

DESCRIPTION Starflam AFR450B1 is a Flame Retardant, 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 ³	ISO 1183	1.56
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	215
Tensile Modulus, 1 mm/min	MPa	ISO 527	9100
Tensile Strain, break, 5 mm/min	%	ISO 527	2
Tensile Stress, break, 5 mm/min	MPa	ISO 527	150

IMPACT

Izod Impact, notched 80*10*4 +23°C	kJ/m ²	ISO 180/1A	7
Izod Impact, notched 80*10*4 -20°C	kJ/m ²	ISO 180/1A	6
Izod Impact, unnotched 80*10*4 +23°C	kJ/m ²	ISO 180/1U	60

THERMAL

CTE, 23°C to 60°C, flow	1/°C	ISO 11359-2	3.00E-05
CTE, 23°C to 60°C, xflow	1/°C	ISO 11359-2	9.00E-05
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	°C	ISO 75/Ae	240
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	°C	ISO 75/Be	256
Vicat Softening Temp, Rate B/120	°C	ISO 306	255

Source RJF, 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

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FLAME CHARACTERISTICS

Glow Wire Flammability Index 960°C, passes at	mm	IEC 60695-2-12	2
UL E2P measurement, 94V-0 Flame Class Rating	mm	UL 94 by E2P	0.8

ELECTRICAL

Comparative Tracking Index	V	IEC 60112	375
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PARAMETER	SETTING	UNIT
Drying Temperature	75 - 85	°C
Drying Time	4 - 6	hrs
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

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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