LANXESS
Energizing Chemistry

ALBIS

Durethan B31SK 000000

PA6 LANXESS Deutschland GmbH

PA 6, non-reinforced, injection molding

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	110 / *	cm³/10min	ISO 1133
Temperature	260 / *	°C	-
Load	5 / *	kg	-

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	3500 / 1100	MPa	ISO 527
Yield stress	85 / 50	MPa	ISO 527
Yield strain	4 / 20	%	ISO 527
Nominal strain at break	10 / >50	%	ISO 527
Tensile creep modulus, 1h	* / 900	MPa	ISO 899-1
Tensile creep modulus, 1000h	* / 700	MPa	ISO 899-1
Charpy impact strength (+23°C)	no break / no break	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	no break / no break	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	- / 25	kJ/m²	ISO 179/1eA
Puncture - maximum force, +23°C	6100 / -	N	ISO 6603-2
Puncture - maximum force, -30°C	6800 / -	N	ISO 6603-2
Puncture energy, +23°C	65 / -	J	ISO 6603-2
Puncture energy, -30°C	70 / -	J	ISO 6603-2

Thermal Properties	dry / cond	Unit	Test Standard
ISO Data			
Melting temperature (10°C/min)	222 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	60 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	170 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	70 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	90 / *	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	V-2 / *	class	UL 94
Thickness tested	1.5 / *	mm	-
Burning behav. at thickness h	V-2 / *	class	UL 94
Thickness tested	0.4 / *	mm	-
Oxygen index	25 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4 / 13	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.5 / 4	-	IEC 62631-2-1
Dissipation factor, 100Hz	60 / 1900	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	200 / 1000	E-4	IEC 62631-2-1
Volume resistivity	1E13 / 1E10	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 1E14	Ohm	IEC 62631-3-2
Electric strength	30 / 30	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	IEC 60112

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	10 / *	%	Sim. to ISO 62
Humidity absorption	3 / *	%	Sim. to ISO 62
Density	1140 / -	kg/m³	ISO 1183

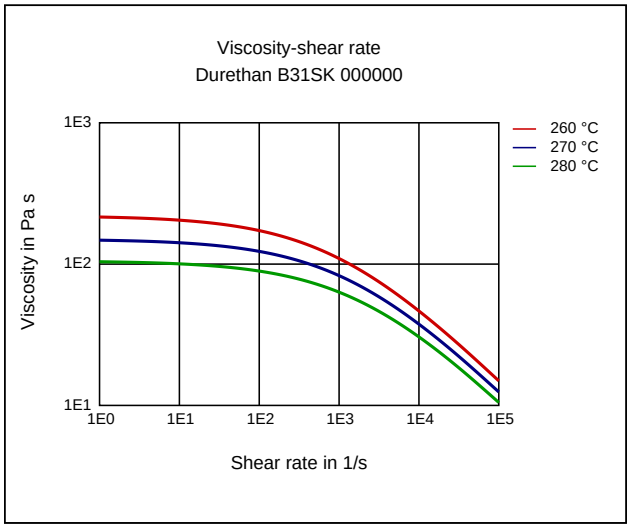
Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	138 / *	cm³/g	ISO 307, 1157, 1628

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	270	°C	ISO 294

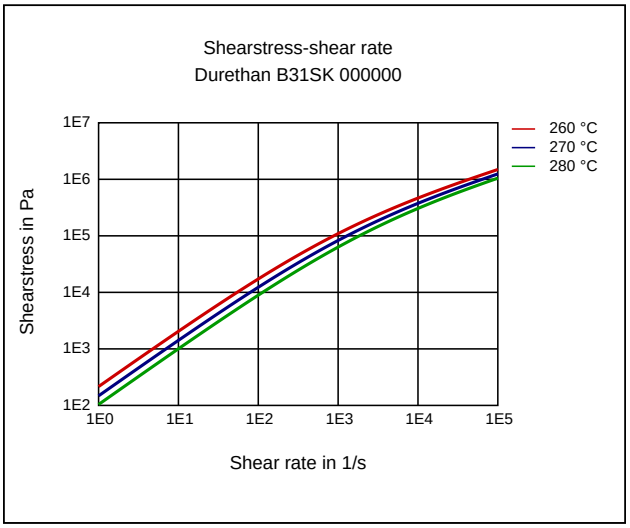
Injection Molding, mold temperature	80	°C	ISO 294

Diagrams

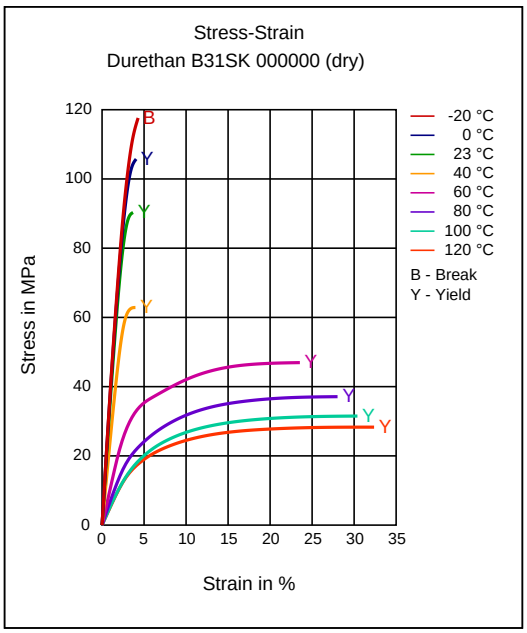
Viscosity-shear rate



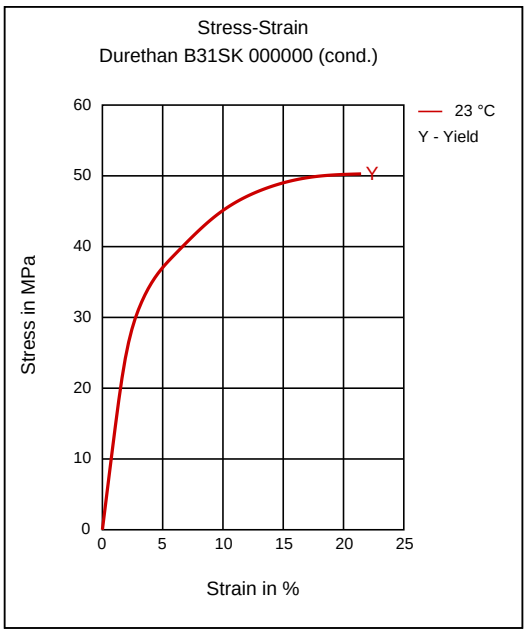
Shearstress-shear rate



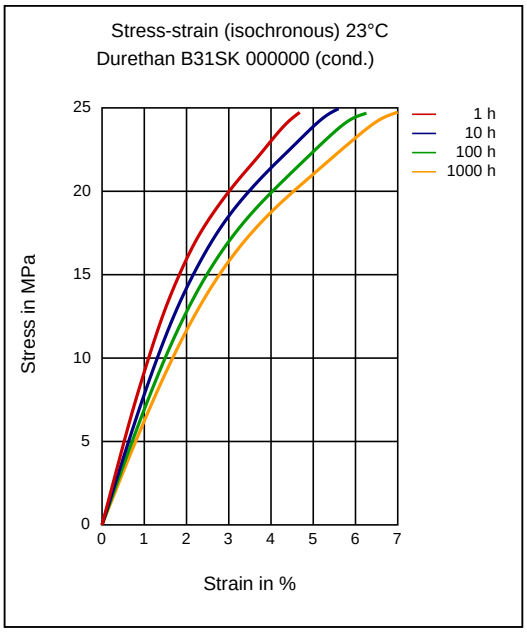
Stress-strain



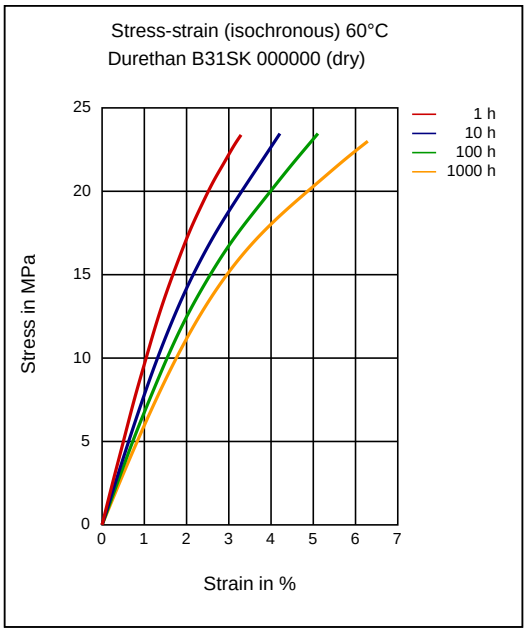
Stress-strain



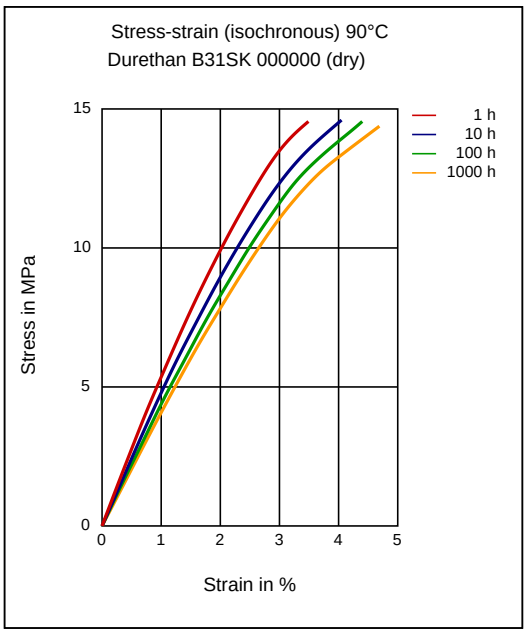
Stress-strain (isochronous) 23 °C



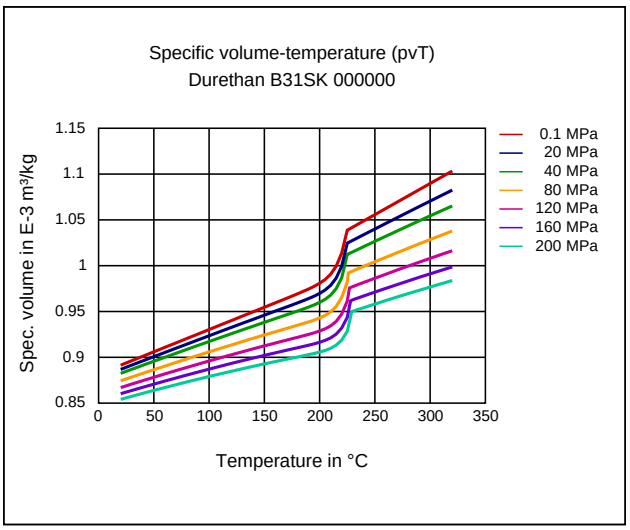
Stress-strain (isochronous) 60 °C



Stress-strain (isochronous) 90 °C



Specific volume-temperature (pvT)



Characteristics

Processing
Injection Molding

Delivery form
Pellets

Injection Molding
PREPROCESSING
Residual moisture content: 0.03-0.12 %
Drying temperature dry air dryer: 80 °C

Drying time dry air dryer: 2-6 h

PROCESSING
Melt temperature (Tmin - Tmax): 260-280 °C

Mold temperature: 80-100 °C

Disclaimer