

PRODUCT INFORMATION

RADISTRONG A RV500W 333 BK

PROVISIONAL

DESCRIPTION

Special PA 50% glass fiber reinforced, injection moulding grade. Heat stabilized. Black colour

Product with enhanced mechanical properties, suitable for demanding applications as in case of metal replacement.

ISO 1043: PA-T GF50

Formerly known as RADISTRONG A X15120 BK.

THE CHARACTERISTICS SHOWN HERE ARE PROVISIONAL AND REFLECT THE AVERAGE VALUES OF PROPERTIES MEASURED OVER A LIMITED NUMBER OF PRODUCTION CAMPAIGNS

REGIONAL AVAILABILITY: North America, Europe, Asia Pacific, South and Central America, Near East/Africa

MATERIAL HANDLING AND PROCESSING

The material is delivered in moisture-proof packaging ready for processing. Maximum recommended water content for best processing is 0.15%. Typical conditions with a desiccant drier: temperature 80 ° C, dew point -20 ° C or below, time 2-4 h or more. Special care must be taken to avoid moisture absorption and contamination with other polymers when adding regrind material. Colour variation and mechanical properties reduction may occur and should always be carefully monitored.

Injection Molding Processing Parameters

Melt Temperature
280 - 300°C

Mold Temperature
90 - 120°C

Injection Speed
medium-high

PRODUCT SAFETY AND APPROVALS

For safety instruction please refer to Material Safety Data Sheet
ROHS compliant 2011/65/UE and following amendments

TECHNICAL DATA SHEET

RADISTRONG A RV500W 333 BK

| PROPERTY | STANDARD | UNIT | VALUE | DAM* | Cond** |
|--|-------------------------------|-------------------|-------------------|-----------|--------|
| PHYSICAL PROPERTIES | | | | | |
| Density | ISO 1183 | kg/m ³ | 1590 | | |
| Moulding shrinkage - Parallel / Normal | 290 / 120 / 60 ^[1] | ISO 294-4 | % | 0.1 / 0.4 | |
| Water Absorption, immersion at 23°C | 2mm | ISO 62 | % | 3.8 | |
| Moisture Absorption 23°C - 50%RH | 2mm | ISO 62 | % | 0.9 | |
| MECHANICAL PROPERTIES | | | | | |
| Tensile Modulus | 1mm/min | ISO 527-2/1A | MPa | 17600 | 14600 |
| Stress at Break | 5mm/min | ISO 527-2/1A | MPa | 250 | 190 |
| Strain at Break | 5mm/min | ISO 527-2/1A | % | 2.3 | 3 |
| Flexural Modulus | 2mm/min | ISO 178 | MPa | 16300 | 15400 |
| Flexural Strength | 2mm/min | ISO 178 | MPa | 375 | 300 |
| Charpy Impact Strength | +23°C | ISO 179/1eU | kJ/m ² | 95 | 102 |
| Charpy Impact Strength | -30°C | ISO 179/1eU | kJ/m ² | 80 | 81 |
| Charpy Notched Impact Strength | +23°C | ISO 179/1eA | kJ/m ² | 15 | 17 |
| Charpy Notched Impact Strength | -30°C | ISO 179/1eA | kJ/m ² | 15 | 15 |
| THERMAL PROPERTIES | | | | | |
| Melting Temperature | 10°C/min | ISO 11357-1/-3 | °C | 258 | |
| Heat Deflection Temperature | 1.80 MPa | ISO 75/2Af | °C | 245 | |
| Coeff. of Linear Therm. Expansion | parallel, 23°C-55°C | ISO 11359-1/-2 | E-6/K | 17 | |
| Coeff. of Linear Therm. Expansion | normal, 23°C-55°C | ISO 11359-1/-2 | E-6/K | 68 | |
| ELECTRICAL PROPERTIES | | | | | |
| Volume Resistivity | 500V | IEC 60093 | Ohm*m | 1E13 | 1E11 |
| Surface Resistivity | 500V | IEC 60093 | Ohm | 1E12 | 1E10 |

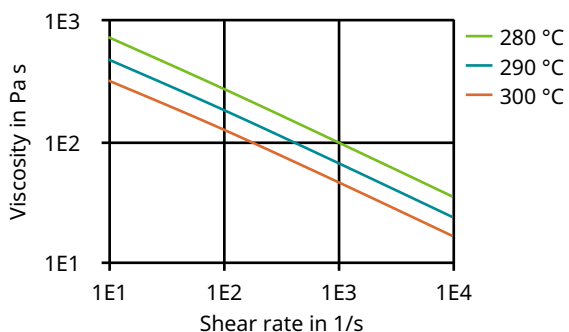
*: DAM = Dry As Moulded state according to ISO 16396-2 **: Cond = Conditioned state similar to ISO 1110 1: Melt Temperature [°C] / Mold Temperature [°C] / Cavity Pressure [MPa]

TECHNICAL DATA SHEET

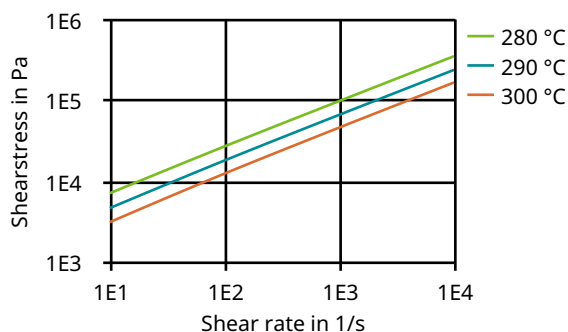
RADISTRONG A RV500W 333 BK

Diagrams

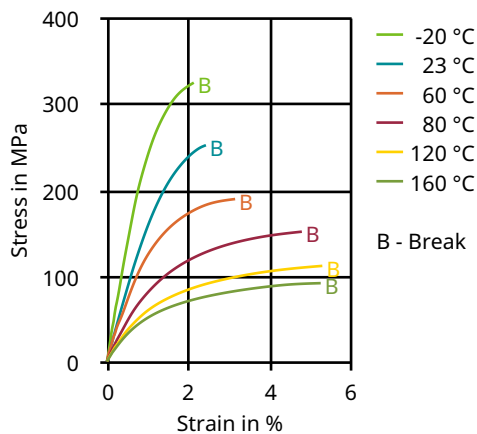
Viscosity-shear rate



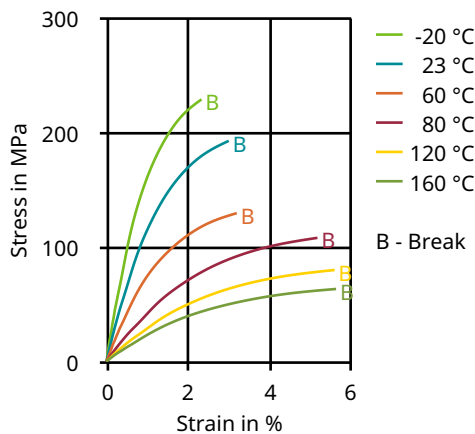
Shearstress-shear rate



Stress-strain (dry)



Stress-strain (cond.)

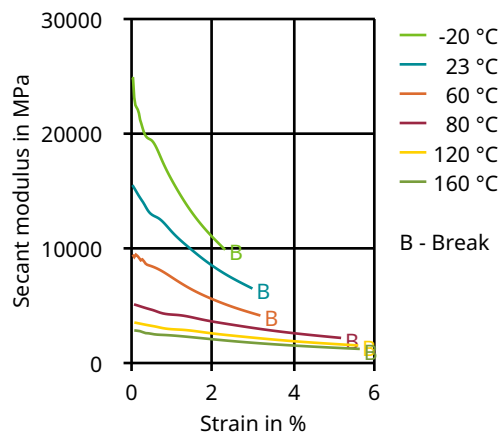
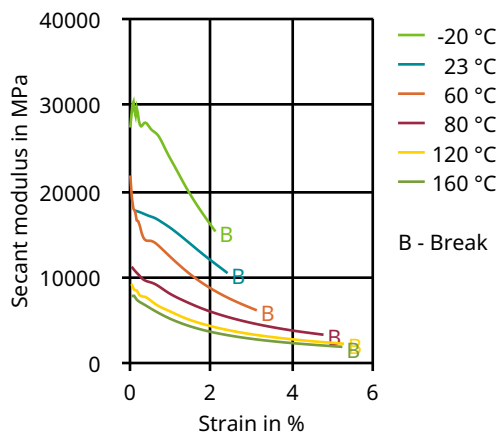


TECHNICAL DATA SHEET

RADISTRONG A RV500W 333 BK

Secant modulus-strain (dry)

Secant modulus-strain (cond.)



Tensile modulus-temperature (dry)

Tensile modulus-temperature (cond.)

