

# Zytel® HTNFR55G55NHLW BK337 (DEVELOPMENTAL)

## HIGH PERFORMANCE POLYAMIDE RESIN

Zytel® HTNFR55G55NHLW BK337 is a 57% glass reinforced, flame retardant high performance polyamide resin with improved flow and low warpage in structural applications. It is also a PPA resin and uses a non-halogenated flame retardant.

### Product information

|                   |              |           |
|-------------------|--------------|-----------|
| Part Marking Code | >PPA-GF57FR< | SAE J1344 |
|-------------------|--------------|-----------|

### Rheological properties

|                              |           |   |                 |
|------------------------------|-----------|---|-----------------|
|                              | dry/cond. |   |                 |
| Moulding shrinkage, parallel | 0.1 / -   | % | ISO 294-4, 2577 |
| Moulding shrinkage, normal   | 0.2 / -   | % | ISO 294-4, 2577 |

### Typical mechanical properties

|                                      |           |                   |              |
|--------------------------------------|-----------|-------------------|--------------|
|                                      | dry/cond. |                   |              |
| Tensile Modulus                      | 21000 / - | MPa               | ISO 527-1/-2 |
| Stress at break, 5mm/min             | 220 / -   | MPa               | ISO 527-1/-2 |
| Strain at break, 5mm/min             | 1.5 / -   | %                 | ISO 527-1/-2 |
| Flexural Modulus                     | 20000 / - | MPa               | ISO 178      |
| Flexural Strength                    | 330 / -   | MPa               | ISO 178      |
| Charpy impact strength, 23°C         | 60 / -    | kJ/m <sup>2</sup> | ISO 179/1eU  |
| Charpy notched impact strength, 23°C | 15 / -    | kJ/m <sup>2</sup> | ISO 179/1eA  |
| Poisson's ratio                      | 0.33 / -  |                   |              |

### Thermal properties

|                                          |           |    |                |
|------------------------------------------|-----------|----|----------------|
|                                          | dry/cond. |    |                |
| Melting temperature, first heat          | 297 / *   | °C | ISO 11357-1/-3 |
| Temp. of deflection under load, 1.8 MPa  | 230 / *   | °C | ISO 75-1/-2    |
| Temp. of deflection under load, 0.45 MPa | 260 / *   | °C | ISO 75-1/-2    |

### Flammability

|                                      |           |       |       |
|--------------------------------------|-----------|-------|-------|
|                                      | dry/cond. |       |       |
| Burning Behav. at 1.5mm nom. thickn. | V-0 / *   | class | UL 94 |
| Thickness tested                     | 1.5 / *   | mm    | UL 94 |
| UL recognition                       | yes / *   |       | UL 94 |
| Burning Behav. at thickness h        | V-0 / *   | class | UL 94 |
| Thickness tested                     | 0.75 / *  | mm    | UL 94 |
| UL recognition                       | yes / *   |       | UL 94 |

### Other properties

|         |           |                   |          |
|---------|-----------|-------------------|----------|
|         | dry/cond. |                   |          |
| Density | 1720 / -  | kg/m <sup>3</sup> | ISO 1183 |

### Injection

|                                 |         |
|---------------------------------|---------|
| Drying Recommended              | yes     |
| Drying Temperature              | 100 °C  |
| Drying Time, Dehumidified Dryer | 6 - 8 h |
| Processing Moisture Content     | ≤0.1 %  |



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|                        |        |
|------------------------|--------|
| Min. melt temperature  | 300 °C |
| Max. melt temperature  | 315 °C |
| Min. mould temperature | 70 °C  |
| Max. mould temperature | 130 °C |

### Characteristics

Additives

Flame retardant

### Additional information

Injection molding

For molding machine components, use corrosion resistant and wear resistant steel. For details please contact our representative. Limit the residence time of the resin in the machine. Use proper protective equipment and adequate ventilation.

