Celanese
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GUR® 5129

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Melt processable UHMW-PE pellet grade

Some of the listed data have been determined from the virgin powder.

Product information

Resin Identification	(PE-UHMW)		ISO 1043
Part Marking Code	>(PE-UHMW)<		ISO 11469
Average molecular weight	3.4E6	g/mol	Margolies' equation

Rheological properties

Viscosity number	1800	cm^3/g	ISO 307, 1628
Intrinsic viscosity	1600		ISO 307, 1628

Typical mechanical properties

Tensile modulus	900	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	23	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	11	%	ISO 527-1/-2
Tensile stress at 50% strain	20	MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	34	MPa	ISO 527-1/-2
Nominal strain at break	420	%	ISO 527-1/-2
Charpy double notched impact strength, 23°C	140	kJ/m^2	ISO 21304-2
Poisson's ratio	0.45[C]		

[C]: Calculated

Tribological properties

Wear by sandslurry method (based on GUR 4120=100)	155		

Thermal properties

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

Flammability

Burning Behav. at 1.5mm nom. thickn.	HB	class	IEC 60695-11-10

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	500	kg/m^3	ISO 60

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	High impact or impact modified, Hydrolysis resistant, Low wear / Low friction,

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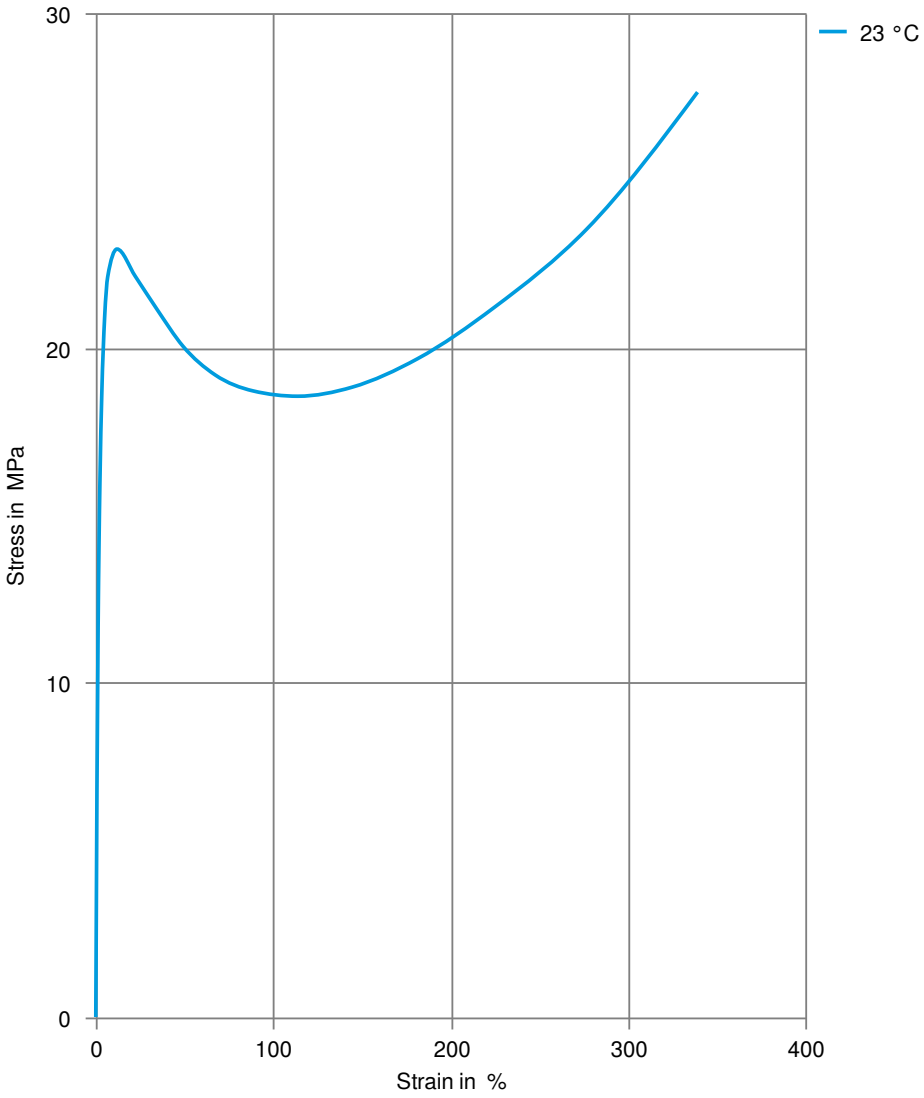
Chemical resistant

Stress-strain



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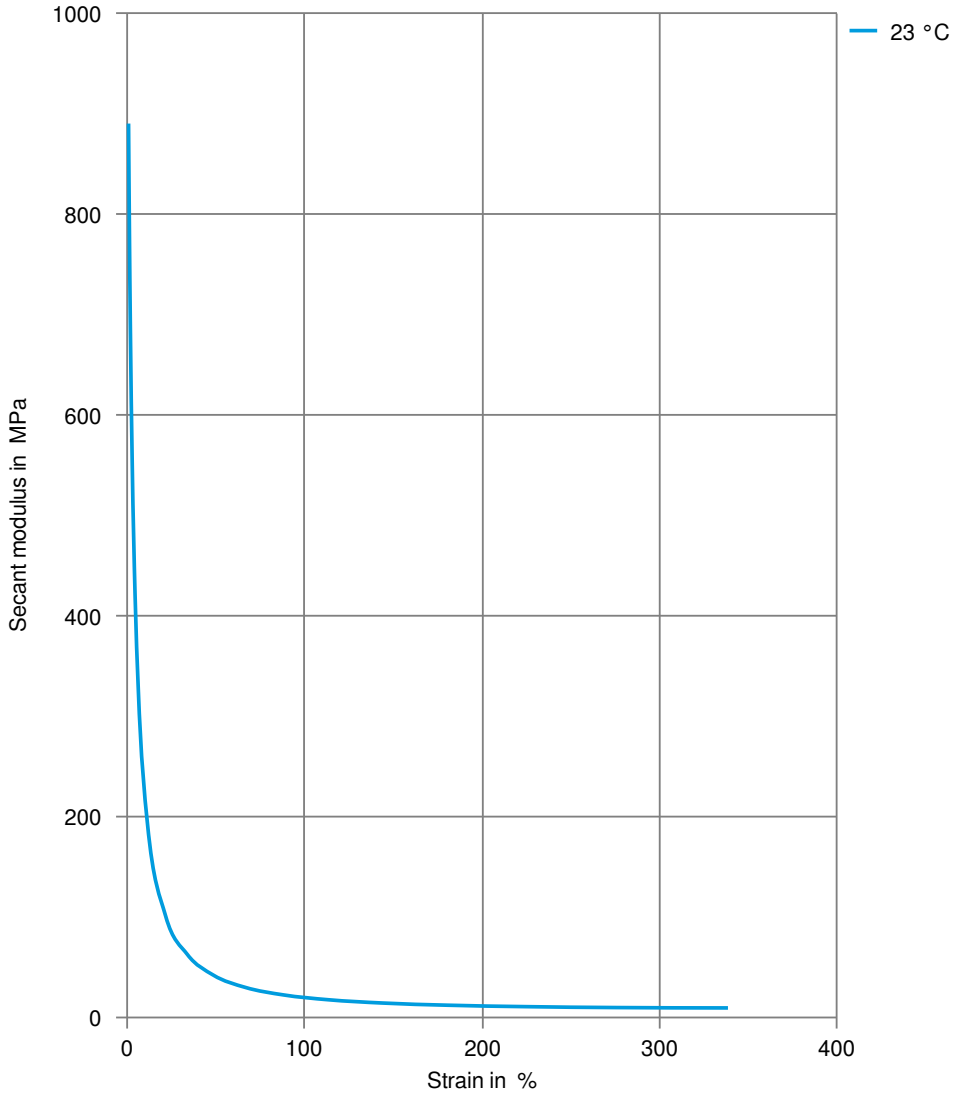
Secant modulus-strain



Revised: 2025-04-07 Source: Celanese Materials Database