Celanese
The chemistry inside innovation™

GUR® 4018

HMW-PE powder grade for battery separators; filtration; melt processable
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Product information

Average molecular weight	600000	g/mol	Margolies' equation
Average particle size, D50	115	µm	laser scattering

Rheological properties

Melt mass-flow rate	1.1	g/10min	ISO 1133
Melt mass-flow rate, Temperature	190	°C	
Melt mass-flow rate, Load	21.6	kg	
Intrinsic viscosity	500		ISO 307, 1157, 1628

Typical mechanical properties

Tensile Modulus	1050	MPa	ISO 527-1/-2
Yield stress, 50mm/min	25	MPa	ISO 527-1/-2
Yield strain, 50mm/min	8	%	ISO 527-1/-2
Stress at 50% strain	18	MPa	ISO 527-1/-2
Stress at break, 50mm/min	37	MPa	ISO 527-1/-2
Nominal strain at break	870	%	ISO 527-1/-2
Elongational stress, 150/10	0.01	MPa	ISO 21304-2
Charpy double notched impact strength, 23°C	45	kJ/m²	ISO 21304-2

Tribological properties

Relative Wear (based on GUR 4120=100), sandslurry method	250		Internal

Thermal properties

Temp. of deflection under load, 1.8 MPa	43	°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

Other properties

Density	950	kg/m³	ISO 1183
Bulk density	450	kg/m³	ISO 60

Characteristics

Food contact	FDA 21 CFR