

GUR® 4011

GUR®

UHMW-PE powder grade

Product information

Resin Identification	(PE-HMW)	ISO 1043
Part Marking Code	>(PE-HMW)<	ISO 11469
Average molecular weight	2E6 g/mol	Margolies' equation
Average particle size, d50	115 µm	laser scattering

Rheological properties

Viscosity number	1200 cm ³ /g	ISO 307, 1628
Intrinsic viscosity	1150	ISO 307, 1628

Typical mechanical properties

Tensile stress at yield, 50mm/min	23 MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	13 %	ISO 527-1/-2
Tensile stress at 50% strain	20 MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	36 MPa	ISO 527-1/-2
Nominal strain at break	400 %	ISO 527-1/-2
Elongational stress F, 150/10	0.07 MPa	ISO 21304-2
Charpy double notched impact strength, 23°C	215 kJ/m ²	ISO 21304-2

Tribological properties

Wear by sandslurry method (based on GUR 4120=100)	137
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Thermal properties

Vicat softening temperature, 50°C/h 50N	80 °C	ISO 306
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Electrical properties

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

Physical/Other properties

Density	940 kg/m ³	ISO 1183
Bulk density	450 kg/m ³	ISO 60

Characteristics

Processing	Gel Extrusion
Delivery form	Powder
Special characteristics	High impact or impact modified, Hydrolysis resistant, Low wear / Low friction, Chemical resistant