

# GUR® X 204 (DEVELOPMENTAL)

## GUR®

UHMW-PE powder grade for sheet and profile

The density of the particles according DIN 51913 (Helium Pycnometry) is > 0,94 g/cm<sup>3</sup>.

### Product information

Resin Identification	(PE-UHMW)	ISO 1043
Part Marking Code	>(PE-UHMW)<	ISO 11469
Average molecular weight	8.4E6 g/mol	Margolies' equation
Average particle size, d50	120 µm	laser scattering

### Rheological properties

Viscosity number	3600 cm <sup>3</sup> /g	ISO 307, 1628
Intrinsic viscosity	3000	ISO 307, 1628

### Typical mechanical properties

Tensile modulus	670 MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	20 MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	14 %	ISO 527-1/-2
Tensile stress at 50% strain	20 MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	33 MPa	ISO 527-1/-2
Nominal strain at break	280 %	ISO 527-1/-2
Elongational stress F, 150/10	0.51 MPa	ISO 21304-2
Charpy double notched impact strength, 23°C	140 kJ/m <sup>2</sup>	ISO 21304-2
Poisson's ratio	0.47 <sup>[C]</sup>	
Shore D hardness, 15s	60	ISO 48-4 / ISO 868
[C]: Calculated		

### Tribological properties

Wear by sandslurry method (based on GUR 4120=100)	85
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### Thermal properties

Temperature of deflection under load, 1.8 MPa	38 °C	ISO 75-1/-2
Vicat softening temperature, 50 °C/h 50N	80 °C	ISO 306

### Electrical properties

Volume resistivity	1E12 Ohm.m	IEC 62631-3-1
Surface resistivity	1E12 Ohm	IEC 62631-3-2

### Physical/Other properties

Density	930 kg/m <sup>3</sup>	ISO 1183
Bulk density	450 kg/m <sup>3</sup>	ISO 60

### Characteristics

Processing	Ram Extrusion, Compression moulding
Delivery form	Powder

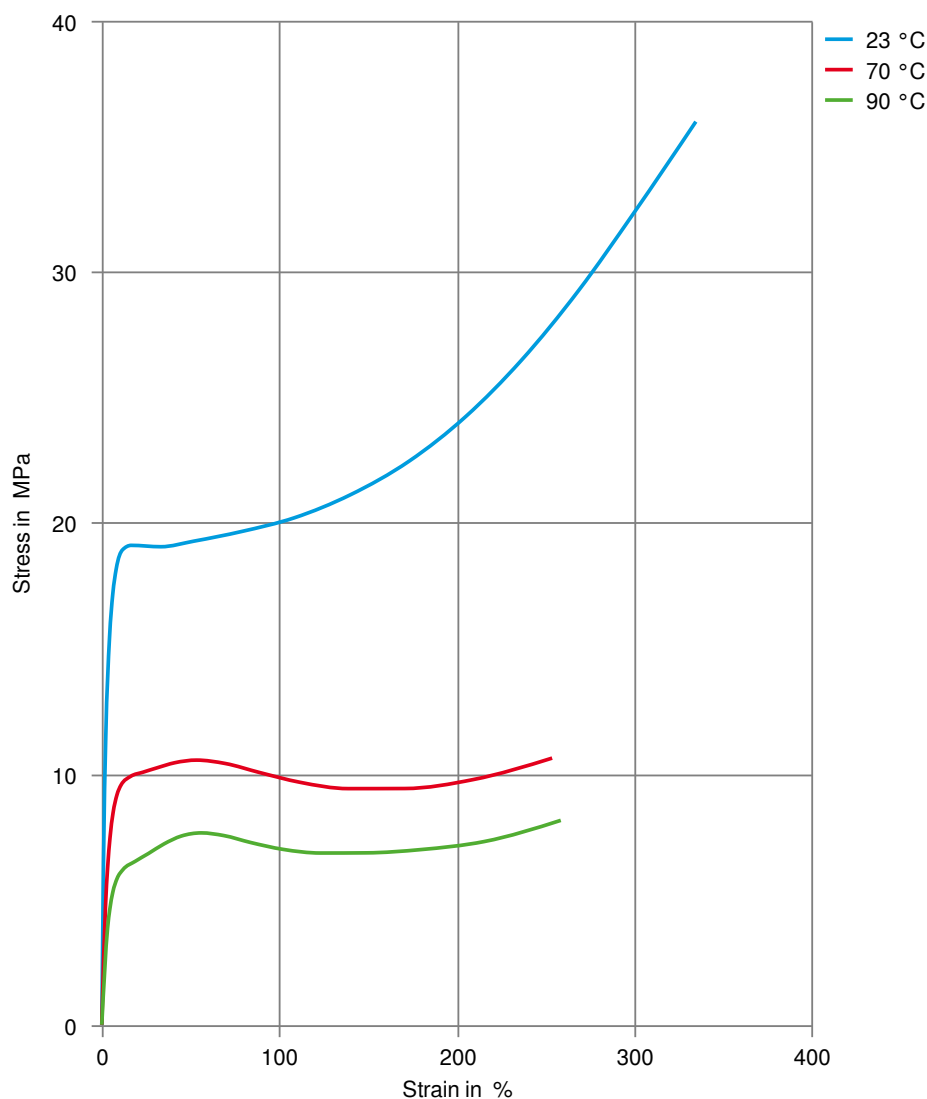
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Special characteristics

Heat stabilised or stable to heat, Hydrolysis resistant, Low wear / Low friction,  
Chemical resistant

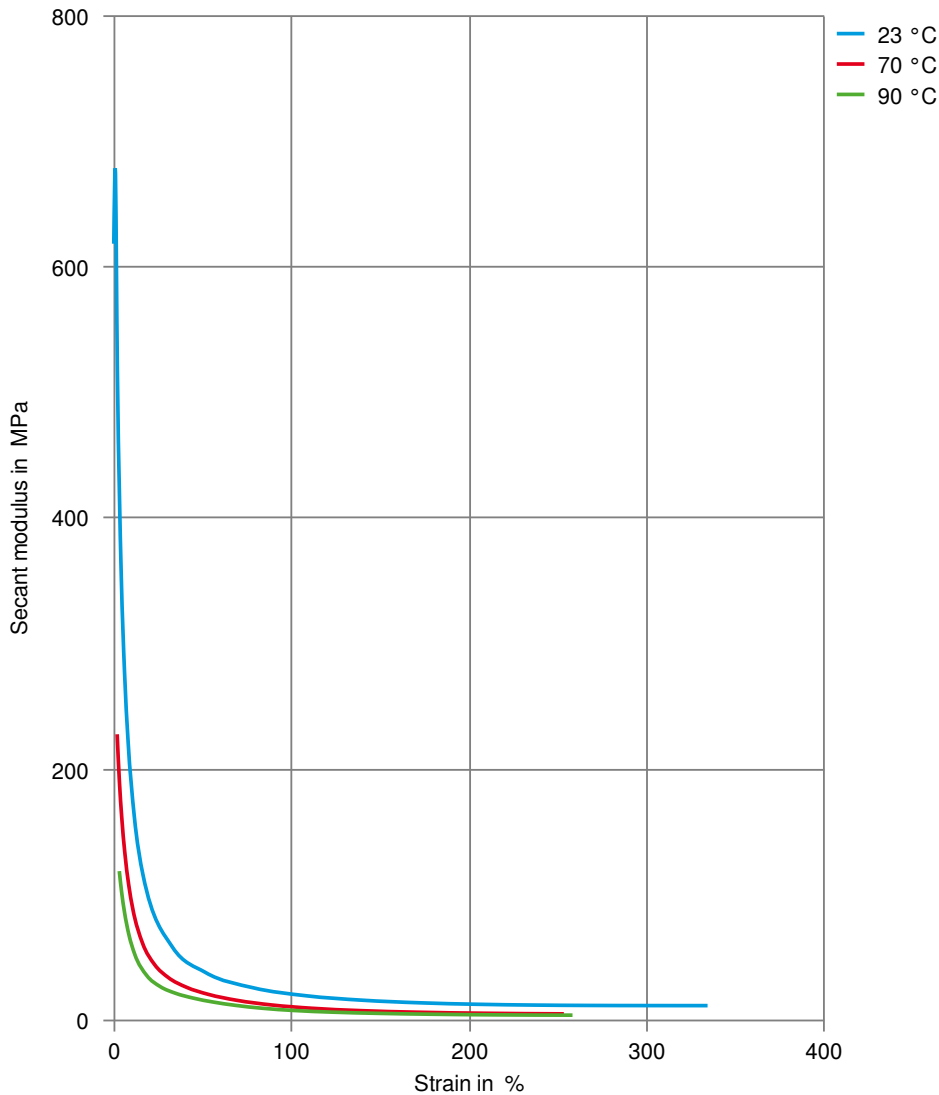
## Stress-strain



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## Secant modulus-strain



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The above data are for the developmental sample and are subject to change as the product is scaled up.

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