Celanese
The chemistry inside innovation™

GUR® 5113

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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	3.7E6	g/mol	Margolies' equation

Rheological properties

Viscosity number	1900	cm^3/g	ISO 307, 1628
Intrinsic viscosity	1700		ISO 307, 1628

Typical mechanical properties

Tensile modulus	800	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	22	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	12	%	ISO 527-1/-2
Tensile stress at 50% strain	19	MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	37	MPa	ISO 527-1/-2
Nominal strain at break	430	%	ISO 527-1/-2
Elongational stress F, 150/10	0.12	MPa	ISO 21304-2
Charpy double notched impact strength, 23°C	190	kJ/m^2	ISO 21304-2
Poisson's ratio	0.46[C]		
Shore D hardness, 15s	62		ISO 48-4 / ISO 868

[C]: Calculated

Tribological properties

Wear by sandslurry method (based on GUR 4120=100)	130		

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	930	kg/m^3	ISO 1183
Bulk density	500	kg/m^3	ISO 60

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Characteristics

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

Additional information

Processing Notes

Pre-Drying

Not needed

Storage

None

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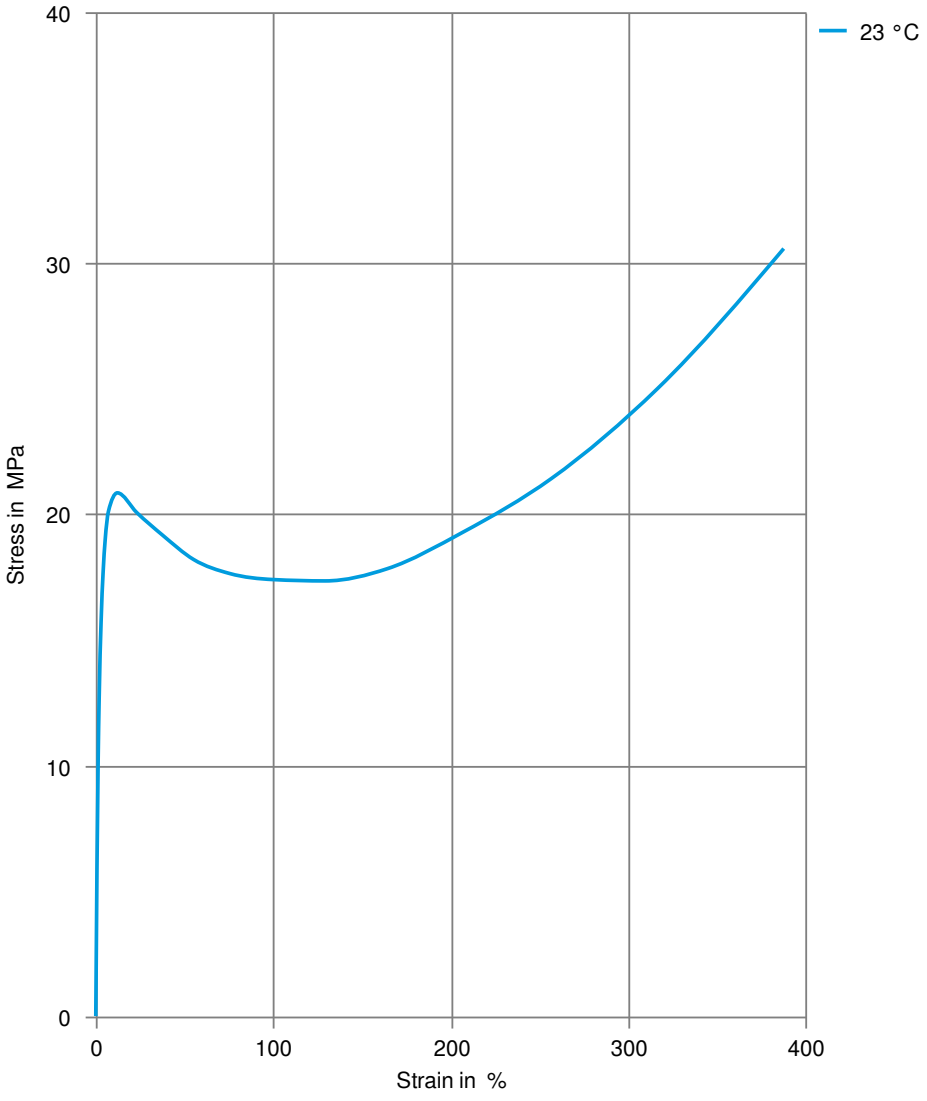
Stress-strain



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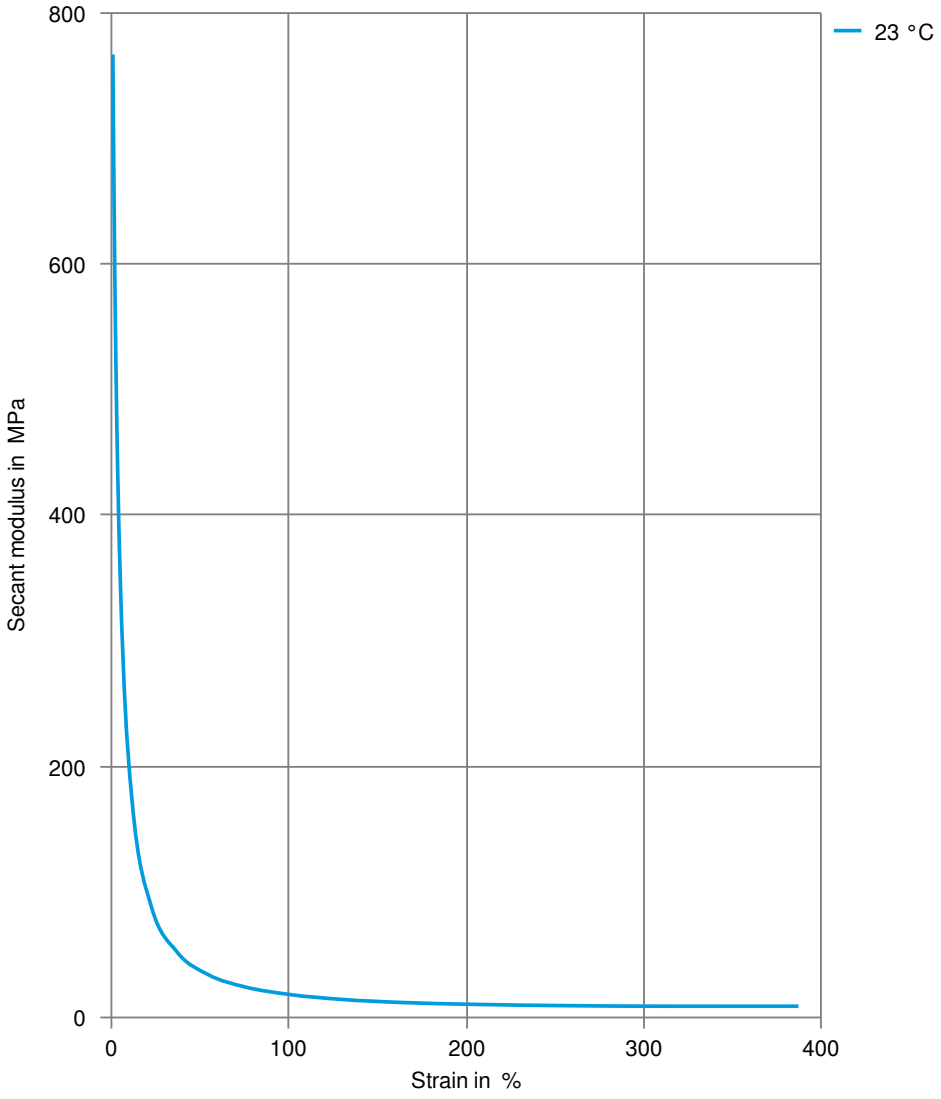
Secant modulus-strain



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