

## Amodel® HFZ A-4133 L

### PPA-GF33

Syensqo

| Processing/Physical Characteristics | Value | Unit  | Test Standard |
|-------------------------------------|-------|-------|---------------|
| <b>ASTM Data</b>                    |       |       |               |
| Mold Shrinkage, MD                  | 0.005 | mm/mm | ASTM D 955    |
| Mold Shrinkage, TD                  | 0.01  | mm/mm | ASTM D 955    |
| Water Absorption, 24hr              | 0.26  | %     | ASTM D 570    |

| Mechanical Properties                   | Value | Unit  | Test Standard |
|-----------------------------------------|-------|-------|---------------|
| <b>ISO Data</b>                         |       |       |               |
| Tensile Modulus                         | 12000 | MPa   | ISO 527       |
| Stress at Break                         | 180   | MPa   | ISO 527       |
| Strain at Break                         | 1.8   | %     | ISO 527       |
| Notched Impact Strength (Charpy), +23°C | 8.2   | kJ/m² | ISO 179/1eA   |
| Flexural Modulus (23°C)                 | 11000 | MPa   | ISO 178       |
| Notched Impact Strength (Izod), 23°C    | 8.4   | kJ/m² | ISO 180/1A    |
| Impact Strength (Izod), 23°C            | 40    | kJ/m² | ISO 180/1U    |

| Thermal Properties                        | Value | Unit  | Test Standard  |
|-------------------------------------------|-------|-------|----------------|
| <b>ISO Data</b>                           |       |       |                |
| Melting Temperature (10°C/min)            | 327   | °C    | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa) | 310   | °C    | ISO 75-1/-2    |
| Burning Behav. at thickness h             | HB    | class | UL 94          |
| Thickness tested                          | 0.8   | mm    | -              |

| Electrical Properties           | Value | Unit   | Test Standard |
|---------------------------------|-------|--------|---------------|
| <b>ASTM Data</b>                |       |        |               |
| Dielectric Strength, Short Time | 19    | kV/mm  | ASTM D 149    |
| Dissipation Factor, 60 Hz       | 0.006 | -      | ASTM D 150    |
| Dissipation Factor, 1 MHz       | 0.016 | -      | ASTM D 150    |
| Dielectric Constant, 60 Hz      | 3.9   | -      | ASTM D 150    |
| Dielectric Constant, 1 MHz      | 3.7   | -      | ASTM D 150    |
| Surface Resistivity             | >1E15 | Ohm    | ASTM D 257    |
| Volume Resistivity              | 1E15  | Ohm*cm | ASTM D 257    |

| Other Properties | Value | Unit  | Test Standard |
|------------------|-------|-------|---------------|
| <b>ISO Data</b>  |       |       |               |
| Density          | 1460  | kg/m³ | ISO 1183      |

| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 120       | °C   | -             |
| Pre-drying - Time                           | 4         | h    | -             |
| Processing humidity                         | ≤0.045    | %    | -             |
| Melt temperature                            | 329 - 343 | °C   | -             |
| Mold temperature                            | 66 - 93   | °C   | -             |
| Zone 1                                      | 318 - 324 | °C   | -             |
| Zone 2                                      | 327 - 332 | °C   | -             |
| Injection speed                             | 76 - 102  | mm/s | -             |

## Characteristics

### Processing

Injection Molding

### Delivery form

Pellets, Black, Natural Color

### Additives

Lubricants, Release agent

### Features

Creep Resistance

### Chemical Resistance

General Chemical Resistance

### Applications

Automotive, IT / Business Machine, Electrical and Electronical, General Purpose