

**DESCRIPTION** Starflam RF0057E is a Halogen Free and Red Phosphorous Free Flame Retardant, Glass Fiber Reinforced, Polyamide 66 Injection Molding Resin (also known as RF1005Z270)

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

Density	g/cm <sup>3</sup>	ISO 1183	1.39
Moisture Absorption (23°C, 50% RH, 24h)	%	ISO 62	0.2
Mold Shrinkage, flow, 24 hrs (5)	%	ISO 294	0.15 - 0.25
Mold Shrinkage, xflow, 24 hrs (5)	%	ISO 294	1 - 1.2
Water Absorption, (23°C/24hr)	%	ISO 62-1	2.64

### MECHANICAL

Flexural Modulus, 2 mm/min	MPa	ISO 178	8000
Flexural Stress, yield, 2 mm/min	MPa	ISO 178	190
Tensile Modulus, 1 mm/min	MPa	ISO 527	9400
Tensile Strain, break, 5 mm/min	%	ISO 527	2.4
Tensile Stress, break, 5 mm/min	MPa	ISO 527	130

### IMPACT

Izod Impact, notched 80*10*4 +23°C	kJ/m <sup>2</sup>	ISO 180/1A	7
Izod Impact, unnotched 80*10*4 +23°C	kJ/m <sup>2</sup>	ISO 180/1U	45

### THERMAL

Ball Pressure Test, approximate maximum	°C	IEC 60695-10-2	240
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	°C	ISO 75/Af	240
Relative Temp Index, Elec	°C	UL 746B	140
Relative Temp Index, Mech w/impact	°C	UL 746B	110

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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### FLAME CHARACTERISTICS

Glow Wire Flammability Index 960°C, passes at	mm	IEC 60695-2-12	0.4
Glow Wire Ignitability Temperature, 0.4 mm	°C	IEC 60695-2-13	775
Glow Wire Ignitability Temperature, 1.0 mm	°C	IEC 60695-2-13	775
Glow Wire Ignitability Temperature, 1.5 mm	°C	IEC 60695-2-13	775
Glow Wire Ignitability Temperature, 3.0 mm	°C	IEC 60695-2-13	825
UL Recognized, 94-5VA Rating (3)	mm	UL 94	1.6
UL Recognized, 94V-0 Flame Class Rating	mm	UL 94	0.4

### ELECTRICAL

Comparative Tracking Index	V	IEC 60112	600
Dielectric Strength, in air, 1.6 mm	kV/mm	ASTM D 149	16
High Ampere Arc Ign, surface {PLC}	PLC Code	UL 746A	0
Hot Wire Ignition {PLC}	PLC Code	UL 746A	0
Volume Resistivity	Ohm-cm	ASTM D 257	1.00E+12

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PARAMETER	SETTING	UNIT
Drying Temperature	80	°C
Drying Time	4	hrs
Maximum Moisture Content	0.15 - 0.25	%
Mold Temperature	60 - 100	°C
Rear - Zone 1 Temperature	265 - 275	°C
Middle - Zone 2 Temperature	270 - 280	°C
Front - Zone 3 Temperature	270 - 280	°C
Melt Temperature	270 - 280	°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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