# Ultramid® A3HG6 WIT BK20560

(PA66+PPA)-(GF+GB)30 BASF

Glass fibre reinforced injection moulding grade with good resistance to hydrolysis, suited for processing by water injection technology (WIT). Applications in the automotive cooling circuit, e.g. cooling water pipes.

| Rheological properties | dry / cond | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Melt volume-flow rate, MVR | 8 / * | cm³/10min | ISO 1133 |
| Temperature | 275 / * | °C | - |
| Load | 5 / * | kg | - |
| Molding shrinkage, parallel | 0.4 / * | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 0.9 / * | % | ISO 294-4, 2577 |

| Mechanical Properties | dry / cond | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Tensile Modulus | 8700 / 5300 | MPa | ISO 527 |
| Stress at Break | 165 / 95 | MPa | ISO 527 |
| Strain at Break | 3 / 4.9 | % | ISO 527 |
| Impact Strength (Charpy), +23°C | 55 / 85 | kJ/m² | ISO 179/1eU |
| Impact Strength (Charpy), -30°C | 50 / 50 | kJ/m² | ISO 179/1eU |
| Notched Impact Strength (Charpy), +23°C | 6 / 8 | kJ/m² | ISO 179/1eA |
| Notched Impact Strength (Charpy), -30°C | 5 / 5 | kJ/m² | ISO 179/1eA |

| Thermal Properties | dry / cond | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Temp. of deflection under load (1.80 MPa) | 230 / * | °C | ISO 75-1/-2 |
| Temp. of deflection under load (0.45 MPa) | 250 / * | °C | ISO 75-1/-2 |

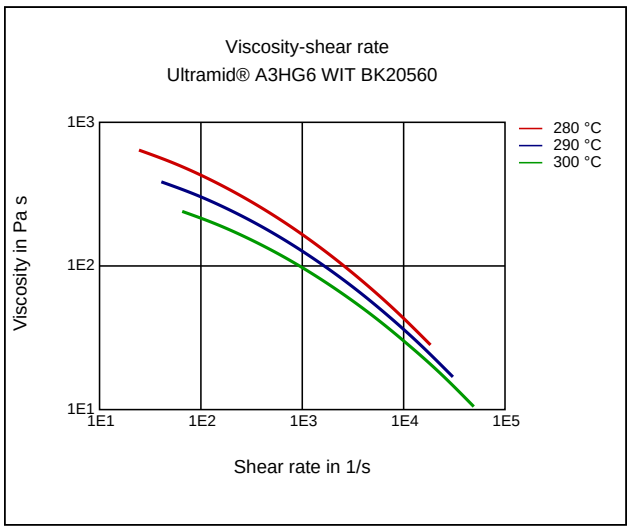
| Other Properties | dry / cond | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Density | 1370 / - | kg/m³ | ISO 1183 |

| Material Specific Properties | dry / cond | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Viscosity number | 146 / * | cm³/g | ISO 307, 1157, 1628 |

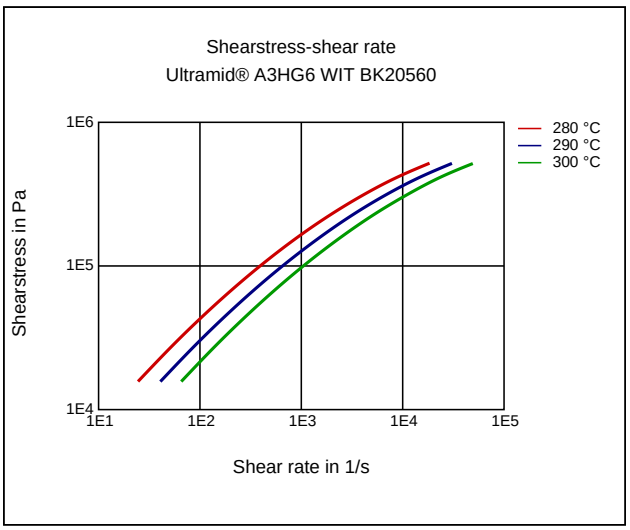
| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|---|---|---|---|
| Pre-drying - Temperature | 80 | °C | - |
| Pre-drying - Time | 4 | h | - |
| Processing humidity | ≤0.15 | % | - |
| Melt temperature | 290 - 310 | °C | - |
| Mold temperature | 80 - 90 | °C | - |

## Diagrams

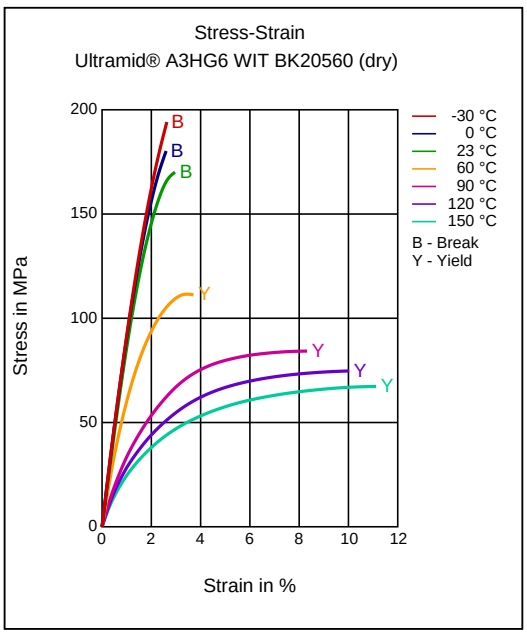
### Viscosity-shear rate



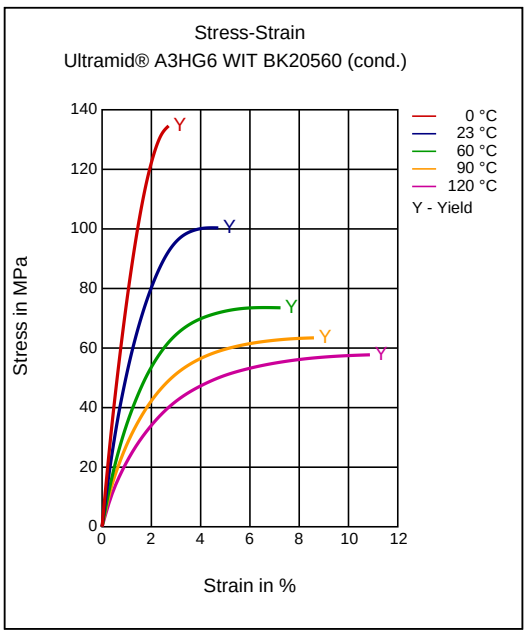

### Shearstress-shear rate



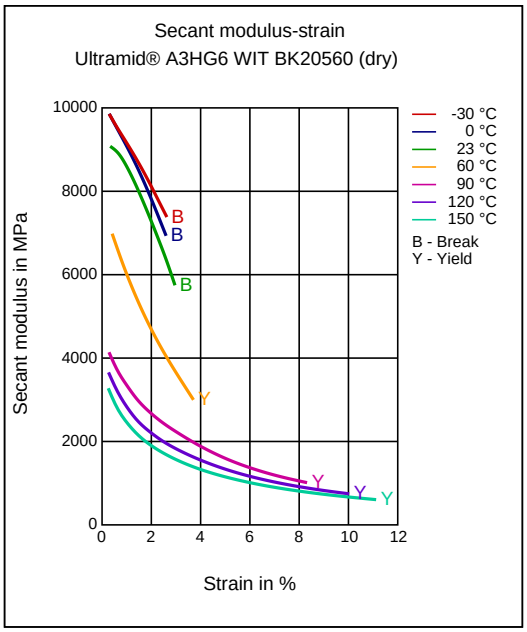

### Stress-strain



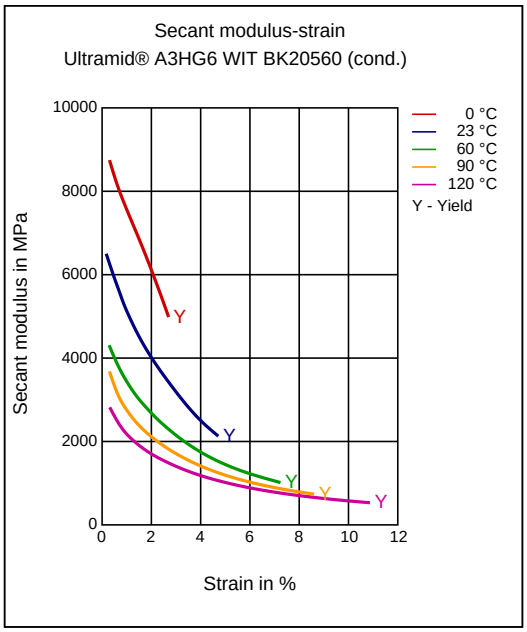

### Stress-strain



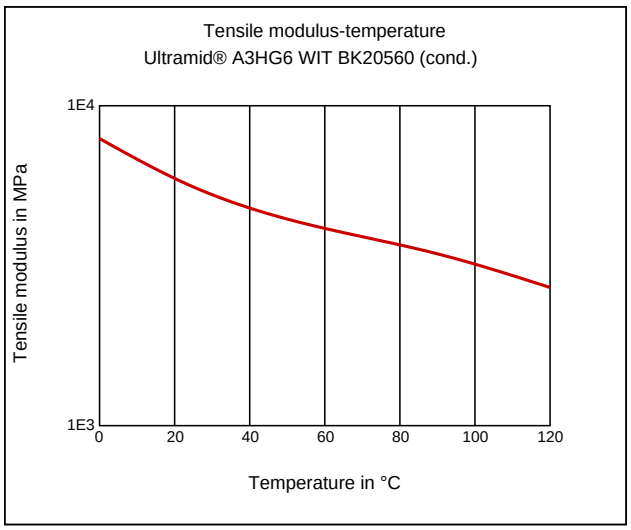
## Secant modulus-strain




## Secant modulus-strain




## Tensile Modulus-Temperature




## Characteristics

### Processing
Injection Molding

### Chemical Resistance
Hydrolysis

### Delivery form
Pellets, Black

### Applications
Automotive

## Injection Molding

PREPROCESSING
Pre/Post-processing, max. allowed water content: .15 %
Pre/Post-processing, Pre-drying, Temperature: 80 °C
Pre/Post-processing, Pre-drying, Time: 4 h

PROCESSING

injection molding, Melt temperature, range: 290 - 310 °C
injection molding, Melt temperature, recommended: 300 °C
injection molding, Mold temperature, range: 80 - 90 °C
injection molding, Mold temperature, recommended: 80 °C
injection molding, Dwell time, thermoplastics: 10 min

## Chemical Media Resistance

### Acids

✔ Acetic Acid (5% by mass) (23°C)

## Disclaimer