

**DESCRIPTION** Starflam AFR450B is a Flame Retardant, 25% Glass Fiber Reinforced Polyamide 66 Injection Molding Resin

PROPERTY (1)	UNIT	STANDARD	TYPICAL VALUE (1) Dry As Moulded
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### PHYSICAL

Density	g/cm <sup>3</sup>	ISO 1183	1.55
Mold Shrinkage on Tensile Bar, flow	%	E2P Method	0.2 - 0.3
Water Absorption, (23°C/sat)	%	ISO 62	4.5

### MECHANICAL

Flexural Modulus, 2 mm/min	MPa	ISO 178	8900
Flexural Stress, break, 2 mm/min	MPa	ISO 178	175
Tensile Modulus, 1 mm/min	MPa	ISO 527	9200
Tensile Strain, break, 5 mm/min	%	ISO 527	2
Tensile Stress, break, 5 mm/min	MPa	ISO 527	120

### IMPACT

Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	kJ/m <sup>2</sup>	ISO 179/1eU	55
Izod Impact, notched 80*10*4 +23°C	kJ/m <sup>2</sup>	ISO 180/1A	7
Izod Impact, notched 80*10*4 -20°C	kJ/m <sup>2</sup>	ISO 180/1A	6

### THERMAL

CTE, 23°C to 60°C, flow	1/°C	ISO 11359-2	2.7E-05
CTE, 23°C to 60°C, xflow	1/°C	ISO 11359-2	9.2E-05
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	°C	ISO 75/Ae	245
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	°C	ISO 75/Be	256
Vicat Softening Temp, Rate B/120	°C	ISO 306	258

Source SIP TDS, VI-4, last update 01-07-2010

(1) Typical values for natural color unless specified otherwise. Do not constitute a specification. Significant variations are possible for colors

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EUROSTAR Engineering Plastics, ZI - Rue de la Ferme Saint Ladre, BP2, F/95471 Fosses Cedex FRANCE,

Tel: + 33 1 34 47 47 00, Fax: + 33 1 34 47 47 18 - [www.eurostar-ep.com](http://www.eurostar-ep.com)

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### FLAME CHARACTERISTICS

UL Recognized, 94V-0 Flame Class Rating	mm	UL 94	0.8
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PARAMETER	SETTING	UNIT
Maximum Moisture Content	0.2	%
Mold Temperature	60 - 90	°C
Rear - Zone 1 Temperature	260 - 270	°C
Middle - Zone 2 Temperature	270 - 280	°C
Front - Zone 3 Temperature	270 - 285	°C
Melt Temperature	270 - 285	°C
Drying Temperature	75 - 85	°C
Drying Time	4 - 6	hrs

**PROCESSING PARAMETERS:** see above typical molding conditions.

**DRYING:** is not essential when material is delivered in sealed bags with moisture content below 0.2%.

**BARRELS, SCREWS, MOULDS:** use wear resisting steel or alloy such as bimetallic cylinders, nitrided screws.

**USE OF REGRIND:** the properties of the component should be checked in order to ascertain the maximum acceptable level of regrind.

**SAFETY:** please refer to Material Safety Datasheet

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