

GUR® 4122 - PE-UHMW
Description

UHMW-PE powder grade
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Physical properties	Value	Unit	Test Standard
Elongational Stress F, 150/10	39.2	psi	ISO 21304-2
Average molecular weight	5E6	g/mol	Margolies' Equation
Density	58.1	lb/ft ³	ISO 1183
MFR temperature	374	°F	ISO 1133
MFR load	47.6	lb	ISO 1133
Intrinsic viscosity	58100	in ³ /lb	ISO 1628-3
Viscosity number (PE and PP)	66400	in ³ /lb	ISO 1628-3
Average particle size, d50	160	µm	Laser scattering

Mechanical properties	Value	Unit	Test Standard
Charpy double 14° v-notch strength, 23°C	76.1	ft-lb/in ²	ISO 21304-2
Wear by sandslurry method (based on GUR 4120=100)	100	-	Internal
Tensile modulus	116000	psi	ISO 527-2/1B
Tensile stress at yield	3050	psi	ISO 527-2/1B
Tensile strain at yield	13	%	ISO 527-2/1B
Tensile stress at 50% strain	3050	psi	ISO 527-2/1B
Tensile stress at break	6380	psi	ISO 527-2/1B
Tensile nominal strain at break	410	%	ISO 527-2/1B
Shore D hardness-TPE, 15s	60	-	ISO 868

Thermal properties	Value	Unit	Test Standard
DTUL at 1.8 MPa	106	°F	ISO 75-1, -2
Vicat softening temperature, 50°C/h 50N	176	°F	ISO 306

Electrical properties	Value	Unit	Test Standard
Volume resistivity, 23°C	>1E12	Ohm*m	IEC 62631-3-1
Surface resistivity, 23°C	>1E12	Ohm	IEC 62631-3-2

Characteristics

Special Characteristics	Heat resistant, Hydrolysis resistant, UV resistant
Product Categories	Low emission, Unfilled
Processing	Injection molding
Delivery Form	Powder