

## Amodel® A-1145 HS

### PPA-GF45

Syensqo

| Processing/Physical Characteristics | Value | Unit  | Test Standard |
|-------------------------------------|-------|-------|---------------|
| <b>ASTM Data</b>                    |       |       |               |
| Mold Shrinkage, MD                  | 0.002 | mm/mm | ASTM D 955    |
| Mold Shrinkage, TD                  | 0.006 | mm/mm | ASTM D 955    |
| Water Absorption, 24hr              | 0.12  | %     | ASTM D 570    |

| Mechanical Properties                   | dry / cond    | Unit  | Test Standard |
|-----------------------------------------|---------------|-------|---------------|
| <b>ISO Data</b>                         |               |       |               |
| Tensile Modulus                         | 16800 / -     | MPa   | ISO 527       |
| Stress at Break                         | 263 / -       | MPa   | ISO 527       |
| Strain at Break                         | 2.7 / -       | %     | ISO 527       |
| Impact Strength (Charpy), +23°C         | 92 / -        | kJ/m² | ISO 179/1eU   |
| Notched Impact Strength (Charpy), +23°C | 10 / -        | kJ/m² | ISO 179/1eA   |
| Flexural Modulus (23°C)                 | 15900 / -     | MPa   | ISO 178       |
| Flexural Modulus                        | 4900 / -      | MPa   | ISO 178       |
| Flexural Modulus Temperature            | 175           | °C    | -             |
| Notched Impact Strength (Izod), 23°C    | 10 / -        | kJ/m² | ISO 180/1A    |
| Impact Strength (Izod), 23°C            | 61 / -        | kJ/m² | ISO 180/1U    |
| <b>ASTM Data</b>                        |               |       |               |
| Tensile Modulus                         | 17200 / 17200 | MPa   | ASTM D 638    |
| Tensile Strength                        | 259 / 228     | MPa   | ASTM D 638    |
| Elongation at Break                     | 2.6 / 2.1     | %     | ASTM D 638    |
| Compressive Strength                    | 194 / -       | MPa   | ASTM D 695    |
| Flexural Modulus                        | 13800 / 13800 | MPa   | ASTM D 790    |
| Flexural Strength                       | 363 / 294     | MPa   | ASTM D 790    |
| Rockwell Hardness                       | R125 / -      | -     | ASTM D 785    |
| Notched Impact Strength (Izod), 1/8 in  | 110 / 100     | J/m   | ASTM D 256    |
| Impact Strength (Izod), 1/8 in          | 1100 / -      | J/m   | ASTM D 256    |

| Thermal Properties                        | dry / cond | Unit  | Test Standard  |
|-------------------------------------------|------------|-------|----------------|
| <b>ISO Data</b>                           |            |       |                |
| Melting Temperature (10°C/min)            | 310 / *    | °C    | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa) | 281 / *    | °C    | ISO 75-1/-2    |
| Burning Behav. at thickness h             | HB / *     | class | UL 94          |
| Thickness tested                          | 3.2 / *    | mm    | -              |

| Electrical Properties           | dry / cond    | Unit   | Test Standard |
|---------------------------------|---------------|--------|---------------|
| <b>ASTM Data</b>                |               |        |               |
| Dielectric Strength, Short Time | 23 / 23       | kV/mm  | ASTM D 149    |
| Dissipation Factor, 60 Hz       | 0.005 / 0.009 | -      | ASTM D 150    |
| Dissipation Factor, 1 MHz       | 0.016 / 0.021 | -      | ASTM D 150    |
| Dielectric Constant, 60 Hz      | 4.6 / 4.9     | -      | ASTM D 150    |
| Dielectric Constant, 1 MHz      | 4.4 / 4.5     | -      | ASTM D 150    |
| Volume Resistivity              | 0 / >1E15     | Ohm*cm | ASTM D 257    |
| Arc Resistance                  | 145 / 125     | s      | ASTM D 495    |

| Other Properties | dry / cond | Unit  | Test Standard |
|------------------|------------|-------|---------------|
| <b>ISO Data</b>  |            |       |               |
| Density          | 1590 / -   | kg/m³ | ISO 1183      |

| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 120       | °C   | -             |
| Pre-drying - Time                           | 4.5       | h    | -             |
| Processing humidity                         | ≤0.045    | %    | -             |
| Melt temperature                            | 321 - 343 | °C   | -             |
| Mold temperature                            | 135       | °C   | -             |
| Zone 1                                      | 304 - 318 | °C   | -             |
| Zone 2                                      | 316 - 329 | °C   | -             |

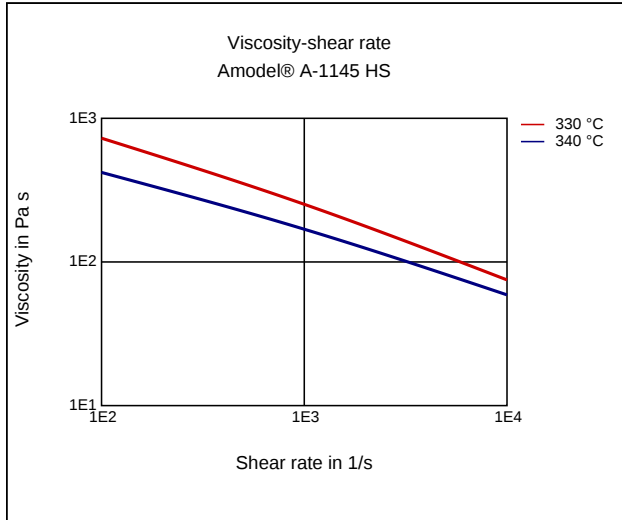
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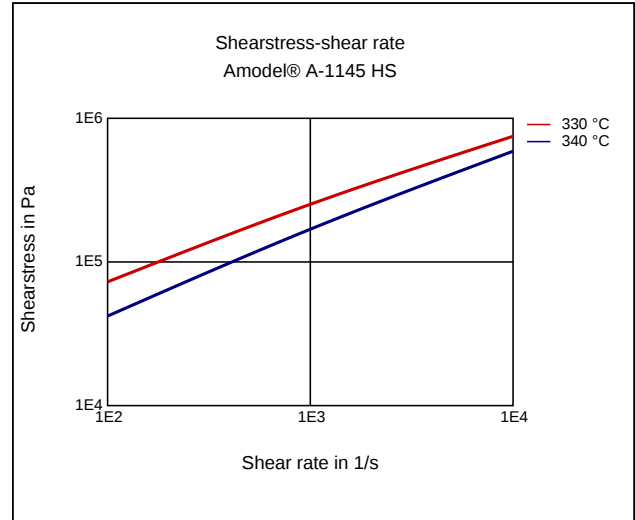
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### Diagrams

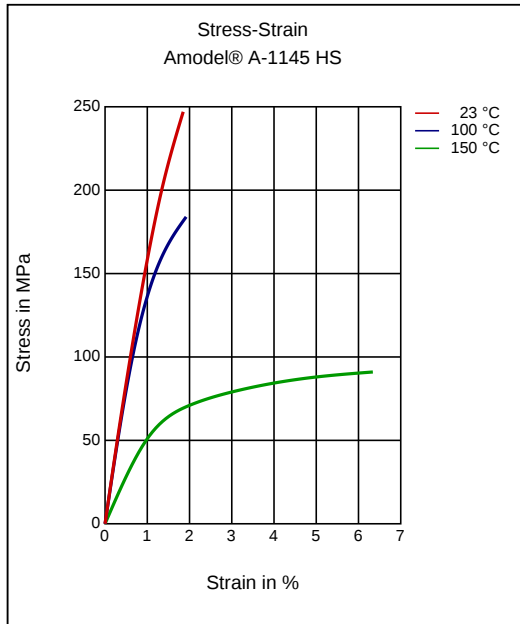
#### Viscosity-shear rate



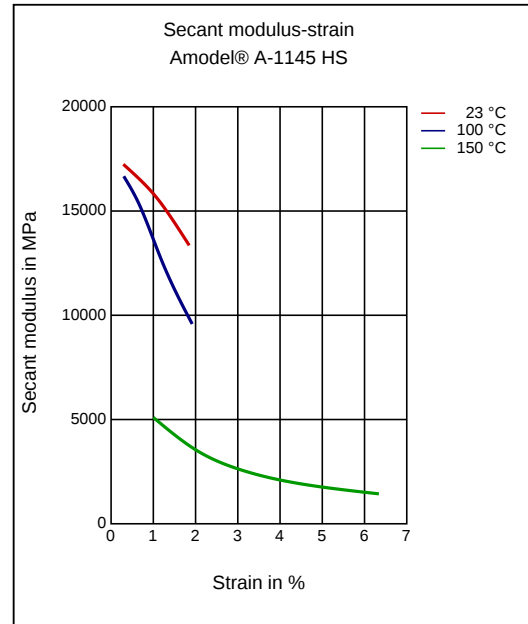
#### Shearstress-shear rate



#### Stress-strain



#### Secant modulus-strain



### Characteristics

#### Processing

Injection Molding

#### Delivery form

Pellets, Black, Natural Color

#### Special Characteristics

Heat aging stabilized

#### Features

Creep Resistance

#### Chemical Resistance

General Chemical Resistance

#### Applications

Automotive, IT / Business Machine, Electrical and Electronical