Celanese
The chemistry inside innovation™

CELANYL® A3 H J20 BK 9005/2

CELANYL®

Toughened grade for outstanding impact resistance over a wide temperature range. Long term heat ageing resistance.

Product information

Resin Identification	PA66-I	ISO 1043
Part Marking Code	>PA66-I<	ISO 11469

Rheological properties

Moulding shrinkage range, parallel	1.4 - 1.8	%	ISO 294-4, 2577
Moulding shrinkage range, normal	1.4 - 1.8	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	1900 / 750	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	48 / -	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	5.5 / -	%	ISO 527-1/-2
Tensile stress at break, 50mm/min	44 / 41	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	35 / 200	%	ISO 527-1/-2
Flexural modulus	1900 / 670	MPa	ISO 178
Flexural strength	68 / 26	MPa	ISO 178
Charpy impact strength, 23°C	180 / N	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	80 / 120	kJ/m²	ISO 179/1eA
Poisson's ratio	0.41 / 0.46[C]		

[C]: Calculated

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	265 / *	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	60 / *	°C	ISO 75-1/-2

Flammability

FMVSS Class	B	ISO 3795 (FMVSS 302)

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.8 / *	%	Sim. to ISO 62
Water absorption, 2mm	6.5 / *	%	Sim. to ISO 62
Density	1070 / -	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	80	°C
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.15	%
Melt Temperature Optimum	290	°C
Min. melt temperature	280	°C
Max. melt temperature	300	°C
Screw tangential speed	≤0.3	m/s
Mold Temperature Optimum	80	°C
Min. mould temperature	50	°C

Celanese
The chemistry inside innovation™

CELANYL® A3 H J20 BK 9005/2

CELANYL®

Max. mould temperature	100 °C

Characteristics

Processing	Injection Moulding
Delivery form	Granules
Special characteristics	High impact or impact modified, Heat stabilised or stable to heat

Automotive

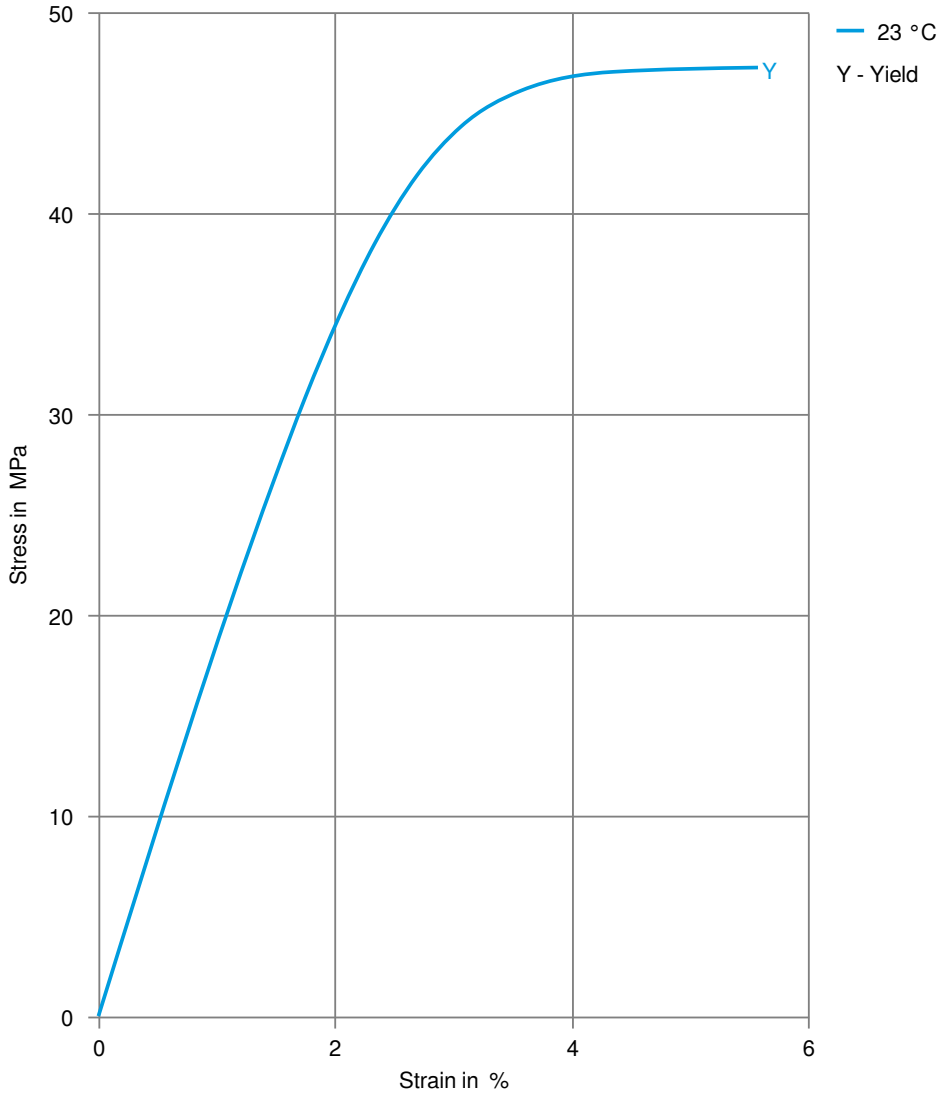
OEM	STANDARD	ADDITIONAL INFORMATION
VW Group	VW 50127	*Best Fitting Grade To PA66-3, Not Officially Approved

Celanese
The chemistry inside innovation™

CELANYL® A3 H J20 BK 9005/2

CELANYL®

Stress-strain (dry)

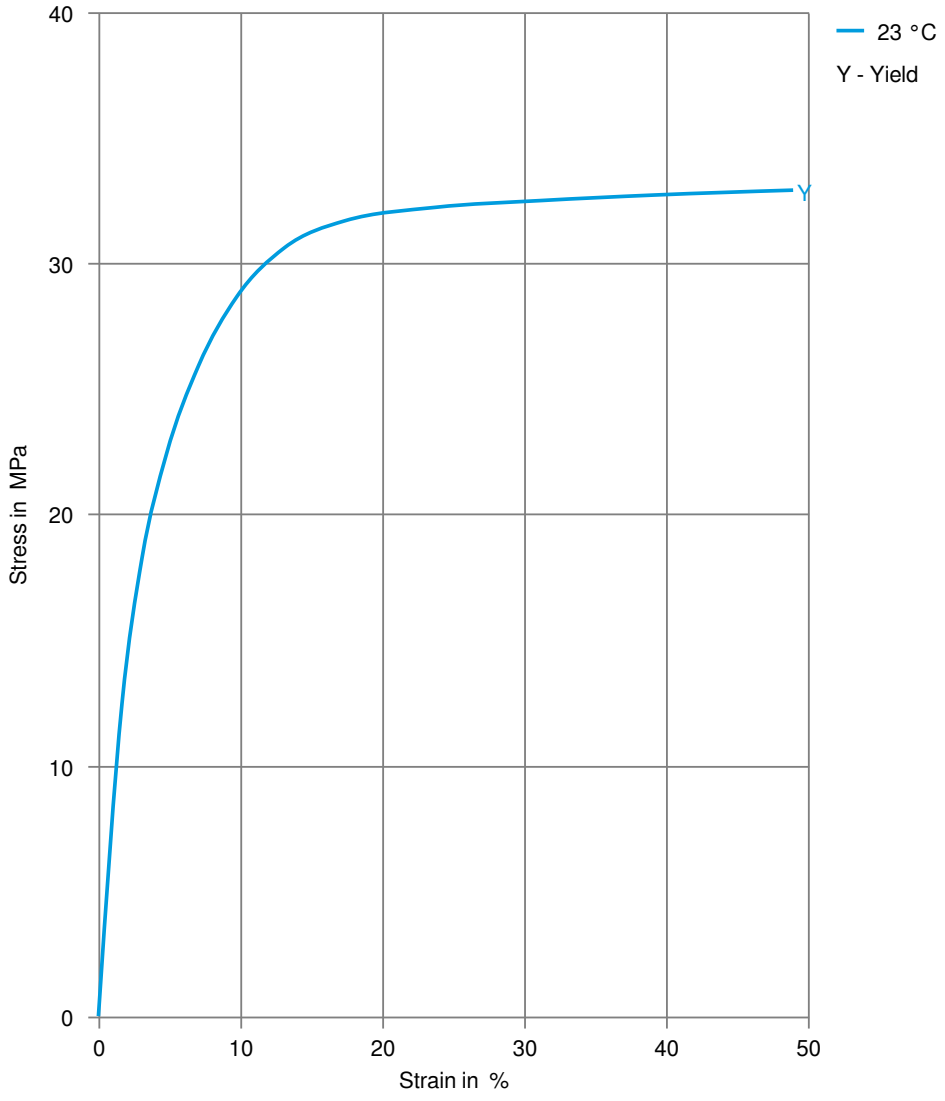


Celanese
The chemistry inside innovation™

CELANYL® A3 H J20 BK 9005/2

CELANYL®

Stress-strain (cond.)

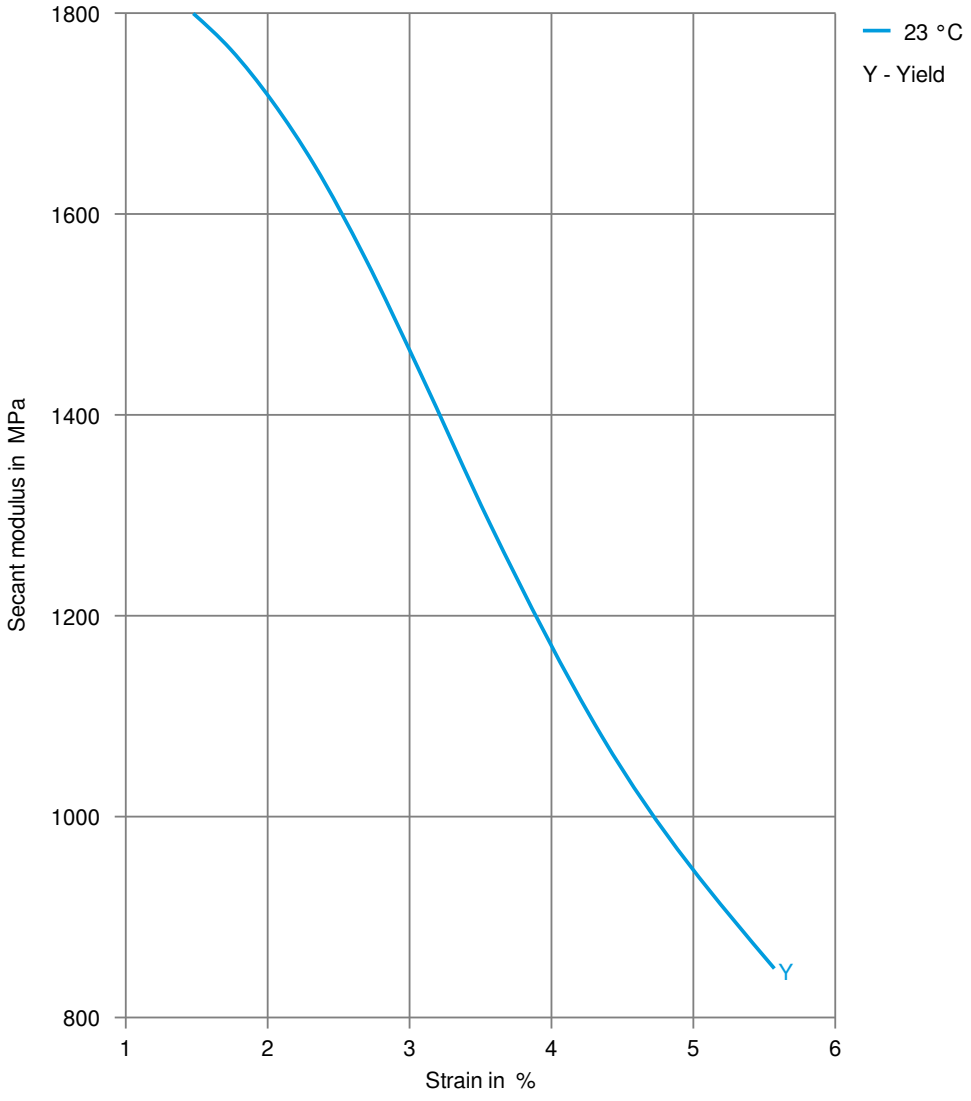


Celanese
The chemistry inside innovation™

CELANYL® A3 H J20 BK 9005/2

CELANYL®

Secant modulus-strain (dry)

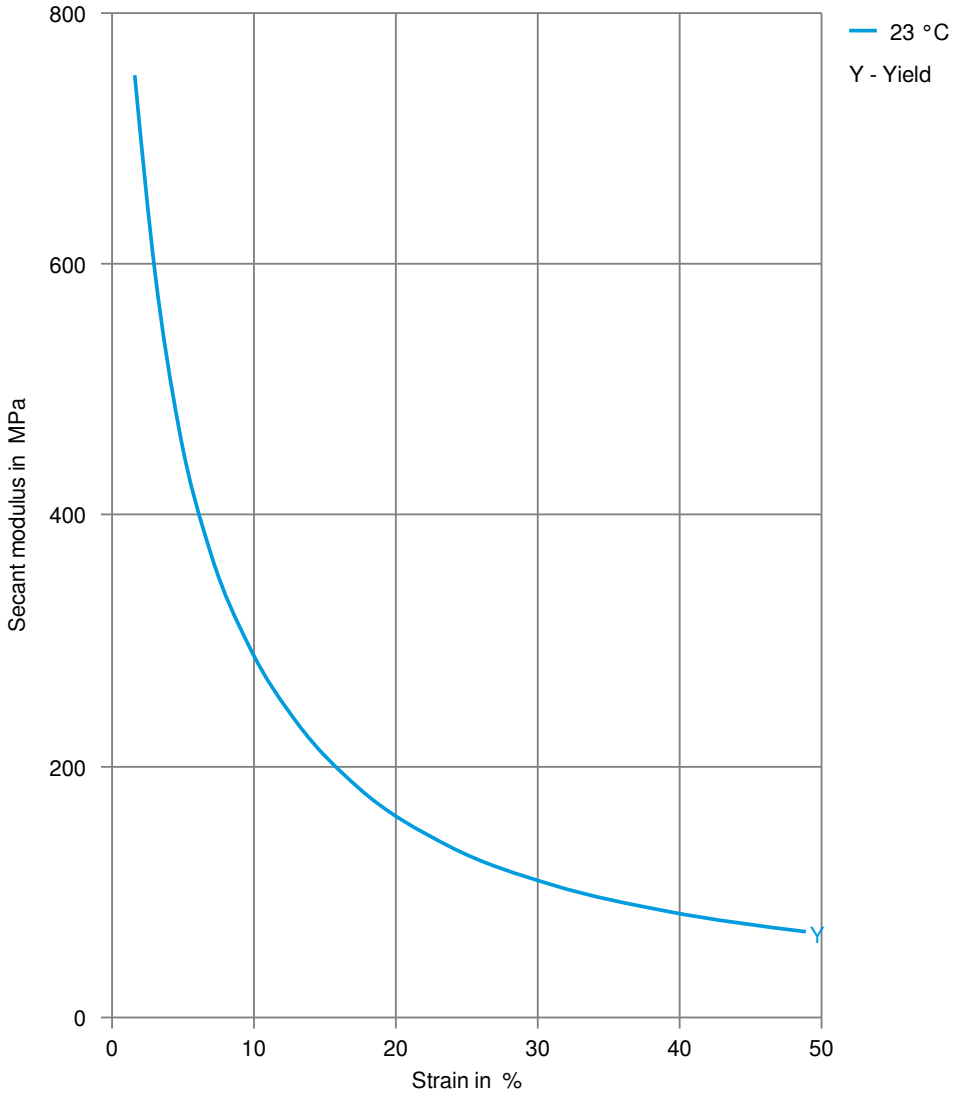


Celanese
The chemistry inside innovation™

CELANYL® A3 H J20 BK 9005/2

CELANYL®

Secant modulus-strain (cond.)

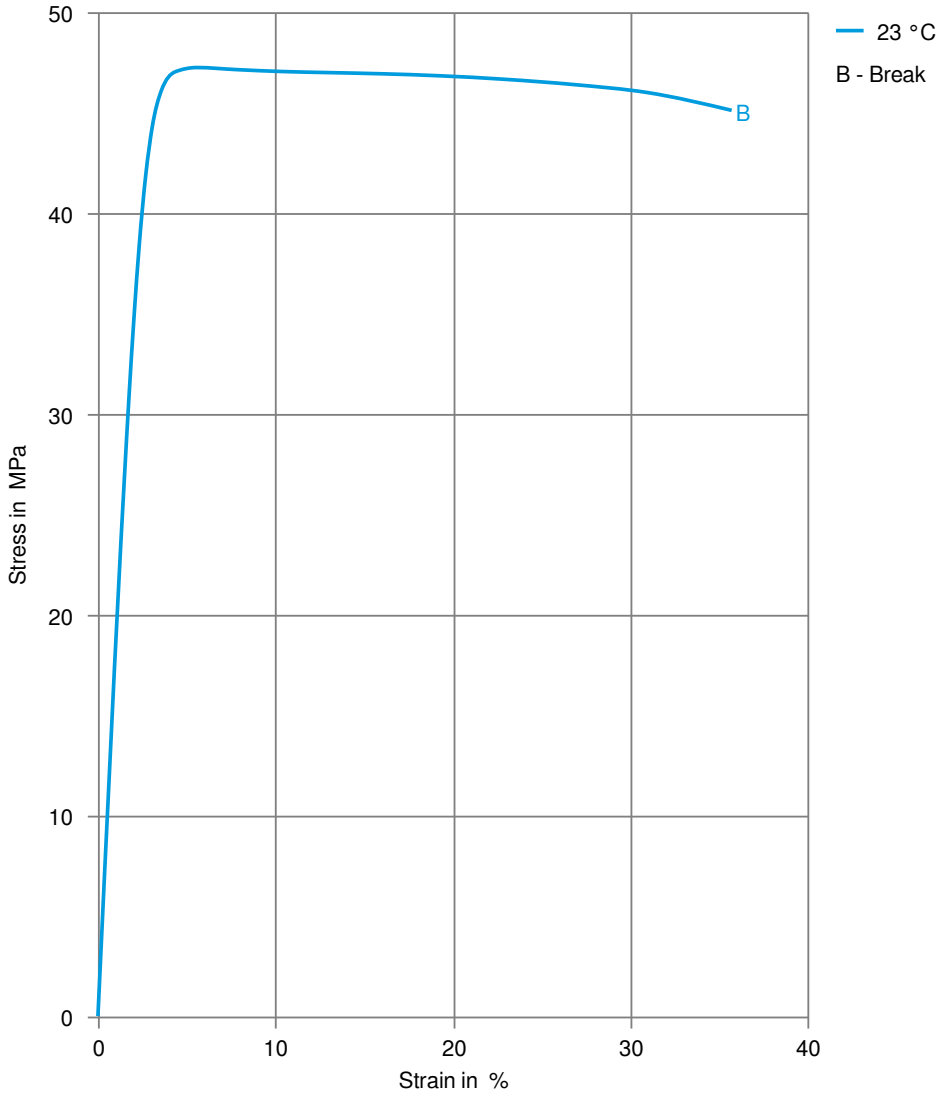


Celanese
The chemistry inside innovation™

CELANYL® A3 H J20 BK 9005/2

CELANYL®

Stress-strain, 50mm/min (dry)

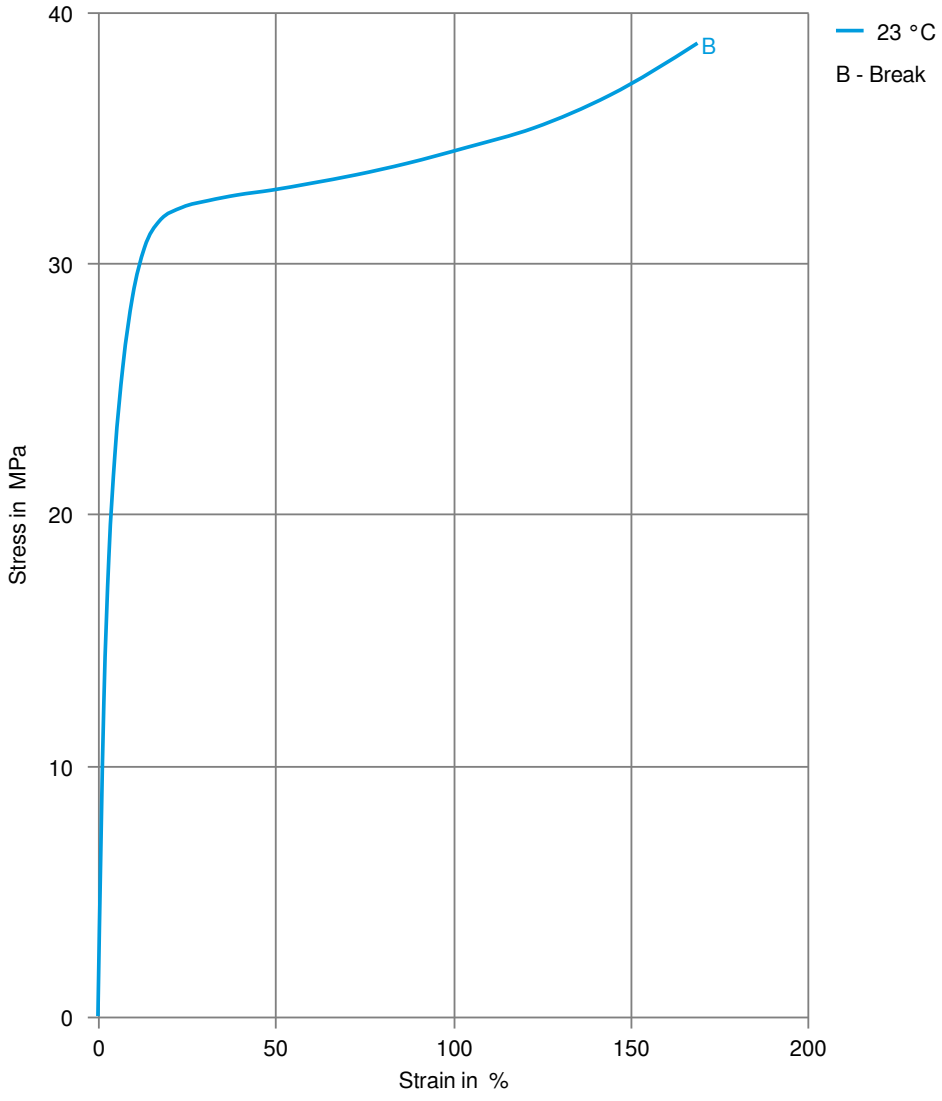


Celanese
The chemistry inside innovation™

CELANYL® A3 H J20 BK 9005/2

CELANYL®

Stress-strain, 50mm/min (cond.)

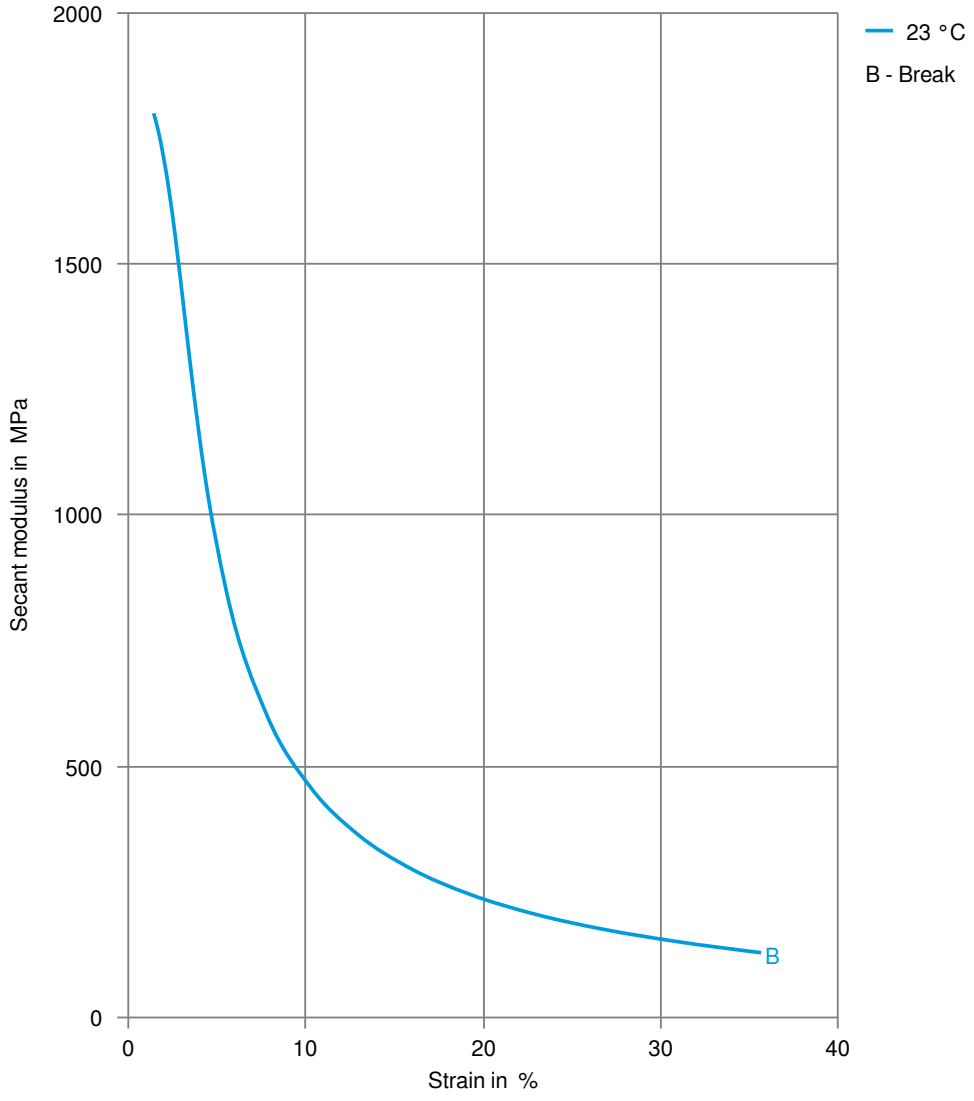


Celanese
The chemistry inside innovation™

CELANYL® A3 H J20 BK 9005/2

CELANYL®

Secant modulus-strain, 50mm/min (dry)

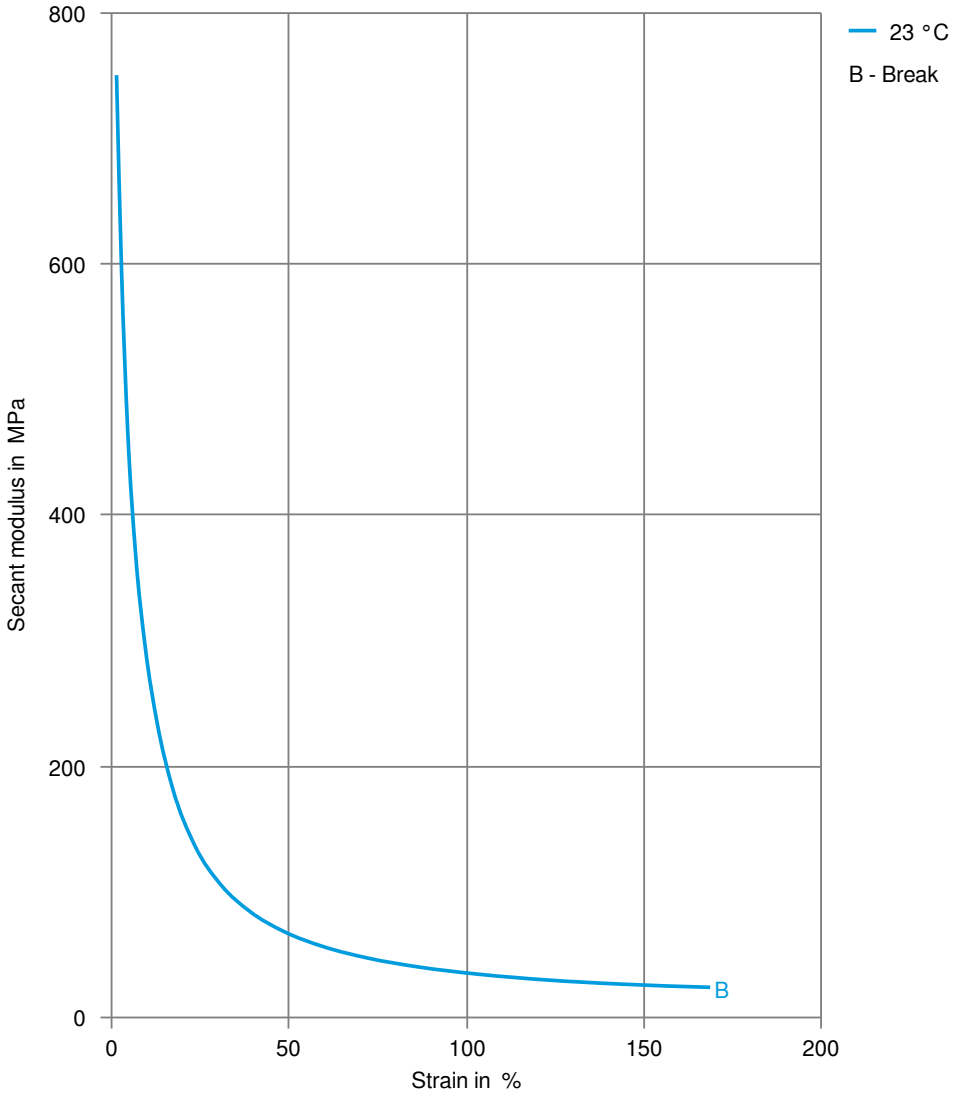


Celanese
The chemistry inside innovation™

CELANYL® A3 H J20 BK 9005/2

CELANYL®

Secant modulus-strain, 50mm/min (cond.)



Revised: 2025-04-23 Source: Celanese Materials Database