

GUR® X 160 (PRELIMINARY)

GUR®

Hydrophilic, very fine particle size, low bulk density UHMW-PE powder grade, additive in thermoplastics and rubbers / additive in paints and lacquers

Product information

Resin Identification	(PE-HMW)	ISO 1043
Part Marking Code	>(PE-HMW)<	ISO 11469
Average molecular weight	400000 g/mol	Margolies' equation
Average particle size, d50	20 µm	laser scattering

Rheological properties

Melt mass-flow rate	3.6 g/10min	ISO 1133
Melt mass-flow rate, Temperature	190 °C	
Melt mass-flow rate, Load	21.6 kg	
Viscosity number	400 cm³/g	ISO 307, 1628
Intrinsic viscosity	400	ISO 307, 1628

Typical mechanical properties

Tensile modulus	1200 MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	27 MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	10 %	ISO 527-1/-2
Tensile stress at 50% strain	18 MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	34 MPa	ISO 527-1/-2
Nominal strain at break	770 %	ISO 527-1/-2
Elongational stress F, 150/10	<0.05 MPa	ISO 21304-2
Charpy double notched impact strength, 23°C	30 kJ/m²	ISO 21304-2
Poisson's ratio	0.44 ^[C]	

[C]: Calculated

Tribological properties

Wear by sandslurry method (based on GUR 4120=100)	320
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Physical/Other properties

Density	950 kg/m³	ISO 1183
Bulk density	300 kg/m³	ISO 60

Characteristics

Delivery form	Micropowder
Special characteristics	High impact or impact modified, Hydrolysis resistant, Low wear / Low friction, Chemical resistant, Hydrophilic