GE Plasti
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Pittsfield, MA 012(
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# VALOX 357

**USA: Commercia**

**Product Portfolio | Product Lines | VALOX**

Unreinforced, impact modified, UL94V-0 rated. Applications like bobbins, switches and enclosures.

## Processing

**INJECTION MOULDING-USA**

VAL-IM-02

| | | |
|---|---|---|
| Drying Temperature | 250 | deg F |
| Drying Time (basic) | 3-4 | h |
| Drying Time (cumulative) | 12 | h |
| Moisture Content, max | 0.02 | % |
| Moisture Content, min | - | % |
| Melt Temperature | 480-510 | deg F |
| Nozzle Temperature | 470-500 | deg F |
| Front Temperature | 480-510 | deg F |
| Middle Temperature | 470-500 | deg F |
| Rear Temperature | 460-490 | deg F |
| Mold Temperature | 120-170 | deg F |
| Back Pressure | 50-100 | psi |
| Screw Speed | 50-100 | rpm |
| Suggested shot size | 40-80 | % |
| Clamp Tonnage | 3-5 | tons/psi |
| Vent Depth | .001-.0015 | in |

Source Eris, last updated: 2000/10/

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Unreinforced, impact modified, UL94V-0 rated. Applications like bobbins, switches and enclosures.

## Properties

**MECHANICAL**

| Property | Typical Data | Unit | Method |
|---|---|---|---|
| Tensile Str, yld, Type I, 2.0 in/min | 7000 | psi | ASTM D 638 |
| Tensile Str, brk, Type I, 2.0 in/min | 7000 | psi | ASTM D 638 |
| Tensile Elong, brk, Type I, 2.0 in/min | 110.0 | % | ASTM D 638 |
| Flex Stress, yld, 0.05 in/min, 2" span | 12000 | psi | ASTM D 790 |
| Flex Stress, brk, 0.05 in/min, 2" span | 12000 | psi | ASTM D 790 |
| Flex Mod, 0.05 in/min, 2" span | 300000 | psi | ASTM D 790 |
| Hardness, Rockwell R | 117 | - | ASTM D 785 |
| Hardness, Rockwell R | 117 | - | ASTM D 785 |

**IMPACT**

| Property | Typical Data | Unit | Method |
|---|---|---|---|
| Izod Impact, unnotched, 73F | 60.0 | ft-lb/in | ASTM D 4812 |
| Izod Impact, notched, 73F | 10.0 | ft-lb/in | ASTM D 256 |
| Gardner Impact, 73F | 32 | ft-lbs | ASTM D 3029 |

| | | | |
|---|---|---|---|
| Modified Gardner, 73F | 32 | ft-lbs | ASTM D 3029 |

**THERMAL**

| Property | Typical Data | Unit | Method |
|---|---|---|---|
| HDT, 66 psi, 0.250", unannealed | 280 | deg F | ASTM D 648 |
| HDT, 264 psi, 0.250", unannealed | 210 | deg F | ASTM D 648 |
| CTE, flow, -40F to 100F | 5 E-5 | 1/F | ASTM E 831 |
| CTE, flow, 140F to 280F | 6 E-5 | 1/F | ASTM E 831 |
| Thermal Index, Elec Prop | 120 | deg C | UL 746B |
| Thermal Index, Mech Prop with impact | 120 | deg C | UL 746B |
| Thermal Index, Mech prop without impact | 140 | deg C | UL 746B |

**PHYSICAL**

| Property | Typical Data | Unit | Method |
|---|---|---|---|
| Specific Gravity, solid | 1.34 | - | ASTM D 792 |
| Specific Volume | 20.80 | in3/lb | ASTM D 792 |
| Water Absorption, 24 hours @ 73F | 0.080 | % | ASTM D 570 |
| Mold Shrinkage, flow, 30-90 mil | 8-11 | in/in E-3 | ASTM D 955 |
| Mold Shrinkage, flow, 90-180 mil | 10-14 | in/in E-3 | ASTM D 955 |
| Mold Shrinkage, xflow, 30-90 mil | 9-13 | in/in E-3 | ASTM D 955 |
| Mold Shrinkage, xflow, 90-180 mil | 12-16 | in/in E-3 | ASTM D 955 |

**ELECTRICAL**

| Property | Typical Data | Unit | Method |
|---|---|---|---|
| Volume Resistivity | >1E16 | ohm-cm | ASTM D 257 |
| Dielectric Strength, in air, 125 mils | 470 | V/mil | ASTM D 149 |
| Dielectric Strength, in oil, 62 mils | 640 | V/mil | ASTM D 149 |
| Dielectric Strength, in oil, 125 mils | 470 | V/mil | ASTM D 149 |
| Dielectric Constant, 100 Hz | 3.20 | - | ASTM D 150 |
| Dielectric Constant, 1 MHz | 3.20 | - | ASTM D 150 |
| Dissipation Factor, 100 Hz | 0.0030 | - | ASTM D 150 |
| Dissipation Factor, 1 MHz | 0.0300 | - | ASTM D 150 |
| Arc Resistance, Tungsten (+/- 0.125") | 6 | PLC Code | ASTM D 495 |
| Hot Wire Ignition (+/- 0.125") | 2 | PLC Code | UL 746A |
| High Voltage Arc Track Rate (+/- 0.125") | 3 | PLC Code | UL 746A |
| High Amp Arc Ign, surface (+/- 0.125") | 3 | PLC Code | UL 746A |
| Comparative Track Index (+/- 0.125") | 2 | PLC Code | UL 746A |
| Volume Resistivity | >1E16 | ohm-cm | ASTM D 257 |
| Dielectric Strength, in air, 125 mils | 470 | V/mil | ASTM D 149 |
| Dielectric Strength, in oil, 62 mils | 640 | V/mil | ASTM D 149 |
| Dielectric Strength, in oil, 125 mils | 470 | V/mil | ASTM D 149 |
| Dielectric Constant, 100 Hz | 3.20 | - | ASTM D 150 |
| Dielectric Constant, 1 MHz | 3.20 | - | ASTM D 150 |
| Dissipation Factor, 100 Hz | 0.0030 | - | ASTM D 150 |
| Dissipation Factor, 1 MHz | 0.0300 | - | ASTM D 150 |

**FLAME CHARACTERISTICS**

| Property | Typical Data | Unit | Method |
|---|---|---|---|
| UL File Number, USA | E121562 | - | - |

| | | | |
|---|---|---|---|
| HB Rated (tested thickness) | 0.018 | inch | UL 94 |
| V-0 Rated (tested thickness) | 0.025 | inch | UL 94 |
| 5VA Rating (tested thickness) | 0.118 | inch | UL 94 |
| CSA (See File for complete listing) | LS88480 | File No. | CSA LISTED |
| Oxygen Index (LOI) | 30.0 | % | ASTM D 2863 |
| Oxygen Index (LOI) | 30.0 | % | ASTM D 2863 |
| UV-light, water exposure/immersion | F2 | - | UL746C |

Source Eris, last updated: 2000/10/

## Disclaimer