

# DuPont™ Zytel®

nylon resin

PRELIMINARY DATA

## Zytel® 75LG50HSL BK031

Zytel® 75LG50HSL is a 50% long glass reinforced, heat stabilized, lubricated polyamide 66 resin for structural applications.

| Property                         | Test Method | Units             | Value        |              |
|----------------------------------|-------------|-------------------|--------------|--------------|
|                                  |             |                   | DAM          | 50%RH        |
| <b>Identification</b>            |             |                   |              |              |
| Resin Identification             | ISO 1043    |                   | PA66-GF50    |              |
| Part Marking Code                | ISO 11469   |                   | >PA66-GF50<  |              |
| <b>Mechanical</b>                |             |                   |              |              |
| Stress at Break                  | ISO 527     | MPa (kpsi)        | 260 (37.7)   | 210 (30.5)   |
| Strain at Break                  | ISO 527     | %                 | 1.9          | 2.1          |
| Tensile Modulus                  | ISO 527     | MPa (kpsi)        | 17000 (2470) | 14000 (2030) |
| Flexural Modulus                 | ISO 178     | MPa (kpsi)        | 14500 (2100) | 12000 (1740) |
| Flexural Strength                | ISO 178     | MPa (kpsi)        | 400 (58.0)   | 310 (45)     |
| Notched Izod Impact Strength     | ISO 180/1A  | kJ/m <sup>2</sup> | 45           |              |
| Unnotched Izod Impact Strength   | ISO 180/1U  | kJ/m <sup>2</sup> | 85           |              |
| Notched Charpy Impact Strength   | ISO 179/1eA | kJ/m <sup>2</sup> |              |              |
| -30°C (-22°F)                    |             |                   | 50           | 53           |
| 23°C (73°F)                      |             |                   | 50           | 53           |
| Unnotched Charpy Impact Strength | ISO 179/1eU | kJ/m <sup>2</sup> |              |              |
| -30°C (-22°F)                    |             |                   | 80           | 87           |
| 23°C (73°F)                      |             |                   | 95           | 105          |

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.  
 ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.  
 Test temperatures are 23°C unless otherwise stated.

For optimal properties with long glass resins, it is necessary to process the resin with conditions that minimize fiber breakage.  
 Recommended molding equipment include a mild working screw, with a low compression ratio and deep metering section.

**The above data are preliminary and are subject to change as additional data are developed on subsequent lots.**

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## Zytel® 75LG50HSL BK031

| Property                                  | Test Method    | Units                                  | Value             |       |
|---|----------------|--|-------------------|-------|
|   |                |  | DAM               | 50%RH |
| <b>Thermal</b>                            |                |  |                   |       |
| Deflection Temperature<br>1.80MPa         | ISO 75f        | °C (°F)                                | 260 (500)         |       |
| Melting Temperature<br>10°C/min           | ISO 11357-1/-3 | °C (°F)                                | 260 (500)         |       |
| CLTE, Normal<br>-40 - 23°C (-40 - 73°F)   | ISO 11359-1/-2 | E-4/C (E-4/F)                          | 0.51 (0.28)       |       |
| 23 - 55°C (73 - 130°F)                    |                |  | 0.67 (0.37)       |       |
| 55 - 125°C (131 - 257°F)                  |                |  | 0.97 (0.54)       |       |
| CLTE, Parallel<br>-40 - 23°C (-40 - 73°F) | ISO 11359-1/-2 | E-4/C (E-4/F)                          | 0.16 (0.09)       |       |
| 23 - 55°C (73 - 130°F)                    |                |  | 0.12 (0.07)       |       |
| 55 - 125°C (131 - 257°F)                  |                |  | 0.08 (0.04)       |       |
| <b>Other</b>                              |                |  |                   |       |
| Density                                   | ISO 1183       | kg/m <sup>3</sup> (g/cm <sup>3</sup> ) | 1590 (1.59)       |       |
| Molding Shrinkage<br>Normal, 2.0mm        | ISO 294-4      | %                                      | 0.6               |       |
| Parallel, 2.0mm                           |                |  | 0.2               |       |
| <b>Processing</b>                         |                |  |                   |       |
| Melt Temperature Range                    |                | °C (°F)                                | 290-310 (550-590) |       |
| Melt Temperature Optimum                  |                | °C (°F)                                | 305 (580)         |       |
| Mold Temperature Range                    |                | °C (°F)                                | 70-120 (160-250)  |       |
| Mold Temperature Optimum                  |                | °C (°F)                                | 100 (210)         |       |
| Drying Time, Dehumidified Dryer           |                | h                                      | 2-4               |       |
| Drying Temperature                        |                | °C (°F)                                | 80                |       |
| Processing Moisture Content               |                | %                                      | <0.20             |       |

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