

**HiDura™ D1MG33J NT0864**

Ascend Performance Materials Operations LLC - Polyamide 612

**General Information**
**Product Description**

HiDura D1MG33J NT0864 is an organically heat stabilized, 33% glass filled PA612 designed for injection molding applications.

**General**

|                        |                                     |                             |                         |
|------------------------|-------------------------------------|-----------------------------|-------------------------|
| Material Status        | • Commercial: Active                |                             |                         |
| Availability           | • Africa & Middle East              | • Europe                    | • North America         |
|                        | • Asia Pacific                      | • Latin America             |                         |
| Filler / Reinforcement | • Glass Fiber, 33% Filler by Weight |                             |                         |
| Additive               | • Heat Stabilizer                   | • Lubricant                 |                         |
| Features               | • Chemical Resistant                | • Heat Stabilized           | • Lubricated            |
|                        | • Good Colorability                 | • Heat Stabilized - Organic | • Medium-high Viscosity |
| Appearance             | • Natural Color                     |                             |                         |
| Forms                  | • Pellets                           |                             |                         |
| Processing Method      | • Injection Molding                 |                             |                         |
| Resin ID               | • PA612-GF33                        |                             |                         |

**Properties <sup>1</sup>**

| <b>Physical</b>   | <b>Dry</b> | <b>Conditioned</b> | <b>Unit</b>           | <b>Test Method</b> |
|---|------------|--------------------|-----------------------|--------------------|
| Density   | 1.32       | --                 | g/cm <sup>3</sup>     | ISO 1183           |
| Molding Shrinkage                                       |            |                    |                       | ISO 294-4          |
| Across Flow : 73°F, 0.0787 in                           | 0.70       | --                 | %                     |                    |
| Flow : 73°F, 0.0787 in                                  | 0.30       | --                 | %                     |                    |
| Water Absorption (24 hr, 73°F)                          | 0.30       | --                 | %                     | ISO 62             |
| Water Absorption (Equilibrium, 73°F, 50% RH)            | 0.80       | --                 | %                     | ISO 62             |
| <b>Mechanical</b>                                       | <b>Dry</b> | <b>Conditioned</b> | <b>Unit</b>           | <b>Test Method</b> |
| Tensile Modulus (73°F)                                  | 1.39E+6    | 1.25E+6            | psi                   | ISO 527-1          |
| Tensile Stress (Break, 73°F)                            | 24800      | 20600              | psi                   | ISO 527-2          |
| Tensile Strain (Break, 73°F)                            | 4.3        | 5.3                | %                     | ISO 527-2          |
| Flexural Modulus (73°F)                                 | 1.39E+6    | 1.22E+6            | psi                   | ISO 178            |
| Flexural Stress (73°F)                                  | 35500      | 28700              | psi                   | ISO 178            |
| Poisson's Ratio (73°F)                                  | 0.39       | --                 |                       | ISO 527-2          |
| <b>Impact</b>   | <b>Dry</b> | <b>Conditioned</b> | <b>Unit</b>           | <b>Test Method</b> |
| Charpy Notched Impact Strength                          |            |                    |                       | ISO 179/1eA        |
| -40°F   | 5.7        | 5.7                | ft·lb/in <sup>2</sup> |                    |
| -22°F   | 5.7        | 6.2                | ft·lb/in <sup>2</sup> |                    |
| 73°F  | 7.1        | 8.1                | ft·lb/in <sup>2</sup> |                    |
| Charpy Unnotched Impact Strength                        |            |                    |                       | ISO 179/1eU        |
| -40°F   | 39         | 39                 | ft·lb/in <sup>2</sup> |                    |
| -22°F   | 43         | 43                 | ft·lb/in <sup>2</sup> |                    |
| 73°F  | 46         | 44                 | ft·lb/in <sup>2</sup> |                    |
| Notched Izod Impact Strength                            |            |                    |                       | ISO 180/1A         |
| -40°F   | 6.2        | 5.7                | ft·lb/in <sup>2</sup> |                    |
| -22°F   | 6.2        | 6.2                | ft·lb/in <sup>2</sup> |                    |
| 73°F  | 7.6        | 8.1                | ft·lb/in <sup>2</sup> |                    |
| <b>Thermal</b>  | <b>Dry</b> | <b>Conditioned</b> | <b>Unit</b>           | <b>Test Method</b> |
| Deflection Temperature Under Load (66 psi, Unannealed)  | 417        | 414                | °F                    | ISO 75-2/B         |
| Deflection Temperature Under Load (264 psi, Unannealed) | 388        | 381                | °F                    | ISO 75-2/A         |
| Melting Temperature                                     | 424        | --                 | °F                    | ISO 11357-3        |



|  |            |                    |             |                    |
|--|------------|--------------------|-------------|--------------------|
| CLTE - Flow (73 to 131°F, 0.0787 in)       | 1.1E-5     | --                 | in/in/°F    | ISO 11359-2        |
| CLTE - Transverse (73 to 131°F, 0.0787 in) | 6.3E-5     | --                 | in/in/°F    | ISO 11359-2        |
| <b>Electrical</b>                          | <b>Dry</b> | <b>Conditioned</b> | <b>Unit</b> | <b>Test Method</b> |
| Electric Strength (0.0394 in)              | 860        | 840                | V/mil       | IEC 60243-1        |

### Processing Information

| <b>Injection</b>       | <b>Dry</b> | <b>Unit</b> |
|------------------------|------------|-------------|
| Drying Temperature     | 176 to 212 | °F          |
| Drying Time            | 4.0 to 6.0 | hr          |
| Suggested Max Moisture | 0.15       | %           |
| Suggested Max Regrind  | 30         | %           |
| Processing (Melt) Temp | 455 to 554 | °F          |
| Mold Temperature       | 122 to 194 | °F          |

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

