3.6%1Min 104Relative Permitivity, 10Hz0.60%1Min 104Relative Permitivity, 10Hz0.60%1Min 104Relative Permitivity, 10Hz0.60%1Min 104Relative Permitivity, 10Hz </td <td>Flexural Modulus, 1.3 mm/min, 50 mm span</td> <td>4480</td> <td>MPa</td> <td>ASTM D 790</td>   | Flexural Modulus, 1.3 mm/min, 50 mm span     | 4480           | MPa      | ASTM D 790   |
| izod impact, unotched, 23°C6671/mASTM 0.4812izod impact, notched, 23°C371/mASTM 0.256iteRMAL555HTT, 452 Ma, 6.4 mm, unannealed60°CASTM 0.648CTE, 40°C to 40°C, flow45£051/°CASTM E.831CTE, 60°C to 138°C, flow5.45051/°CASTM E.831Relative Temp Index, Elec125°C0.17468Relative Temp Index, Moch w/Impact120°C0.17468Relative Temp Index, Moch w/Impact1.43°CMID 1.92Specific Gravity0.40m <sup>3</sup> 19ASTM 0.792Specific Gravity0.40.66%CMID 1.92Mold Shrinkage, flow, 1.5.3.2 mm0.40.66%CMID 1.92Mold Shrinkage, flow, 1.5.3.2 mm0.50.8%IDMID 1.92Dielectric Strength, in in, 3.2 mm0.50.8%IDMID 1.92Dielectric Strength, in in, 3.2 mm3.66MID 1.92MID 1.92Dielectric Strength, in in, 3.2 mm3.66MID 1.92MID 1.92Dielectric Strength, in in, 1.6 mm3.6MID 1.92MID 1.92Relative Permitriky, 1.0 Miz3.6MID 1.92 <td>Hardness, Rockwell R</td> <td>119</td> <td>-</td> <td>ASTM D 785</td>               | Hardness, Rockwell R                         | 119            | -        | ASTM D 785   |
| izod impact, notched, 23°Ci7i7MRIM 256THERMAL10°CASIM 264HDT, 0.54 MR, 6.4 mm, unannealed20°CASIM 0648HDT, 1.52 MR, 6.4 mm, unannealed60°CASIM 0648CTE, 40°C to 40°C, flow456.051/°CASIM 263CTE, 60°C to 38°C, flow54.051/°CMIR 8.31CTE, 60°C to 38°C, flow10°CU.7468Relative Temp Index, Mech w/ impact10°CU.7468Relative Temp Index, Mech w/ impact10°CU.7468Relative Temp Index, Mech w/ impact1.3°CU.7468Specific Croaty1.43°CMIM 292Specific Croaty0.6sml 9.3SMIM 292Mod Shrinkage, flow, 1.5.2 mm0.6%IMSMIM 292Mold Shrinkage, flow, 1.5.2 mm0.6%IMSMIC endodMold Shrinkage, flow, 1.5.2 mm <td>IMPACT</td> <td></td> <td></td> <td></td>   | IMPACT                                       |                |          |              |
| THERMA.HDT, 0.45 MPa, 6.4 mm, unannealed210°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed160°CASTM D 648CTE, 40°C to 038°C, flow4.5E051/°CASTM E 831CTE, 60°C to 138°C, flow5.4E051/°CMSTM E 831Relative Temp Index, Mech w/impact10°CU. 7468Relative Temp Index, Mech w/impact10°CU. 7468Relative Temp Index, Mech w/impact1.43°CU. 7468PHYSICALVVSTM D 792Specific Gravity0.66%CSASID 0792Mold Shrinkage, flow, 1.5.3.2 mm0.67%CSASID ControlMold Shrinkage, flow, 1.5.3.2 mm0.67%CSASIC methodMold Shrinkage, flow, 3.2.4.6 mm0.5-0.8%SSASIC methodVolume Resistivity5.6F1NormSASID 270Volume Resistivity5.6F1NormSASID 270Volume Resistivity0.5C4%UmmSASID 270Dielectric Strength, in in, 3.2 mm3.6KV/mmSASID 270Dielectric Strength, in in, 1.6 mm3.6%UmmSASID 270Relative Permittivity, 100 Hz3.6KV/mmSASID 270Relative Permittivity, 100 Hz3.6%UmmSASID 270Relative Permittivity, 100 Hz3.6%UmmSASID 270Relative Permittivity, 100 Hz3.6%UmmSASID 270Relative Permittivity, 100 Hz3.6%UmmSASID 150Relative Permittivity, 100 Hz3.6%Umm  | Izod Impact, unnotched, 23°C                 | 267            | J/m      | ASTM D 4812  |
| HDT. 0.45 MPa, 6.4 mm, unannealed210°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed160°CASTM D 648HDT, 4.62 MPa, 6.4 mm, unannealed4.5051/°CASTM E 831CTE, 40°Ct 0 13°C, flow5.4001/°CASTM E 831Relative Temp Index, Elec120°CU. 7468Relative Temp Index, Meth w/Impact120°CU. 7468Relative Temp Index, Meth w/Impact120°CU. 7468Relative Temp Index, Meth w/Impact1.43°CMSTM D 792Specific Gravity0.74SMID 792SMID 792Specific Gravity0.40.60SMID 792SMID 792Mold Shrinkage, flow, 1.5.3.2 mm0.40.60SMID 792SMID 792Mold Shrinkage, flow, 3.5.4 mm0.40.60SMID 792SMID 792Mold Shrinkage, flow, 3.5.4 mm0.40.60SMID 870SMID 792Mold Shrinkage, flow, 3.5.4 mm0.40.60SMID 870SMID 870Mold Shrinkage, flow, 3.5.4 mm0.50.8SMIC methodSMID 870Mold Shrinkage, flow, 3.5.4 mm0.50.4SMIC METHODSMID 193Dielectric Strength, in ar, 3.2 mm2.3SMIC MIDSMID 193Dielectric Strength, in ar, 3.2 mm3.6SMID 193SMID 193Relative Permittivity, 100 Hz3.6SMID 193SMID 193Relative Permittivity, 101 Hz3.6SMID 193SMID 193Sinsipation Facer, Indig FLOP3.6SMID 193SMID 193Relative Permittivity, 101 Hz3.6SMID 193  | Izod Impact, notched, 23°C                   | 37             | J/m      | ASTM D 256   |
| HDT, 1.82 MPa, 6.4 mm, unannealed160°CASTM D 648CTE, 40°C to 40°C, flow4.56051/°CASTM E 831CTE, 60°C to 138°C, flow5.4605°CU.7468Relative Temp Index, Elec10°CU.7468Relative Temp Index, Mech w/ impact10°CU.7468Relative Temp Index, Mech w/ impact1.43°CU.7468Specific Cravity1.43°CSTIM D 792Specific Cravity0.60%1ASTM D 792Mold Shrinkage, flow, 1.5.3.2 mm0.64.0.6%1SABIC methodMold Shrinkage, flow, 2.4.6 mm0.6-0.9%1SABIC methodMold Shrinkage, flow, 3.2.4.6 mm0.5-0.8%1SABIC methodMold Shrinkage, flow, 3.2.4.6 mm0.5-0.8%1SABIC methodDielectric Strength, in sit, 3.2 mm2.5NotmSATM D 572Dielectric Strength, in sit, 3.2 mm2.6MirmSABIC methodDielectric Strength, in sit, 3.2 mm0.5-0.8%1SABIC methodDielectric Strength, in sit, 3.2 mm2.6MirmSATM D 57Dielectric Strength, in sit, 3.2 mm3.6MirmSTM D 150Dielectric Strength, in sit, 3.2 mm3.6MirmSTM D 150Dielectric Strength, in sit, 1.6 mm3.6MirmSTM D 150Dielectric Strength, in sit, 3.2 mm3.6MirmSTM D 150Dielectric Strength, in sit, 3.2 mm3.6MirmSTM D 150Dielectric Strength, in sit, 1.6 mm3.6Mir Sit, 1.6Mirm   | THERMAL                                      |                |          |              |
| CFE, 40°C to 40°C, flow4,5051/°CSTM E 831CTE, 60°C to 138°C, flow5,46051/°CSTM E 831Relative Temp Index, Elec125°CU 17468Relative Temp Index, Mech w/ impact130°CU 7468Relative Temp Index, Mech w/ impact125°CU 7468PHYSCA   | HDT, 0.45 MPa, 6.4 mm, unannealed            | 210            | °C       | ASTM D 648   |
| CFE, 60°c to 138°C, flow5.46051/°cSIM E 831Relative Temp Index, Rech w/ impact125°CU 7468Relative Temp Index, Mech w/ impact125°CU 7468PHYSCALVVSpecific Gravity1.43°CSIM D 792Specific Gravity0.40°CSIM D 792Mater Absorption, 24 hours0.40%IM CSIM D 792Model Shrinkage, flow, 1.5-3.2 mm0.41-0.6%IMSIM C methodMod Shrinkage, flow, 3.2-4.6 mm0.61-0.9%IMSIM C methodMod Shrinkage, flow, 3.2-4.6 mm0.50-0.8%IMSIM C methodDielectric Strength, in alt, 3.2 mm0.51-0.8%IMSIM D 592Dielectric Strength, in alt, 3.2 mm0.61-0.9%IMSIM D 593Dielectric Strength, in alt, 3.2 mm0.62-0.8%IMSIM D 593Dielectric Strength, in alt, 3.2 mm0.62-0.8%IMSIM D 593Dielectric Strength, in alt, 3.2 mm0.62-0.8%IMSIM D 593Dielectric Strength, in alt, 3.2 mm0.62%IMSIM D 194Dielectric Strength, in alt, 1.6 mm0.60%IMSIM D 194Dielectric Strength, in alt, 3.2 mm0.60%IM%IM D 194Dielectric Strength, 10.1 ML0.60%IM D 194%IM D 194Diel   | HDT, 1.82 MPa, 6.4 mm, unannealed            | 160            | °C       | ASTM D 648   |
| Relative Temp Index, Elec125°C0.17468Relative Temp Index, Mech w/impact100°C0.17468Relative Temp Index, Mech w/o impact25°C0.17468PMSICA  | CTE, -40°C to 40°C, flow                     | 4.5E-05        | 1/°C     | ASTM E 831   |
| Relative Temp Index, Mech w/impact100°CU.7468Relative Temp Index, Mech w/impact125°CU.7468PMSICASpecific Gravity1.43°CMID 192Specific Yolume0.70cm³/gATM D 792Vater Absorption, 24 hours0.66%1SAIM D 792Mold Shrinkage, flow, 1.5.2 mm0.4-0.6%2SAIR methodMold Shrinkage, stady, 1.5.2 mm0.6-0.9%2SAIR methodMold Shrinkage, stady, 3.2.4.6 mm0.6-0.9%2SAIR methodDidektric Strength, insi, 3.2 mm0.6-0.9%2%2SAIR methodDielectric Strength, insi, 3.2 mm0.6-0.1%2%2%2Dielectric Strength, insi, 3.2 mm3.6%2%2%2Relative Permittivi, 104Fz3.6%2%2%2%2Dielectric Strength, indi, 1.6 mm%2%2%2%2%2Relative Permittivi, 104Fz%2%2%2%2%2Dielectric Strength, indi, 1.6 mm%2%2%2%2%2Charge Strength, indi, 3.2 mm%2%2%2%2%2Dielectric Strength, indi, 3.2 mm%2%2%2%2%2   | CTE, 60°C to 138°C, flow                     | 5.4E-05        | 1/°C     | ASTM E 831   |
| Relative Temp Index. Mech w/n impact15°CU. 7468PHYSICALSpecific Gravity1.43Specific Gravity0.7Specific Gravity0.7Meta Absorption, 24 hours0.6 </td <td>Relative Temp Index, Elec</td> <td>125</td> <td>°C</td> <td>UL 746B</td>   | Relative Temp Index, Elec                    | 125            | °C       | UL 746B      |
| PHYSICALSpecific Gravity1.43-ASTM D 792Specific Volume0.7cm³/gASTM D 792Water Absorption, 24 hours0.66%ASTM D 570Mold Shrinkage, flow, 1.5.3.2 mm0.4–0.6%ASIC methodMold Shrinkage, flow, 3.2.4.6 mm0.6–0.9%ASIC methodMold Shrinkage, sflow, 3.2.4.6 mm0.5–0.8%ASIC methodMold Shrinkage, sflow, 3.2.4.6 mm0.8–1.1%ASIC methodMold Shrinkage, sflow, 3.2.4.6 mm0.8–1.1%ASIC methodMold Shrinkage, sflow, 3.2.4.6 mm0.8–1.1%MoldMold Shrinkage, sflow, 3.2.4.6 mm%%MoldDielectric Strength, in air, 3.2 mm2.6MirmASIT D 150Relative Permittivity, 10 Hz3.6%MirmMir D 150Relative Permittivity, 11 MHz0.002%Mir D 150Disipation Factor, 100 Hz%%Mir D 150Arc Resistance, FLOS%%Mir D 150Hot Wire Ignition (PLO%%%Mir D 160 <tr< td=""><td>Relative Temp Index, Mech w/impact</td><td>110</td><td>°C</td><td>UL 746B</td></tr<> | Relative Temp Index, Mech w/impact           | 110            | °C       | UL 746B      |
| Specific Gravity1.43- <<br>ATM D 792Specific Yolume0.7m³/gATM D 792Water Absorption, 24 hours0.66%ATM D 792Mold Shinkage, flow, 1.5.3.2 mm0.4-0.60%SalC methadMold Shinkage, flow, 3.2.4.6 mm0.4-0.60%SalC methadMold Shinkage, flow, 3.2.4.6 mm0.4-0.60%SalC methadMold Shinkage, flow, 3.2.4.6 mm0.4-0.60%%SalC methadMold Shinkage, flow, 3.2.4.6 mm0.4-0.60%%SalC methadMold Shinkage, flow, 3.2.4.6 mm0.4-0.60%%%%Mold Shinkage, flow, 3.2.4.6 mm0.4-0.60%%%%Mold Shinkage, flow, 3.2.4.6 mm0.4-0.60%%%%Mold Shinkage, flow, 3.2.4.6 mm%%%%%%Mold Shinkage, flow, 3.2.4.6 mm%%%%%%Mold Shinkage, flow, 3.2.4.6 mm%%%%%%Mold Shinkage, flow, 3.2.4.6 mm%%%%%%%%%Bieletric Strange, flow, 3.2.6 mm%%% <th< td=""><td>Relative Temp Index, Mech w/o impact</td><td>125</td><td>°C</td><td>UL 746B</td></th<>  | Relative Temp Index, Mech w/o impact         | 125            | °C       | UL 746B      |
| Specific Volume0.7cm³/gATM D 792Water Absorption, 24 hours0.66%ATM D 570Mold Shrinkage, flow, 1.5-3.2 mm0.4–0.6%SABIC methodMold Shrinkage, flow, 3.2-4.6 mm0.6–0.9%SABIC methodMold Shrinkage, sflow, 3.2-4.6 mm0.6–0.9%%SABIC methodMold Shrinkage, sflow, 3.2-4.6 mm0.6–0.9%%SABIC methodMold Shrinkage, sflow, 3.2-4.6 mm%%%%%Mold Shrinkage, sflow, 3.2-4.6 mm%%%%%Bielettin Strangth, in sit, 3.2 mm%%%%%%Dialectric Strength, in sit, 3.2 mm%%%%%%%Relative Permittivity, 100 Hz%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%<   | PHYSICAL                                     |                |          |              |
| Water Absorption, 24 hours0.06%ASTM D 570Mold Shrinkage, flow, 1.5-3.2 mm0.4 - 0.6%SABIC methodMold Shrinkage, flow, 3.2-4.6 mm0.6 - 0.9%SABIC methodMold Shrinkage, sflow, 3.2-4.6 mm0.5 - 0.8%SABIC methodMold Shrinkage, sflow, 3.2-4.6 mm0.8 - 1.1%SABIC methodDielectric Strength, in air, 3.2 mm2.2kV/mmASTM D 257Dielectric Strength, in oil, 1.6 mm23.6kV/mmASTM D 149Relative Permittivity, 1 MHz3.5kV/mmASTM D 150Dissipation Factor, 100 Hz0.002-ASTM D 150Arc Resistance, Tungsten {PLC}0.002%ASTM D 495Hot Wire Ignition (PLC)2NC CodeU.746AHigh Voltage Arc Track Rate {PLC}1YC CodeU.746A  | Specific Gravity                             | 1.43           | -        | ASTM D 792   |
| Mold Shrinkage, flow, 1.5-3.2 mm0.4 - 0.6%SABIC methodMold Shrinkage, flow, 3.2-4.6 mm0.6 - 0.9%SABIC methodMold Shrinkage, flow, 3.2-4.6 mm0.5 - 0.8%SABIC methodMold Shrinkage, flow, 3.2-4.6 mm0.8 - 1.1%%SABIC methodBettertext1.1%%%%%%Polleetric Strength, in air, 3.2 mm2.6%%% </td <td>Specific Volume</td> <td>0.7</td> <td>cm³/g</td> <td>ASTM D 792</td>  | Specific Volume                              | 0.7            | cm³/g    | ASTM D 792   |
| Mold Shrinkage, flow, 3.2-4.6 mm0.6 - 0.9%SABIC methodMold Shrinkage, xflow, 1.5-3.2 mm0.5 - 0.8%SABIC methodMold Shrinkage, xflow, 3.2-4.6 mm0.8 - 1.1%SABIC methodMold Shrinkage, xflow, 3.2-4.6 mm0.8 - 1.1%%SABIC methodMold Shrinkage, xflow, 3.2-4.6 mm5.6 + 1.6%%%SABIC methodDielectric Strength, in air, 3.2 mm2.1%%%%%Dielectric Strength, in oil, 1.6 mm2.1%%%%%%%%Relative Permittivity, 100 Hz3.6%%   | Water Absorption, 24 hours                   | 0.06           | %        | ASTM D 570   |
| Mold Shrinkage, xflow, 1.5-3.2 mm0.5 - 0.8%SABIC methodMold Shrinkage, xflow, 3.2-4.6 mm0.8 - 1.1%SABIC methodELECTRICALVolume Resistivity5.6E+16Ohm-cmASTM D 257Dielectric Strength, in air, 3.2 mm22W/mmASTM D 149Dielectric Strength, in oil, 1.6 mm3.6KV/mmASTM D 149Relative Permittivity, 100 Hz3.6-ASTM D 150Disipation Factor, 100 Hz0.002-ASTM D 150Disipation Factor, 100 Hz5.0NO2ASTM D 150Hot Wire Ignition (PLC)2AGRPLC CodeU 1746AHigh Voltage Arc Track Rate (PLC)1Mod ShrinkagePLC CodeU 1746A  | Mold Shrinkage, flow, 1.5-3.2 mm             | 0.4 - 0.6      | %        | SABIC method |
| Mold Shrinkage, xflow, 3.2-4.6 mm0.8 – 1.1%SABIC methodELECTRICALVolume Resistivity5.6E+16Ohm-cmASTM D 257Dielectric Strength, in air, 3.2 mm2.2KV/mmASTM D 149Dielectric Strength, in oil, 1.6 mm3.6KV/mmASTM D 149Relative Permittivity, 100 Hz3.6.ASTM D 150Dispiption Factor, 100 Hz0.002.ASTM D 150Arc Resistance, Tungsten {PLC}5.6PLC CodeU.746AHigh Voltage Arc Track Rate {PLC}1.0PLC CodeU.746A   | Mold Shrinkage, flow, 3.2-4.6 mm             | 0.6 - 0.9      | %        | SABIC method |
| ELECTRICALVolume Resistivity5.6E+16Ohm-cmASTM D 257Dielectric Strength, in air, 3.2 mm2W/mmASTM D 149Dielectric Strength, in oil, 1.6 mm3.6W/mmASTM D 149Relative Permittivity, 100 Hz3.6.ASTM D 150Relative Permittivity, 100 Hz0.002.ASTM D 150Dispation Factor, 100 Hz0.002ASTM D 150Arc Resistance, Tungsten {PLC}5LC CodeNET D 450High Voltage Arc Track Rate {PLC}1.PL CodeU 1746A  | Mold Shrinkage, xflow, 1.5-3.2 mm            | 0.5 – 0.8      | %        | SABIC method |
| Volume Resistivity5.6E+16Ohm-cmASTM D 257Dielectric Strength, in air, 3.2 mm22K/mmASTM D 149Dielectric Strength, in oil, 1.6 mm23.6K/mmASTM D 149Relative Permittivity, 100 Hz3.6.ASTM D 150Relative Permittivity, 100 Hz0.002.ASTM D 150Dissipation Factor, 100 Hz5.0.ASTM D 150Arc Resistance, Tungsten {PLC}5.0ASTM D 495High Voltage Arc Track Rate {PLC}1NoPLC CodeU.746A  | Mold Shrinkage, xflow, 3.2-4.6 mm            | 0.8 - 1.1      | %        | SABIC method |
| Dielectric Strength, in air, 3.2 mm22KV/mmASTM D 149Dielectric Strength, in oil, 1.6 mm23.6KV/mmASTM D 149Relative Permittivity, 100 Hz3.6.ASTM D 150Relative Permittivity, 1 MHz3.5.ASTM D 150Dissipation Factor, 100 Hz0.002.ASTM D 150Arc Resistance, Tungsten {PLC}5PLC CodeASTM D 495Hot Wire Ignition {PLC}1OtogationPLC CodeUI 746AHigh Voltage Arc Track Rate {PLC}1PLC CodeUI 746A   | ELECTRICAL                                   |                |          |              |
| Dielectric Strength, in oil, 1.6 mm23.6KV/mmASTM D 149Relative Permittivity, 100 Hz3.6-ASTM D 150Relative Permittivity, 1 MHz3.5-ASTM D 150Dissipation Factor, 100 Hz0.002-ASTM D 150Arc Resistance, Tungsten {PLC}5PLC CodeASTM D 495Hot Wire Ignition {PLC}2PLC CodeUL 746AHigh Voltage Arc Track Rate {PLC}1PLC CodeUL 746A  | Volume Resistivity                           | 5.6E+16        | Ohm-cm   | ASTM D 257   |
| Relative Permittivity, 100 Hz3.6ASTM D 150Relative Permittivity, 1 MHz3.5ASTM D 150Dissipation Factor, 100 Hz0.002ASTM D 150Arc Resistance, Tungsten {PLC}5PLC CodeASTM D 495Hot Wire Ignition {PLC}2PLC CodeUL 746AHigh Voltage Arc Track Rate {PLC}1PLC CodeUL 746A   | Dielectric Strength, in air, 3.2 mm          | 22             | kV/mm    | ASTM D 149   |
| Relative Permittivity, 1 MHz3.5ASTM D 150Dissipation Factor, 100 Hz0.002ASTM D 150Arc Resistance, Tungsten {PLC}5PLC CodeASTM D 495Hot Wire Ignition {PLC}2PLC CodeUL 746AHigh Voltage Arc Track Rate {PLC}1PLC CodeUL 746A   | Dielectric Strength, in oil, 1.6 mm          | 23.6           | kV/mm    | ASTM D 149   |
| Dissipation Factor, 100 Hz0.002-ASTM D 150Arc Resistance, Tungsten {PLC}5PLC CodeASTM D 495Hot Wire Ignition {PLC}2PLC CodeUL 746AHigh Voltage Arc Track Rate {PLC}1PLC CodeUL 746A   | Relative Permittivity, 100 Hz                | 3.6            | -        | ASTM D 150   |
| Arc Resistance, Tungsten {PLC}     5     PLC Code     ASTM D 495       Hot Wire Ignition {PLC}     2     PLC Code     UL 746A       High Voltage Arc Track Rate {PLC}     1     PLC Code     UL 746A  | Relative Permittivity, 1 MHz                 | 3.5            | -        | ASTM D 150   |
| Hot Wire Ignition {PLC}     2     PLC Code     UL 746A       High Voltage Arc Track Rate {PLC}     1     PLC Code     UL 746A   | Dissipation Factor, 100 Hz                   | 0.002          | -        | ASTM D 150   |
| High Voltage Arc Track Rate {PLC} 1 PLC Code UL 746A  | Arc Resistance, Tungsten {PLC}               | 5              | PLC Code | ASTM D 495   |
|   | Hot Wire Ignition {PLC)                      | 2              | PLC Code | UL 746A      |
| High Ampere Arc Ign, surface {PLC}2PLC CodeUL 746A  | High Voltage Arc Track Rate {PLC}            | 1              | PLC Code | UL 746A      |
|   | High Ampere Arc Ign, surface {PLC}           | 2              | PLC Code | UL 746A      |

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## CHEMISTRY THAT MATTERS

Revision 20190214



| PROPERTIES                             | TYPICAL VALUES | UNITS    | TEST METHODS |
|--|----------------|----------|--------------|
| Comparative Tracking Index (UL) {PLC}  | 2              | PLC Code | UL 746A      |
| FLAME CHARACTERISTICS                  |                |          |              |
| UL Recognized, 94HB Flame Class Rating | 1.47           | mm       | UL 94        |
| INJECTION MOLDING                      |                |          |              |
| Drying Temperature                     | 120            | °C       |              |
| Drying Time                            | 3 – 4          | hrs      |              |
| Drying Time (Cumulative)               | 12             | hrs      |              |
| Maximum Moisture Content               | 0.02           | %        |              |
| Melt Temperature                       | 250 – 265      | °C       |              |
| Nozzle Temperature                     | 245 – 260      | °C       |              |
| Front - Zone 3 Temperature             | 250 – 265      | °C       |              |
| Middle - Zone 2 Temperature            | 245 – 260      | °C       |              |
| Rear - Zone 1 Temperature              | 240 – 255      | °C       |              |
| Mold Temperature                       | 65 – 90        | °C       |              |
| Back Pressure                          | 0.3 – 0.7      | MPa      |              |
| Screw Speed                            | 50 – 80        | rpm      |              |
| Shot to Cylinder Size                  | 40 - 80        | %        |              |
| Vent Depth                             | 0.025 - 0.038  | mm       |              |

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