

Durethan® BKV 330 H2.0

PA6-GF30

LANXESS Deutschland GmbH

PA 6, 30 % glass fibres, injection moulding, improved weldability

ISO Shortname: ISO 1874-PA 6, GHR, 14-100, GF30

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7 / *	%	ISO 294-4, 2577

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	9800 / 5600	MPa	ISO 527
Stress at break	170 / 100	MPa	ISO 527
Strain at break	3 / 8	%	ISO 527
Charpy impact strength (+23°C)	80 / 95	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	65 / 65	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	12 / 20	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	10 / 10	kJ/m ²	ISO 179/1eA
Puncture - maximum force, +23°C	883 / -	N	ISO 6603-2
Puncture - maximum force, -30°C	791 / -	N	ISO 6603-2
Puncture energy, +23°C	3.4 / -	J	ISO 6603-2
Puncture energy, -30°C	2.8 / -	J	ISO 6603-2
Flexural modulus (23°C)	8300 / 4900	MPa	ISO 178
Izod Impact notched, 23°C	12 / 10	kJ/m ²	ISO 180/1A
Izod Impact notched	10 / -	kJ/m ²	ISO 180/1A
Temperature	-30	°C	-
Izod Impact unnotched, 23°C	75 / 85	kJ/m ²	ISO 180/1U
Ball indentation hardness	195 / 95	MPa	ISO 2039-1

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)	200 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	215 / *	°C	ISO 75-1/-2
Temp. of deflection under load, 8.00 MPa	90 / *	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	200 / *	°C	ISO 306
Coeff. of linear therm. expansion, parallel	20 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	100 / *	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	HB / *	class	UL 94
Thickness tested	1.6 / *	mm	-
Burning behav. at thickness h	HB / *	class	UL 94
Thickness tested	3.2 / *	mm	-
Oxygen index	23 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4.5 / 17	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.9 / 4.8	-	IEC 62631-2-1
Dissipation factor, 100Hz	190 / 3900	E-4	IEC 62631-2-1
Volume resistivity	1E13 / >1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	*/ 3.6E13	Ohm	IEC 62631-3-2
Electric strength	32 / -	kV/mm	IEC 60243-1
Comparative tracking index	450 / -	-	IEC 60112

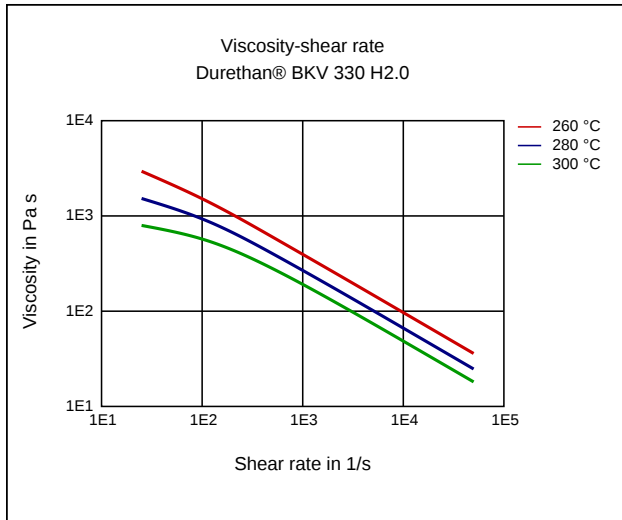
Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	6.5 / *	%	Sim. to ISO 62
Humidity absorption	2.3 / *	%	Sim. to ISO 62
Density	1360 / -	kg/m ³	ISO 1183
Bulk density	700	kg/m ³	-

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	1160	kg/m ³	-
Thermal conductivity of melt	0.223	W/(m K)	-
Spec. heat capacity of melt	2140	J/(kg K)	-
Eff. thermal diffusivity	9.03E-8	m ² /s	-
Ejection temperature	140	°C	-

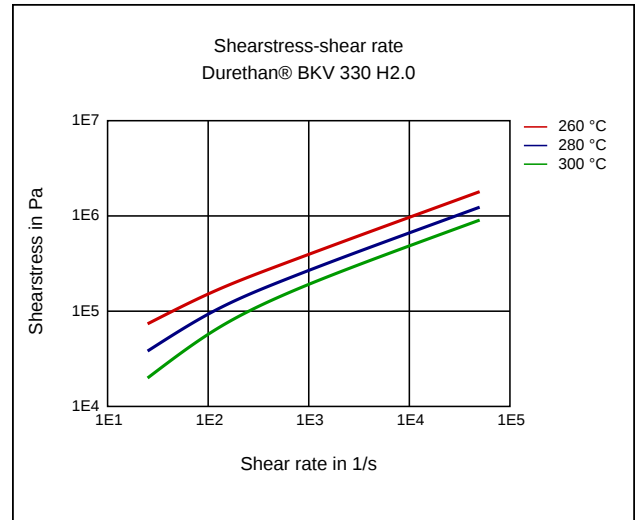
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	280	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

Diagrams

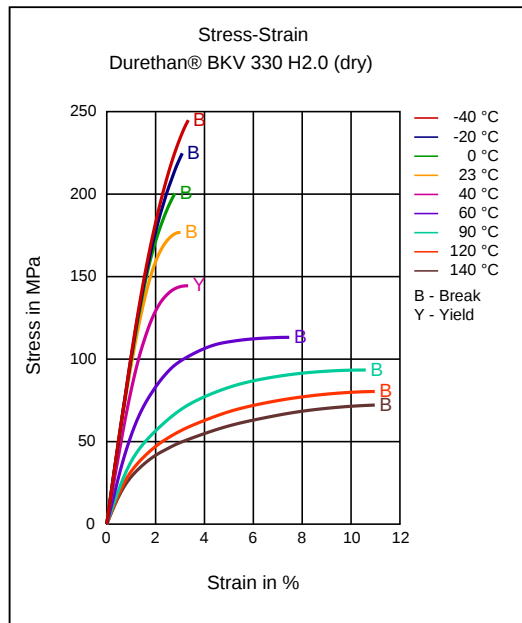
Viscosity-shear rate



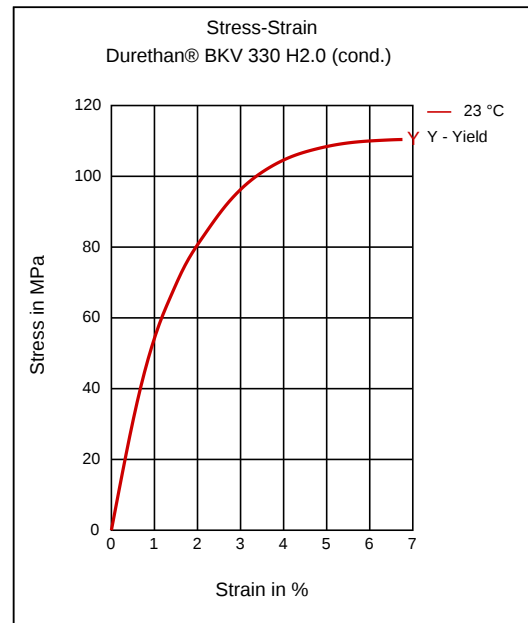
Shearstress-shear rate



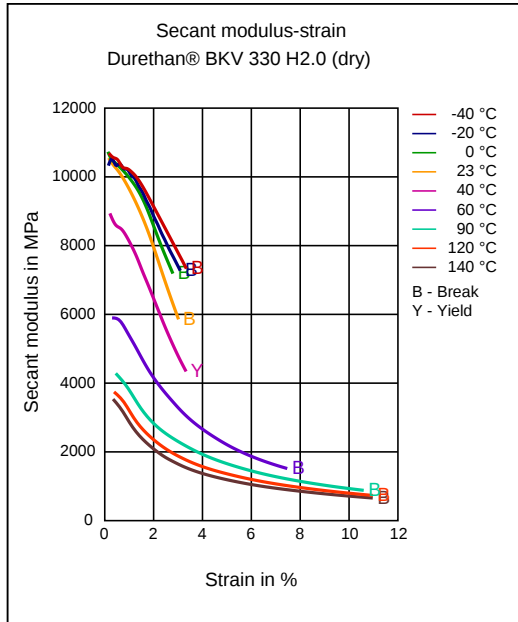
Stress-strain



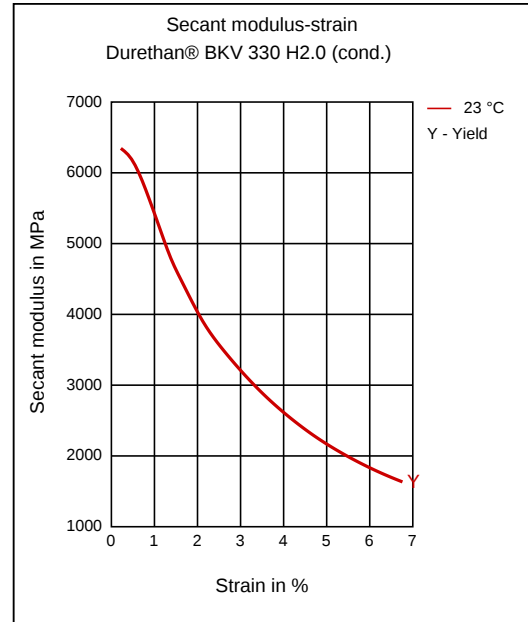
Stress-strain



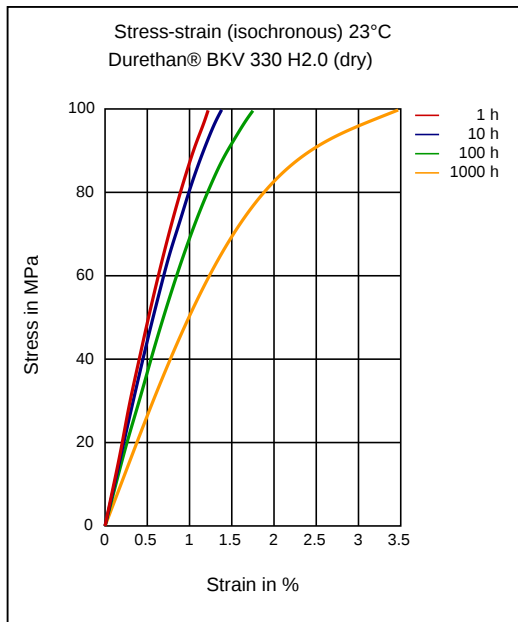
Secant modulus-strain



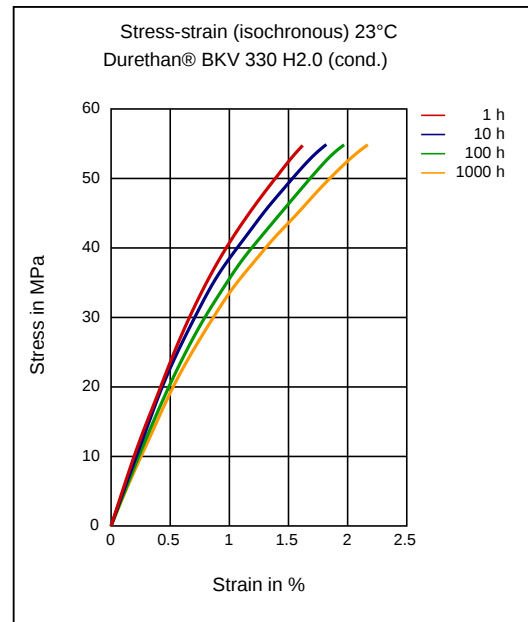
Secant modulus-strain



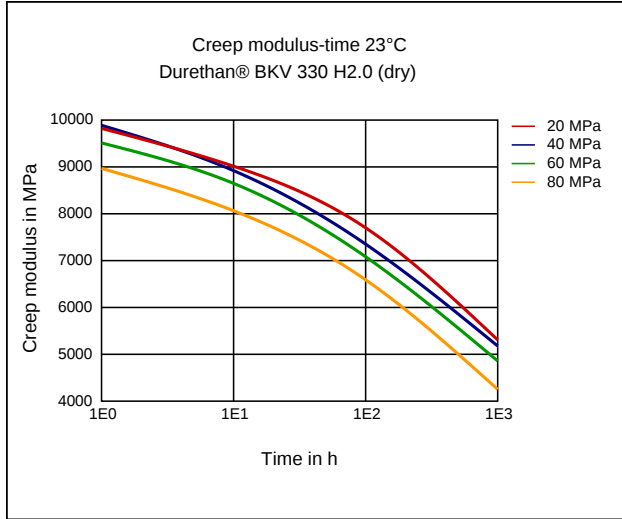
Stress-strain (isochronous) 23 °C



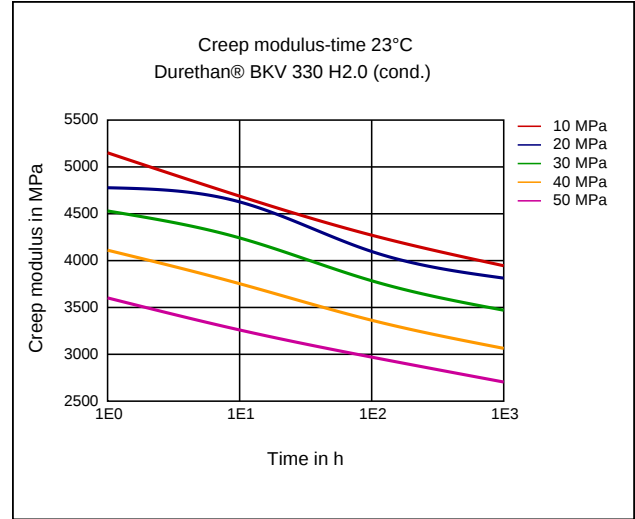
Stress-strain (isochronous) 23 °C



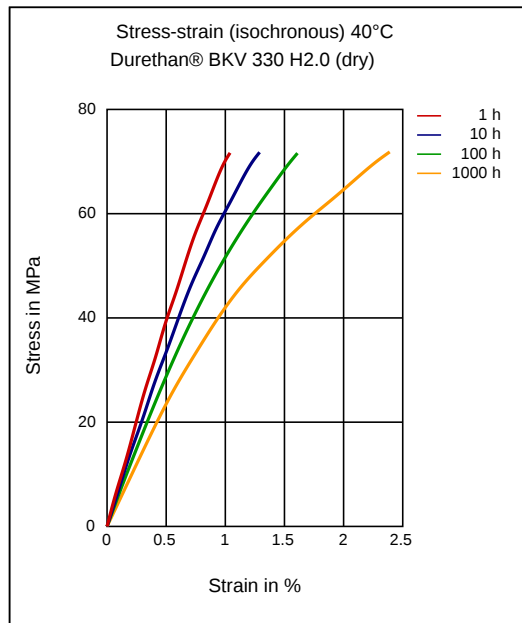
Creep modulus-time 23 °C



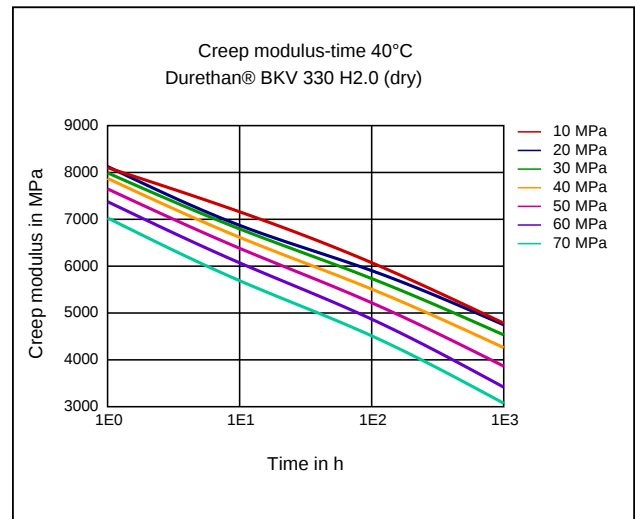
Creep modulus-time 23 °C



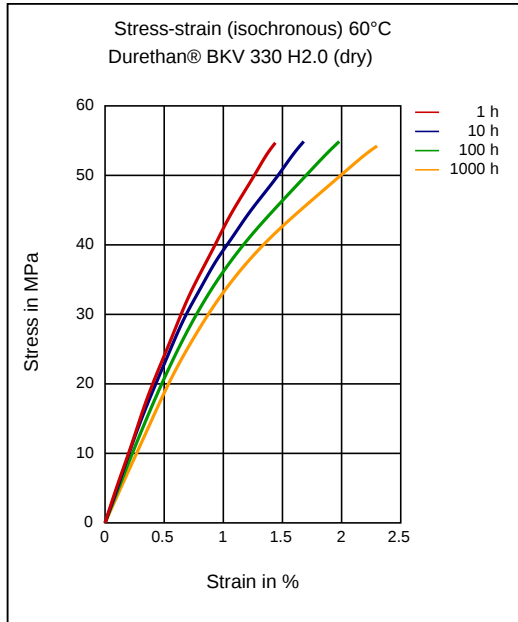
Stress-strain (isochronous) 40 °C



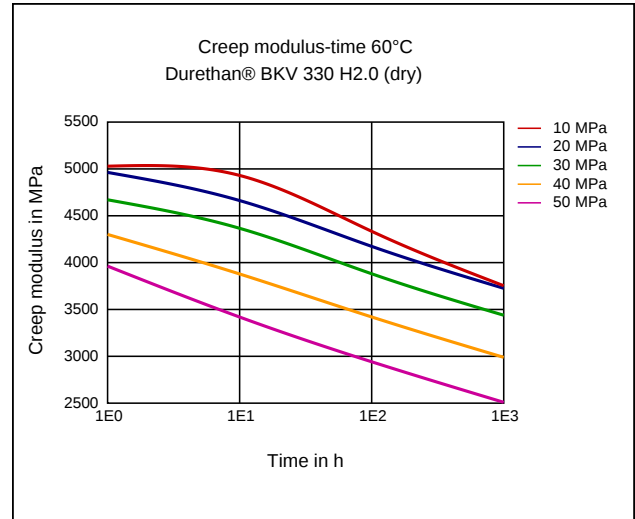
Creep modulus-time 40 °C



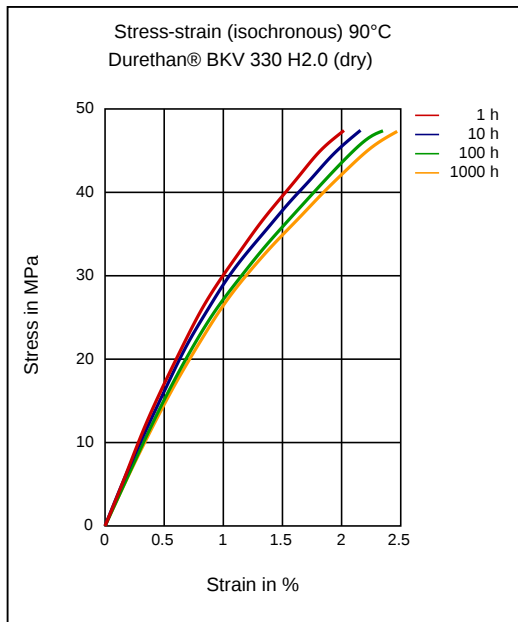
Stress-strain (isochronous) 60 °C



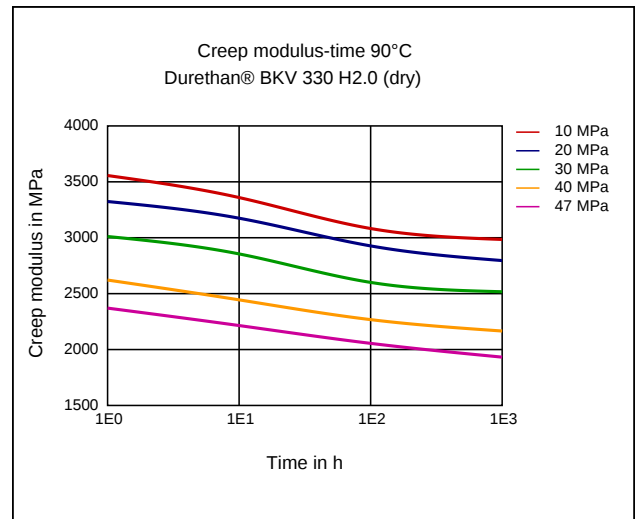
Creep modulus-time 60 °C



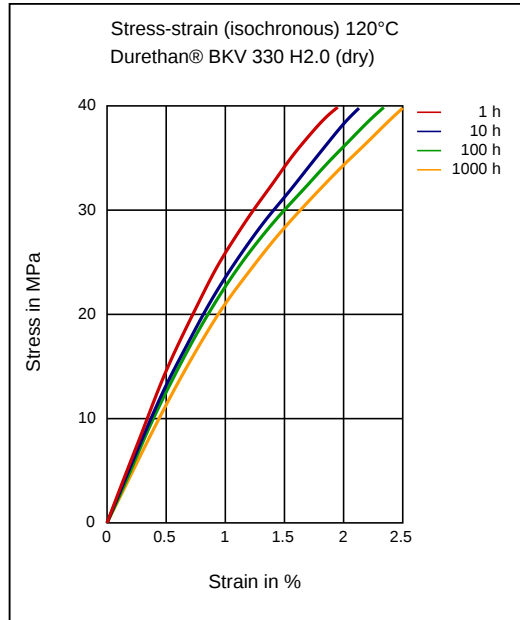
Stress-strain (isochronous) 90 °C



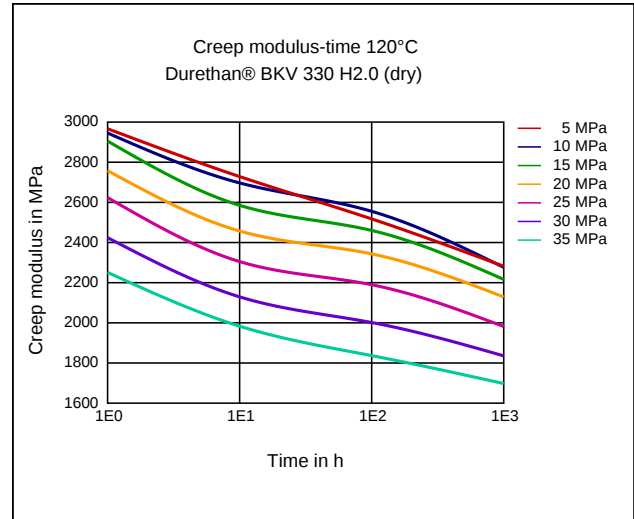
Creep modulus-time 90 °C



Stress-strain (isochronous) 120 °C



Creep modulus-time 120 °C



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Additives

Release agent

Features

Weldable

Injection Molding

PREPROCESSING

Max. Water content: 0.1 %

Drying temperature: 80 °C

Drying time:

Dry air dryer 2-20 h (will depend on the initial moisture content)

PROCESSING

Melt temperature: 270 - 290 °C

Mold temperature: 80 - 120 °C

Disclaimer

These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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