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## B38 (FR) Product Data Sheet

### Material Details

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<b>Grade:</b>	B38 (FR). (Type: Glass Based Laminates - SRBG)
<b>Description:</b>	Epoxy Glass. Flame retardant epoxy glass laminate
<b>Comments:</b>	Flame retardant Epoxy glass laminate. Class B applications incorporating a brominated resin system. Very good electrical, mechanical and machining characteristics. For all electrical and electronic applications.
<b>Specifications:</b>	BSEN60893-3-2-EPGC202 (Which supersedes BS3953 EP4). The closest NEMA equivalent to this specification is NEMA FR4.
<b>Body Colour:</b>	Pale Green
<b>Cover Colour:</b>	Pale Green
<b>Standard Finish:</b>	Satin/Glossy
<b>Size:</b>	1220 x 1220 Thickness Range: 0.4 - 175.0 †

### Typical Applications

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- Transformer Spacers
- Terminal Boards and Tag Strips
- Slot Wedges
- Precision Machined Parts
- Pipeline Insulation
- Phase Barriers
- Insulating Bushes Spacers Sleeves
- High Voltage Insulation
- Electromagnetic Coil Insulation
- Chemical Resistance Components

### General Properties

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Property	Unit of measure	Typical Value
Density	g/cm <sup>3</sup>	1.9
Water Absorption	mg	7
Flammability Category <sup>‡</sup>	-	FV0

<sup>‡</sup> Where relevant, the flammability test method is used solely to control and monitor consistency of production. Under no conditions should the results be considered in relation to fire hazards under actual conditions of use.

## Electrical Properties

Property	Unit of measure	Typical Value
IR (24hrs Water Immersed)	G □	30000
IR (Dry)	G □	30000
Electric Strength (Flat Rapid)	kV/mm	16
Breakdown Voltage (Edge Step by Step)	kV	89
Relative Permittivity @ 1 MHz	-	4.8
Dissipation Factor @ 1 MHz	-	0.02
Tracking Index	V	210

## Mechanical Properties

Property	Unit of measure	Typical Value
Flexural Strength	MPa	492
Tensile Strength	MPa	220
Impact (Notched CHARPY)	kJ/m <sup>2</sup>	55

## Thermal Properties

Property	Unit of measure	Typical Value
Thermal Rating Continuous	°C	130
Thermal Rating Intermittent	°C	140

## Notes

- Datasheet Issue No. 1

Disclaimer: The above values are based upon routine test data and do not form the basis of a supply contract. These products may be used in a diverse range of applications and whilst every effort is made to ensure the information in this data sheet is accurate, it must be stressed that it is the user's responsibility to ensure suitability for the intended end use.

Source: <https://www.attwater.com/products/b38-fr/>