Celanese
The chemistry inside innovation™

GHR® 8020 ECO-B

ECO-B: GUR ECO-B is a is a (U)HMW-PE with the same properties and performance as standard grades but produced with sustainability in mind. Using a mass-balance approach, biogenic feedstocks are used to offset the use of fossil-based raw materials and decrease greenhouse gas emissions. The process is audited and certified according to the ISCC Plus mass balance approach.

Product information

Average molecular weight	400000	g/mol	Margolies' equation
Average particle size, D50	220	µm	laser scattering

Rheological properties

Melt mass-flow rate	3.5	g/10min	ISO 1133
Melt mass-flow rate, Temperature	190	°C	
Melt mass-flow rate, Load	21.6	kg	
Viscosity number	400	cm^3/g	ISO 307, 1157, 1628
Intrinsic viscosity	400		ISO 307, 1157, 1628

Typical mechanical properties

Tensile Modulus	1250	MPa	ISO 527-1/-2
Yield stress, 50mm/min	26	MPa	ISO 527-1/-2
Yield strain, 50mm/min	10	%	ISO 527-1/-2
Stress at 50% strain	18	MPa	ISO 527-1/-2
Stress at break, 50mm/min	38	MPa	ISO 527-1/-2
Nominal strain at break	900	%	ISO 527-1/-2
Elongational stress, 150/10	0.01	MPa	ISO 21304-2
Charpy double notched impact strength, 23°C	35	kJ/m^2	ISO 21304-2
Shore D hardness, 15s	63		ISO 48-4 / ISO 868

Tribological properties

Relative Wear (based on GUR 4120=100), sandslurry method	330		Internal

Thermal properties

Temp. of deflection under load, 1.8 MPa	44	°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
Surface resistivity	>1E12	Ohm	IEC 62631-3-2

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Other properties

Density	950	kg/m³	ISO 1183
Bulk density	440	kg/m³	ISO 60

Characteristics

Additives	Biobased
Food contact	FDA 21 CFR

Stress-strain

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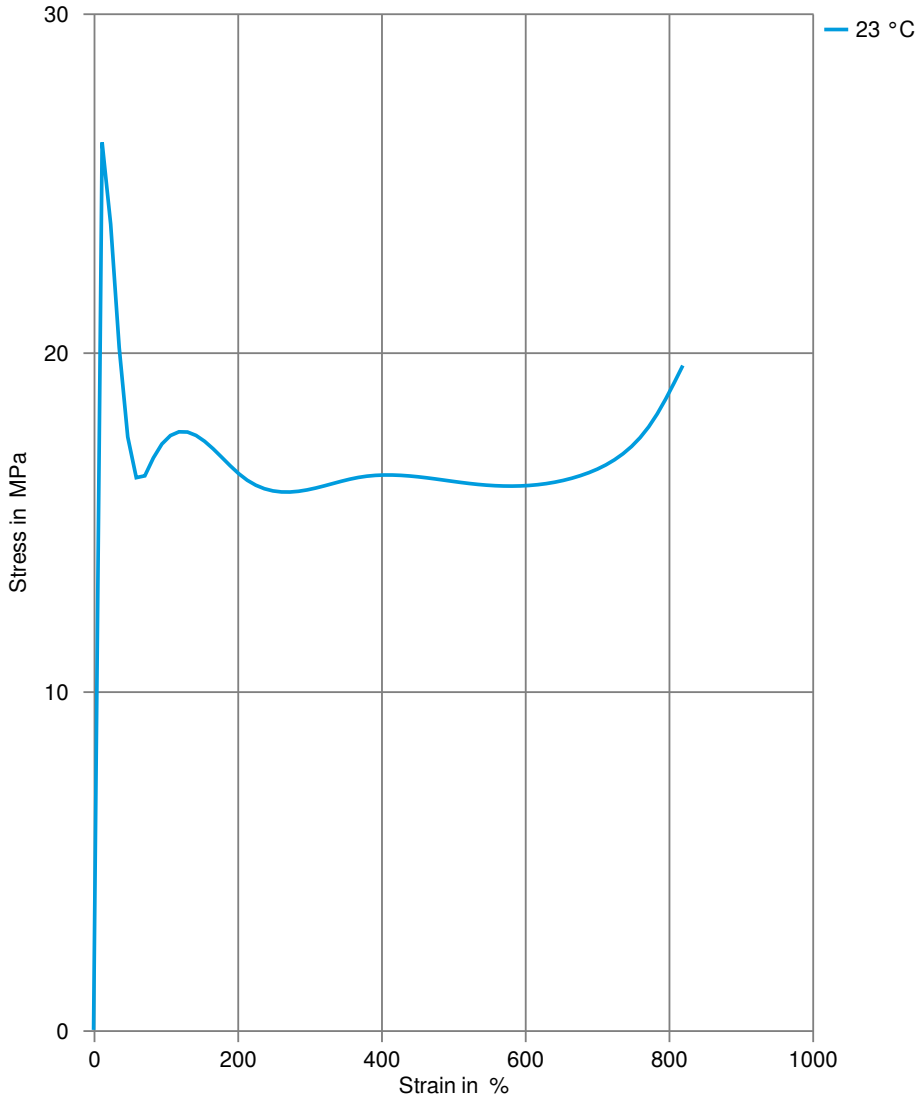

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Secant modulus-strain