

# GUR<sup>®</sup> 4523

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Melt processable UHMW-PE powder grade; screw extrusion grade

### Product information

Resin Identification	(PE-UHMW)	ISO 1043
Part Marking Code	>(PE-UHMW)<	ISO 11469
Average molecular weight	6.7E6 g/mol	Margolies' equation
Average particle size, d50	120 µm	laser scattering

### Rheological properties

Viscosity number	3000 cm <sup>3</sup> /g	ISO 307, 1628
Intrinsic viscosity	2500	ISO 307, 1628

### Typical mechanical properties

Tensile modulus	740 MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	20 MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	13 %	ISO 527-1/-2
Tensile stress at 50% strain	19 MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	38 MPa	ISO 527-1/-2
Nominal strain at break	410 %	ISO 527-1/-2
Elongational stress F, 150/10	0.24 MPa	ISO 21304-2
Charpy double notched impact strength, 23°C	160 kJ/m <sup>2</sup>	ISO 21304-2
Poisson's ratio	0.46 <sup>[C]</sup>	

[C]: Calculated

### Tribological properties

Wear by sandslurry method (based on GUR 4120=100)	110
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### Thermal properties

Vicat softening temperature, 50°C/h 50N	80 °C	ISO 306
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### Physical/Other properties

Density	930 kg/m <sup>3</sup>	ISO 1183
Bulk density	490 kg/m <sup>3</sup>	ISO 60

### Characteristics

Processing	Injection Moulding, Extrusion
Delivery form	Powder
Special characteristics	Hydrolysis resistant, Low wear / Low friction, Chemical resistant