

**DESCRIPTION** Starflam R10002E is an Unfilled, Halogen Free and Red Phosphorous Free, Flame Retardant, Polyamide 66 / Polyamide 6 Injection Molding Resin (also known as Starflam R1000Z220EM)

| PROPERTY (1) | UNIT | STANDARD | TYPICAL VALUE (1)<br>Dry As Moulded |
|--------------|------|----------|-------------------------------------|
|--------------|------|----------|-------------------------------------|

### PHYSICAL

|                                     |                   |            |           |
|-------------------------------------|-------------------|------------|-----------|
| Density                             | g/cm <sup>3</sup> | ISO 1183   | 1.17      |
| Mold Shrinkage on Tensile Bar, flow | %                 | E2P Method | 0.8 - 1.5 |

### MECHANICAL

|                            |     |         |      |
|----------------------------|-----|---------|------|
| Flexural Modulus, 2 mm/min | MPa | ISO 178 | 3500 |
| Flexural Stress            | MPa | ISO 178 | 105  |
| Tensile Modulus, 1 mm/min  | MPa | ISO 527 | 3400 |
| Tensile Strain, break      | %   | ISO 527 | 5    |
| Tensile Stress, yield      | MPa | ISO 527 | 75   |

### IMPACT

|                                      |                   |            |    |
|--------------------------------------|-------------------|------------|----|
| Izod Impact, notched 80*10*4 +23°C   | kJ/m <sup>2</sup> | ISO 180/1A | 4  |
| Izod Impact, unnotched 80*10*4 +23°C | kJ/m <sup>2</sup> | ISO 180/1U | 60 |

### THERMAL

|  |    |           |     |
|--|----|-----------|-----|
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm  | °C | ISO 75/Af | 80  |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | °C | ISO 75/Bf | 200 |

### FLAME CHARACTERISTICS

|   |    |                |               |
|---|----|----------------|---------------|
| Glow Wire Flammability Index 960°C, passes at | mm | IEC 60695-2-12 | 0.8           |
| Glow Wire Ignitability Temperature, 0.8 mm    | °C | IEC 60695-2-13 | 750           |
| UL Recognized, 94V-0 Flame Class Rating       | mm | UL 94          | 0.4 (natural) |

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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| PARAMETER                   | SETTING   | UNIT |
|-----------------------------|-----------|------|
| Maximum Moisture Content    | 0.2       | %    |
| Mold Temperature            | 60 - 90   | °C   |
| Rear - Zone 1 Temperature   | 260 - 270 | °C   |
| Middle - Zone 2 Temperature | 265 - 280 | °C   |
| Front - Zone 3 Temperature  | 270 - 280 | °C   |
| Melt Temperature            | 265 - 280 | °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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