Composites International
THERMOSET MOLDING COMPOUNDS

# Product Data

G7B offers exceptionally good resistance to arcing in both high current and high voltage situations and has become long-established in providing parts for heavy duty engineering applications, eg. insulators and distribution equipment.

The material has a low flammability rating and carries Underwriters Laboratory approval (UL 94 VO) for moulded thicknesses down to 3.0 mm.

## GRADE: G7B

### TYPICAL PROPERTIES OF MOULDINGS

| PROPERTY | TEST METHOD | UNITS | VALUE |
|---|---|---|---|
| Physical Properties | | | |
| Density | BS2782 Method 620A | g/cm³ | 1.73 |
| Mould Shrinkage | BS2782 Method 640A ISO 2577 | % | 0.15 |
| Water Absorption | BS2782 Method 430A ISO 62-80 | mg | 20 |
| Thermal Properties | | | |
| After Shrinkage (48 hr at 100ºC) | BS2782 Method 640A ISO 2577 | % | Zero |
| Temperature of Deflection Under Load (1.8 MPa) | BS2782 Method 121A ISO 75 | ºC | > 200 |
| Deflection under Load at 100ºC | BS2782 Method 121A ISO 75 | mm | 1.2 |
| RTI Electrical | UL746B | ºC | 150 |
| RTI Mechanical without impact | UL746B | ºC | 160 |
| RTI Mechanical with impact | UL746B | ºC | 150 |
| Flame Retardant Properties | | | |
| Oxygen Index | BS2782 Method 141 ISO 4589 | % | 30 |
| UL Rating | UL94 @ 3.0 mm. | | VO |
| Mechanical Properties | | | |
| Flexural Strength | BS2782 Method 335A ISO 178 | Mpa | 90 |
| Flexural Modulus | BS2782 Method 335A ISO 178 | Gpa | 9.5 |
| Charpy Impact Strength (Notched) | BS2782 Method 359 ISO 179 | kJ/m² | 20 |
| Tensile Strength | BS2782 Method 320E | Mpa | 30 |
| Electrical Properties | | | |
| Electric Strength at 90ºC | BS2782 Method 220 IEC 243 | MV/m | 8.5 |
| Arc Resistance | ASTM D495-73 | Sec | 195 |
| | | ULGrade | 4 |
| Insulation Resistance | BS2782 Method 204C IEC 167 | $\log_{10}$ohms | 12.3 |
| Tracking Resistance | DIN 53480 Method A | Grade | KA3C |
| | DIN 53480 Method B | Grade | > B600 |
| | BS5901 IEC 112 ASTM D3638 | V | > 600 |
| | UL 746 ASTM D3638 | ULGrade | 0 |
| HAI -High Current Arc Ignition | UL 746A | ULGrade | 0 |
| HWI –Hot Wire Ignition | ASTM D3874 IEC 60695-2-20 | ULGrade | 0 |
| Glow Wire | IEC 60695-2-1 | ºC | 960 |
| Surface Resistivity | BS2782 Method 231A | $\log_{10}$ohms | 13.0 |
| Volume Resistivity | BS2782 Method 230A | $\log_{10}$ohmsc m | 13.0 |

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Before use consult the appropriate IDI Composites. Health and Safety Data.
The values quoted in the properties table have been obtained by standard test methods, using compression moulded specimens.
They provide useful comparisons between types but do not necessarily indicate the performance of commercial parts, which may differ due to a number of factors, including colour, component design, mould design, and method of manufacture and moulding.



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