

Durethan® AKV30HRH2.0 901510
PA66-GF30

Envalior

Injection Molding, 30% Glass Reinforced, Heat Stabilized, Hydrolysis resistant

ISO 1043 PA66-GF30

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Molding shrinkage, parallel	0.4 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9 / *	%	ISO 294-4, 2577
Mechanical Properties			
ISO Data			
Tensile Modulus	9700 / 6100	MPa	ISO 527
Stress at Break	180 / 120	MPa	ISO 527
Strain at Break	3.5 / 8	%	ISO 527
Impact Strength (Charpy), +23°C	75 / 85	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	65 / 75	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	10 / 20	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	- / 10	kJ/m ²	ISO 179/1eA
Puncture - maximum force, +23°C	896 / 1070	N	ISO 6603-2
Puncture - maximum force, -30°C	776 / -	N	ISO 6603-2
Puncture energy, +23°C	3.1 / 4.7	J	ISO 6603-2
Puncture energy, -30°C	1.9 / -	J	ISO 6603-2
Flexural Modulus (23°C)	8600 / 5400	MPa	ISO 178
Notched Impact Strength (Izod)	10 / 10	kJ/m ²	ISO 180/1A
Temperature	-30	°C	-
Impact Strength (Izod), 23°C	70 / -	kJ/m ²	ISO 180/1U
Ball Indentation Hardness	205 / 105	MPa	ISO 2039-1
ASTM Data			
Tensile Modulus	9432 / 5929	MPa	ASTM D 638
Tensile Strength at Break	175 / 117	MPa	ASTM D 638
Elongation at Break	4 / 8	%	ASTM D 638
Flexural Modulus	8618 / 5412	MPa	ASTM D 790
Flexural Strength	281 / 181	MPa	ASTM D 790
Thermal Properties			
ISO Data			
Melting Temperature (10°C/min)	262 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	245 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	250 / *	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	30 / *	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.	HB / *	class	UL 94
Thickness tested	1.5 / *	mm	-
Oxygen index	26 / *	%	ISO 4589-1/-2
Electrical Properties			
ISO Data			
Relative permittivity, 100Hz	4 / 12	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.6 / 4.5	-	IEC 62631-2-1
Dissipation Factor, 100Hz	80 / 3000	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	160 / 900	E-4	IEC 62631-2-1
Volume Resistivity	1E13 / 1E9	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric Strength	35 / 30	kV/mm	IEC 60243-1
Comparative tracking index	450 / -	-	IEC 60112
Other Properties			
ISO Data			
Water Absorption	5.5 / *	%	Sim. to ISO 62
Humidity absorption	2 / *	%	Sim. to ISO 62
Density	1360 / -	kg/m ³	ISO 1183
Bulk density	700	kg/m ³	-

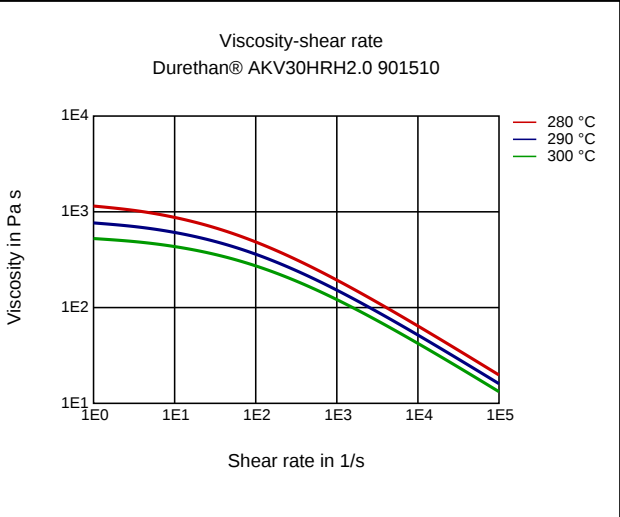
Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	153 / *	cm³/g	ISO 307, 1157, 1628

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	290	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

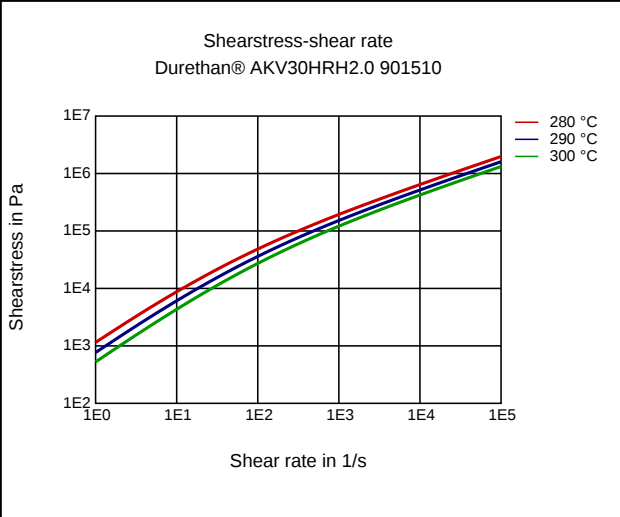
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 6	h	-
Processing humidity	≤0.12	%	-
Melt temperature	280 - 300	°C	-
Mold temperature	80 - 120	°C	-

Diagrams

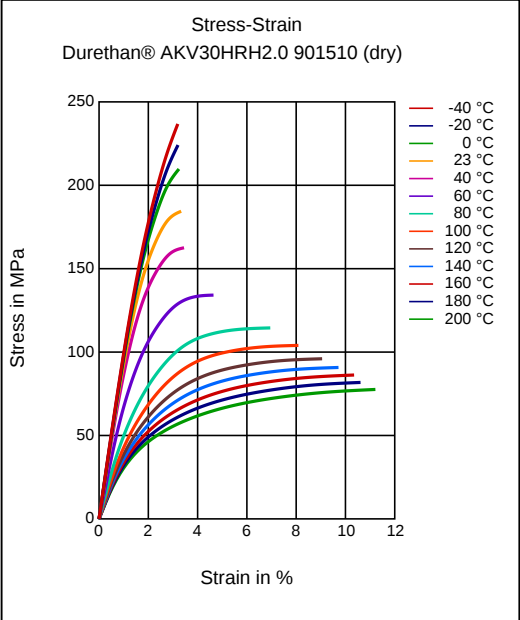
Viscosity-shear rate



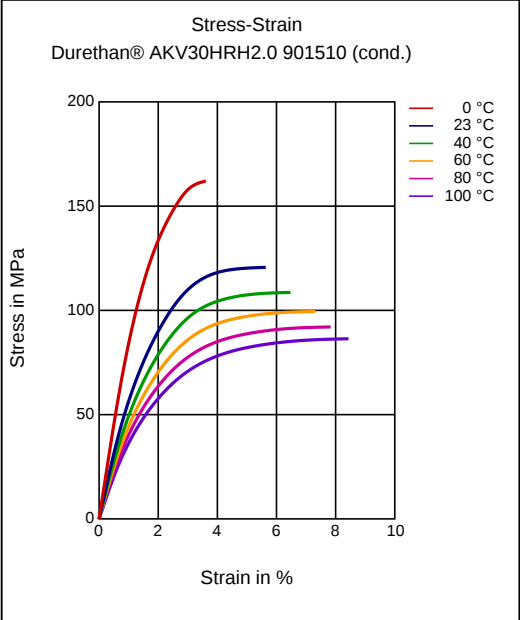
Shearstress-shear rate



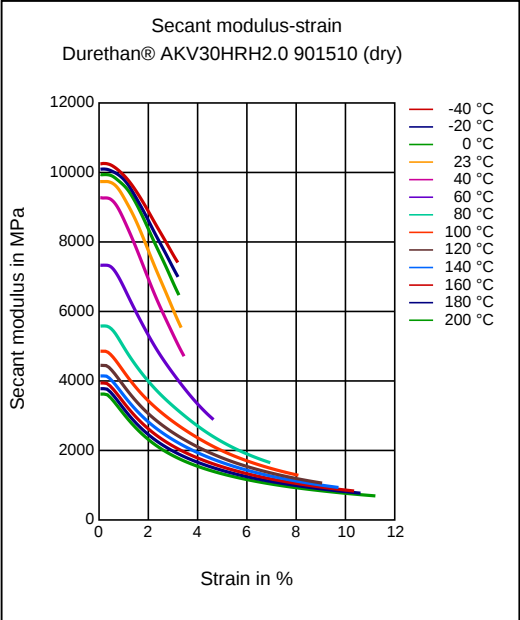
Stress-strain



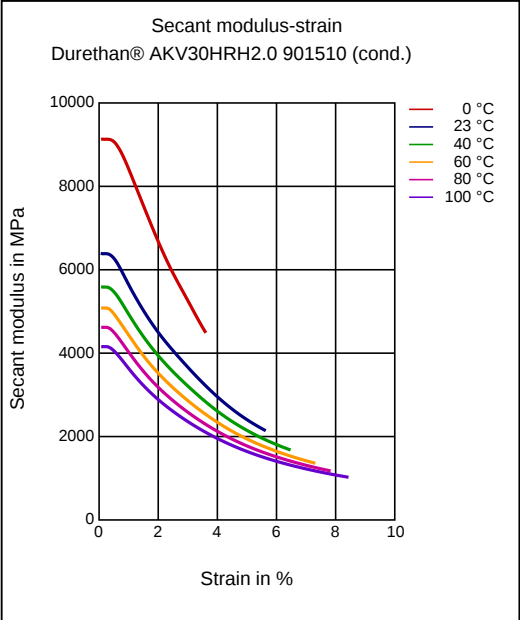
Stress-strain



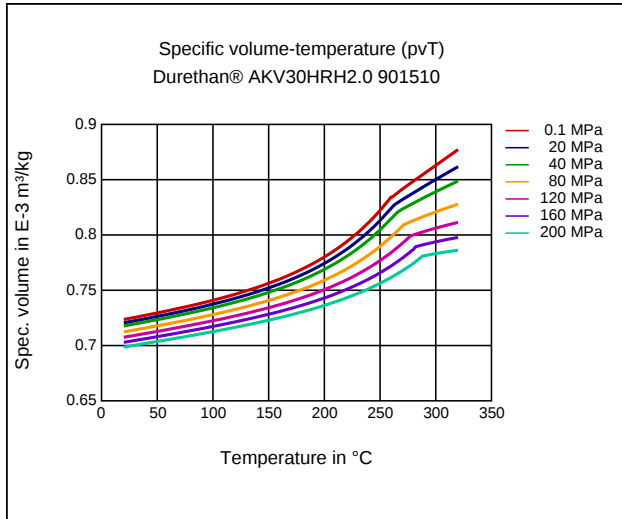
Secant modulus-strain



Secant modulus-strain



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Special Characteristics

Heat aging stabilized

Chemical Resistance

Hydrolysis

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): 280 - 300 °C

Mold temperature: 80 - 120 °C

Disclaimer

Liability Exclusion

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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