Celanese
The chemistry inside innovation™

GUR® ALGRA

Electrically and heat conductive, anthracite UHMW-PE powder grade
Electrically and heat conductive, anthracite UHMW-PE powder grade

Product information

Average molecular weight	4.2E6	g/mol	Margolies' equation

Rheological properties

Viscosity number	2100	cm^3/g	ISO 307, 1157, 1628
Intrinsic viscosity	1900		ISO 307, 1157, 1628

Typical mechanical properties

Tensile Modulus	1290	MPa	ISO 527-1/-2
Yield stress, 50mm/min	16	MPa	ISO 527-1/-2
Yield strain, 50mm/min	19	%	ISO 527-1/-2
Stress at 50% strain	16	MPa	ISO 527-1/-2
Stress at break, 50mm/min	18	MPa	ISO 527-1/-2
Nominal strain at break	160	%	ISO 527-1/-2
Tensile creep modulus, 1h	1060	MPa	ISO 899-1
Tensile creep modulus, 1000h	600	MPa	ISO 899-1
Charpy double notched impact strength, 23°C	40	kJ/m^2	ISO 21304-2
Ball indentation hardness, H 358/30	52	MPa	ISO 2039-1
Shore D hardness, 15s	62		ISO 48-4 / ISO 868

Tribological properties

Relative Wear (based on GUR 4120=100), sandslurry method	310		Internal

Thermal properties

Temp. of deflection under load, 1.8 MPa	46	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	90	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h, 50N	101	°C	ISO 306
Coeff. of linear therm. expansion, parallel	150	E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at 1.5mm nom. thickn.	HB	class	UL 94
Thickness tested	1.6	mm	UL 94

Electrical properties

Volume resistivity	1E7	Ohm.m	IEC 62631-3-1
Surface resistivity	1E9	Ohm	IEC 62631-3-2

Celanese
The chemistry inside innovation™

GUR® ALGRA

Other properties

Density	1250 kg/m³	ISO 1183