STARFLAM

AFR450X2

DESCRIPTION Starflam AFR450X2 is a Red Phosphorous Flame Retardant, Glass Fiber Reinforced Polyamide 66 Injection Molding Resin

PROPERTY (1)	UNIT	STANDARD	TYPICAL VALUE (1) Dry As Moulded
PHYSICAL			
Density	g/cm^3	ISO 1183	1.33
Moisture Absorption (23°C / 50% RH)	%	ISO 62	1.2
Mold Shrinkage on Tensile Bar, flow	%	E2P Method	0.3 - 0.5
Water Absorption, (23°C/sat)	%	ISO 62	6
MECHANICAL			
Flexural Modulus, 2 mm/min	MPa	ISO 178	8000
Flexural Stress, break, 2 mm/min	MPa	ISO 178	210
Hardness, Rockwell L		ISO 2039-2	108
Tensile Modulus, 1 mm/min	MPa	ISO 527	8700
Tensile Strain, break, 5 mm/min	%	ISO 527	2
Tensile Stress, break, 5 mm/min	MPa	ISO 527	160
IMPACT			
Izod Impact, notched 80*10*4 +23°C	kJ/m^2	ISO 180/1A	12
Izod Impact, notched 80*10*4 -20°C	kJ/m^2	ISO 180/1A	9
Izod Impact, notched 80*10*4 -40°C	kJ/m^2	ISO 180/1A	8
THERMAL			
Ball Pressure Test, 125°C +/- 2°C		IEC 60695-10-2	PASSES
CTE, 23°C to 60°C, flow	1/°C	ISO 11359-2	2.80E-05
CTE, 23°C to 60°C, xflow	1/°C	ISO 11359-2	9.00E-05

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

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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THERMAL			
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	°C	ISO 75/Ae	248
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	°C	ISO 75/Be	250
Relative Temp Index, Elec	°C	UL 746B	110
Relative Temp Index, Mech w/impact	°C	UL 746B	110
Relative Temp Index, Mech w/o impact	°C	UL 746B	115
Vicat Softening Temp, Rate B/120	°C	ISO 306	245
Vicat Softening Temp, Rate B/50	°C	ISO 306	245
FLAME CHARACTERISTICS			
Glow Wire Flammability Index 960°C, passes at	mm	IEC 60695-2-12	2
UL E2P measurement, 94V-2 Flame Class Rating	mm	UL 94 by E2P	0.8
UL Recognized, 94V-0 Flame Class Rating	mm	UL 94	1.5
ELECTRICAL			
Comparative Tracking Index	V	IEC 60112	600
Dielectric Strength, in oil, 3.2 mm	kV/mm	IEC 60243-1	17
Dissipation Factor, 1 MHz		IEC 60250	0.0119
Dissipation Factor, 50/60 Hz		IEC 60250	0.0054
Relative Permittivity, 1 MHz		IEC 60250	2.8
Relative Permittivity, 50/60 Hz		IEC 60250	3
Surface Resistivity, ROA	Ohm	IEC 60093	>1.E+16
Volume Resistivity	Ohm-cm	IEC 60093	>1.E+15

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PARAMETER	SETTING	UNIT
Drying Temperature	75 - 85	˚C
Drying Time	4 - 6	hrs
Maximum Moisture Content	0.1	%
Mold Temperature	60-90	˚C
Rear – Zone 1 Temperature	275 - 285	˚C
Middle – Zone 2 Temperature	275 - 285	˚C
Front – Zone 3 Temperature	270 - 285	˚C
Melt Temperature	275 - 285	˚C

PROCESSING PARAMETERS : see above typical molding conditions.
SAFETY : Specific safety precautions must be taken when handling and processing this material. Please consult product MSDS or contact our technical service for details.
PREDRYING : This material is supplied in sealed bags. However further typical drying is required.
BARRELS, SCREWS, MOULDS : use wear resisting steel or alloy such as bimetallic cylinders, nitrided screws.

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