



This datasheet of **Akulon® Care K1U** from **Envalior** is provided by the international plastics database **CAMPUS**.

Akulon® Care K1U | PA6 | Envalior

Product Texts

Low Viscosity, Medical grade, Food Contact Quality

ISO 1043 PA6

Rheological properties

	dry / cond	Unit
Melt volume-flow rate, MVR	185 / *	cm³/10min
Temperature	275 / *	°C
Load	5 / *	kg
Molding shrinkage, parallel	1.1 / *	%
Molding shrinkage, normal	1.1 / *	%

Mechanical properties

	dry / cond	Unit
Tensile modulus	3200 / 1000	MPa
Yield stress	87 / 45	MPa
Yield strain	4 / 25	%
Nominal strain at break	20 / >50	%
Charpy impact strength, +23°C	N / N	kJ/m²
Charpy impact strength, -30°C	N / N	kJ/m²
Charpy notched impact strength, +23°C	8 / 35	kJ/m²
Charpy notched impact strength, -30°C	5 / 5	kJ/m²

Thermal properties

	dry / cond	Unit
Melting temperature, 10°C/min	220 / *	°C
Temp. of deflection under load, 1.80 MPa	60 / *	°C
Temp. of deflection under load, 0.45 MPa	150 / *	°C
Vicat softening temperature, 50°C/h 50N	195 / *	°C
Coeff. of linear therm. expansion, parallel	90 / *	E-6/K
Coeff. of linear therm. expansion, normal	90 / *	E-6/K

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Burning behavior at 1.5 mm nominal thickness

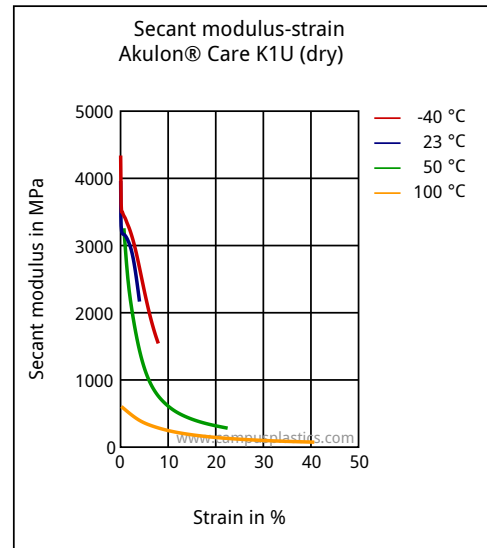
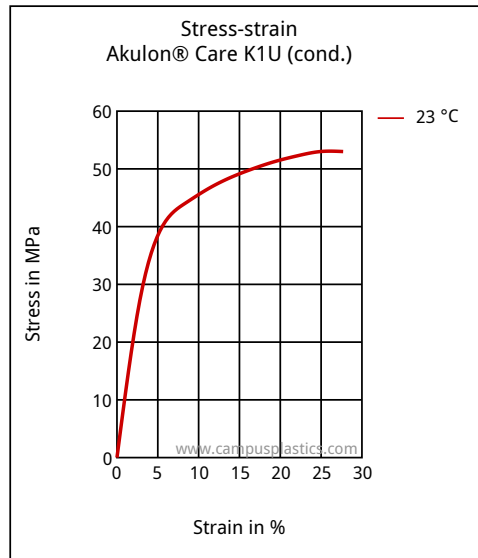
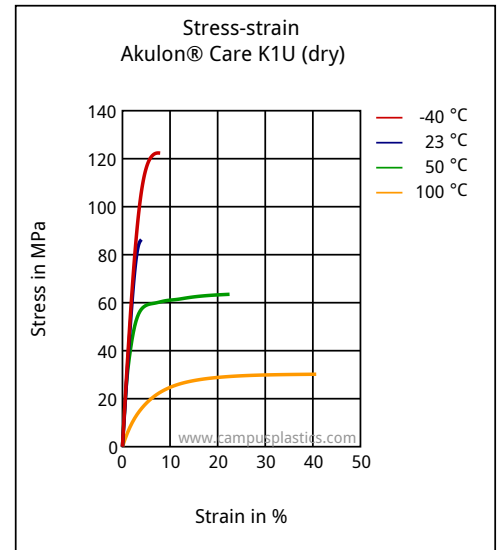
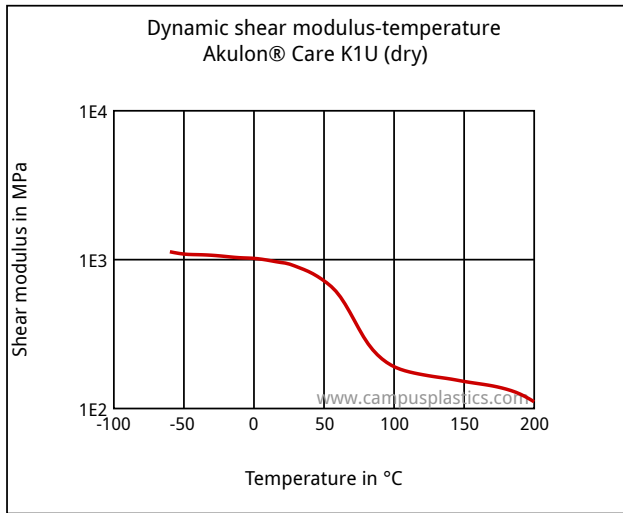
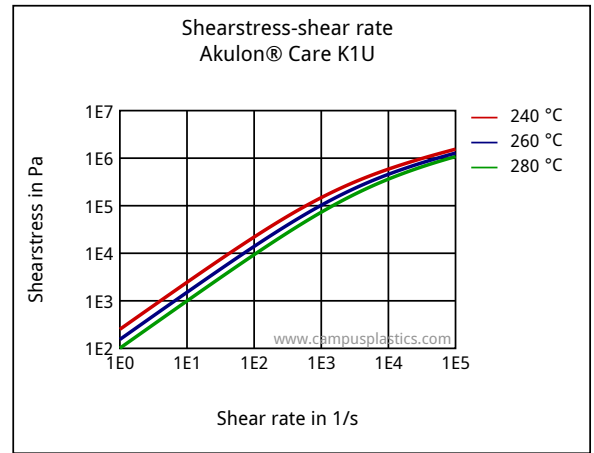
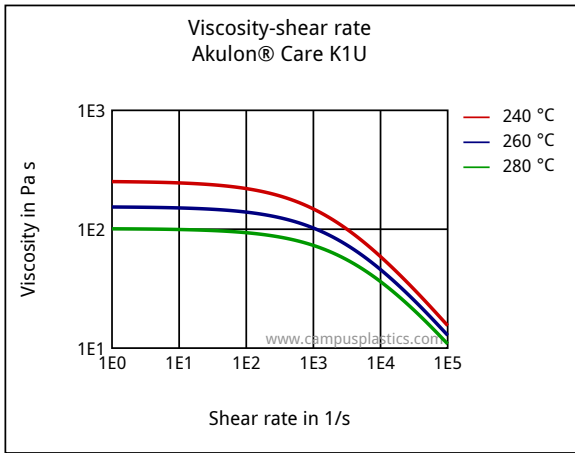
V-2 / * Class

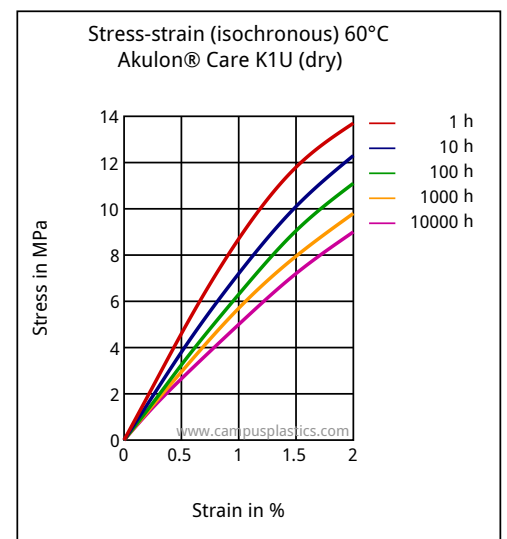
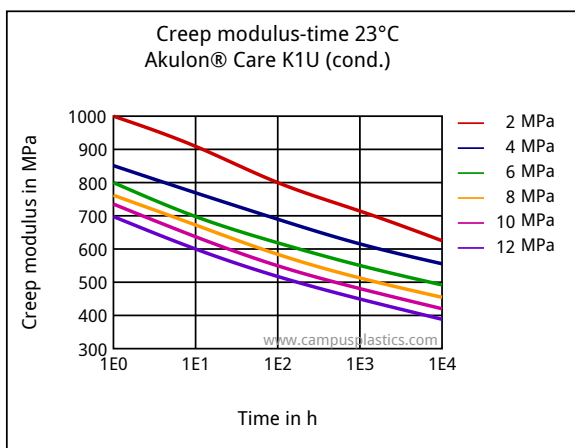
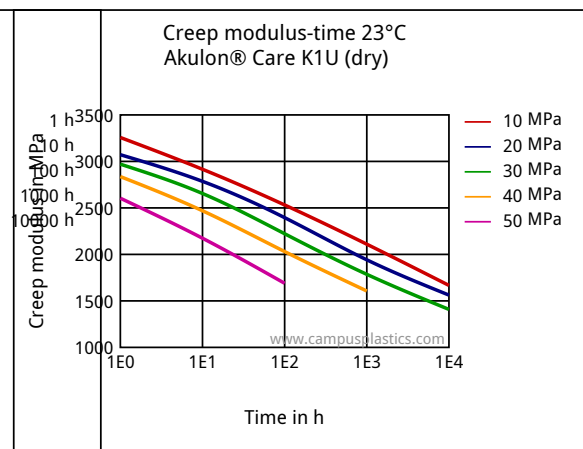
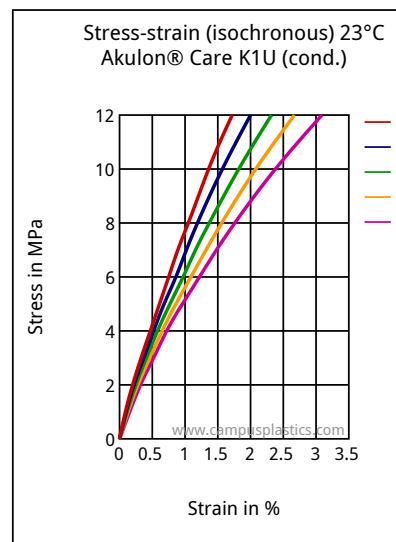
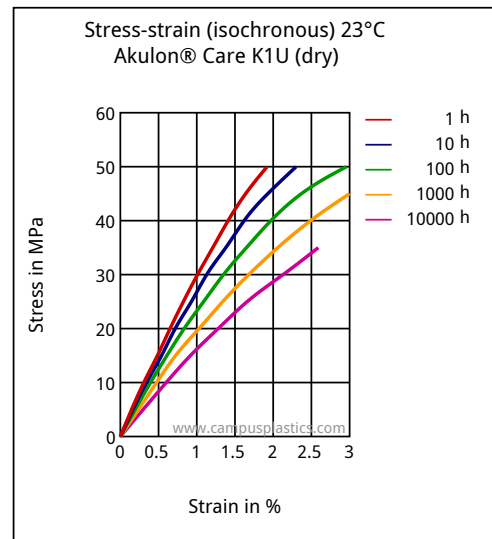
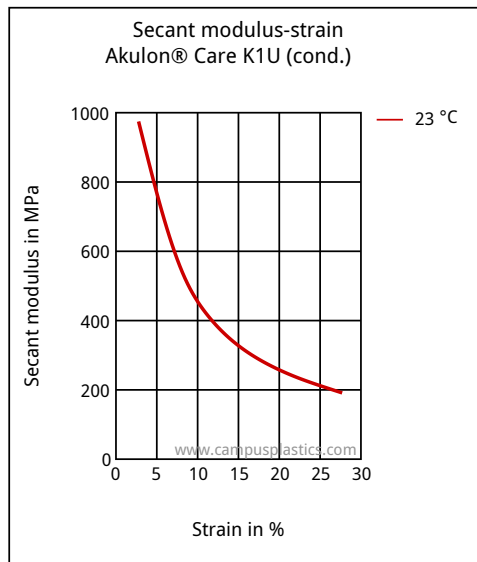
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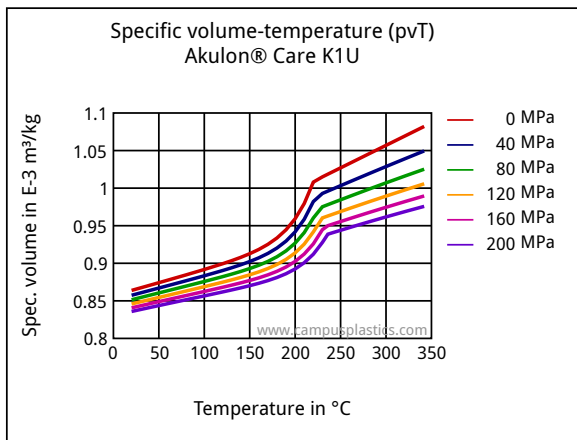
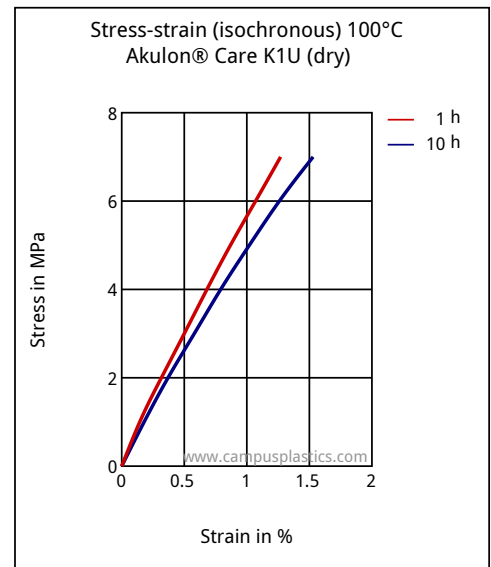
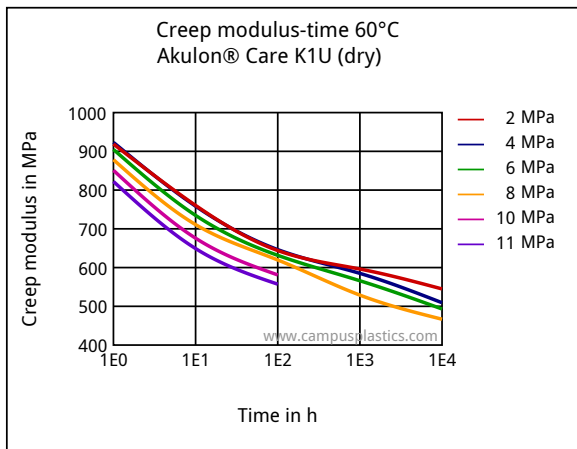
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Thickness tested (1.5)	1.5 / *	mm
Yellow Card available	Yes / *	-
Burning behavior at thickness h	V-2 / *	class
Thickness tested (h)	3.0 / *	mm
Yellow Card available	Yes / *	-
Oxygen index	26 / *	%
Electrical properties	dry / cond	Unit
Relative permittivity, 100Hz	3.2 / 14	-
Relative permittivity, 1MHz	3 / 4.5	-
Dissipation factor, 100Hz	50 / 3000	E-4
Dissipation factor, 1MHz	150 / 1200	E-4
Volume resistivity	1E13 / 1E10	Ohm*m
Surface resistivity	* / 1E14	Ohm
Electric strength	25 / 20	kV/mm
Comparative tracking index	* / 600	-
Other properties	dry / cond	Unit
Water absorption	9 / *	%
Humidity absorption	2.5 / *	%
Density	1130 / -	kg/m ³
Rheological calculation properties	Value	Unit
Density of melt	960	kg/m ³
Thermal conductivity of melt	0.23	W/(m K)
Spec. heat capacity melt	2680	J/(kg K)
Eff. thermal diffusivity	8.82E-8	m ² /s

Diagrams







Characteristics

Processing

Injection Molding

Delivery form

Pellets

Regional Availability

North America, Europe, Asia Pacific

Other text information

Injection molding

Injection Molding Recommendations

Steel recommendations for molds screws and barrels

Trouble shooting guideline for injection molding

Chemical Media Resistance

Alcohols

Methanol (23°C)

Ethanol (23°C)

Hydrocarbons

Toluene (23°C)

Ketones

Acetone (23°C)

Ethers

Diethyl ether (23°C)

Other

Ethyl Acetate (23°C)

Water (23°C)

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