

Durethan BKV35H2.0LT 904040

PA6, 35% glass fibers, injection molding, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6,GF35,GHR,S14-110

CTensile Stress at break 5 mm/min MPa ISO 527-1,-2 190 f. CTensile Strain at break 5 mm/min % ISO 527-1,-2 3 3 CCharpy impact strength 23 °C kJ/m² ISO 179-1eU 85 5 CCharpy impact strength -30 °C kJ/m² ISO 179-1eA 15 2 CCharpy notched impact strength -30 °C kJ/m² ISO 179-1eA 10 4 Izod impact strength -30 °C kJ/m² ISO 180-1U 80 6 Izod impact strength -30 °C kJ/m² ISO 180-1U 70 6 Izod notched impact strength -30 °C kJ/m² ISO 180-1U 70 6 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 15 2 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 1 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 1 Izod notched impact strength -30 °C kJ/m²	Property	Test Condition	Unit	Standard	guide value d.a.m.	cond.
CTensile Stress at break 5 mm/min MPa ISO 527-1,-2 190 f. CTensile Strain at break 5 mm/min % ISO 527-1,-2 3 3 CCharpy impact strength 23 °C kJ/m² ISO 179-1eU 85 5 CCharpy impact strength -30 °C kJ/m² ISO 179-1eA 15 2 CCharpy notched impact strength -30 °C kJ/m² ISO 179-1eA 10 4 Izod impact strength -30 °C kJ/m² ISO 180-1U 80 6 Izod impact strength -30 °C kJ/m² ISO 180-1U 70 6 Izod notched impact strength -30 °C kJ/m² ISO 180-1U 70 6 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 15 2 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 1 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 1 Izod notched impact strength -30 °C kJ/m²	Mechanical properties (23 °C/50 % r. h.)					
CTensile Strain at break 5 mm/min % ISO 527-1,-2 3 CCharpy impact strength 23 °C kJ/m² ISO 179-1eU 85 9 CCharpy impact strength -30 °C kJ/m² ISO 179-1eU 75 7 CCharpy notched impact strength 23 °C kJ/m² ISO 179-1eA 15 2 CCharpy notched impact strength -30 °C kJ/m² ISO 179-1eA 10 1 Izod impact strength -30 °C kJ/m² ISO 180-1U 80 9 Izod impact strength -30 °C kJ/m² ISO 180-1U 70 6 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 15 2 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 1 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 1 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 1 Izod notched impact strength -30 °C kJ/m² ISO	C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	11000	6800
CCharpy impact strength 23 °C kJ/m² ISO 179-1eU 85 S CCharpy impact strength -30 °C kJ/m² ISO 179-1eU 75 7 CCharpy notched impact strength 23 °C kJ/m² ISO 179-1eA 15 2 CCharpy notched impact strength -30 °C kJ/m² ISO 179-1eA 10 1 Izod impact strength 23 °C kJ/m² ISO 180-1U 80 6 Izod impact strength -30 °C kJ/m² ISO 180-1U 70 6 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 15 2 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 15 2 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 1 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 1 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 1 Izod notched impact strength -30 °C kJ/	C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	190	120
Charpy impact strength -30 °C kJ/m² ISO 179-1eU 75 75 75 CC harpy notched impact strength 23 °C kJ/m² ISO 179-1eA 15 25 CC harpy notched impact strength -30 °C kJ/m² ISO 179-1eA 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3	5
C Charpy notched impact strength 23 °C kJ/m² ISO 179-1eA 15 2 C Charpy notched impact strength -30 °C kJ/m² ISO 179-1eA 10 1 Izod impact strength 23 °C kJ/m² ISO 180-1U 80 9 Izod impact strength -30 °C kJ/m² ISO 180-1U 70 6 Izod impact strength -30 °C kJ/m² ISO 180-1U 70 6 Izod notched impact strength 23 °C kJ/m² ISO 180-1A 15 2 Izod notched impact strength 23 °C kJ/m² ISO 180-1A 15 2 Izod notched impact strength 20 °C kJ/m² ISO 180-1A 15 2 Izod notched impact strength 90 °C kJ/m² ISO 180-1A 10 10 10 10 10 10 10 10 10 10 10 10 10	C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	85	95
C Charpy notched impact strength	C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	75	75
Izod impact strength	C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	15	22
Izod impact strength	C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	10	10
Izod notched impact strength 23 °C kJ/m² ISO 180-1A 15 2 Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 1 1 1 1 1 1 1 1	Izod impact strength	23 °C	kJ/m²	ISO 180-1U	80	90
Izod notched impact strength -30 °C kJ/m² ISO 180-1A 10 10 10 10 10 10 10	Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	70	65
Flexural modulus	Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	15	22
Flexural strength	Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	10	10
Flexural strain at flexural strength	Flexural modulus	2 mm/min	MPa	ISO 178-A	10700	5900
Flexural stress at 3.5 % strain 2 mm/min MPa ISO 178-A 285 1 Thermal properties C Melting temperature 10 °C/min °C ISO 11357-1,-3 220 C Temperature of deflection under load 1.80 MPa °C ISO 75-1,-2 205 C Temperature of deflection under load 0.45 MPa °C ISO 306 >200 Vicat softening temperature 50 N; 120 °C/h °C ISO 306 >200 C Coefficient of linear thermal expansion, parallel 23 to 55 °C 10°4/K ISO 11359-1,-2 0.2 C Coefficient of linear thermal expansion, transverse 23 to 55 °C 10°4/K ISO 11359-1,-2 0.8 Other properties (23 °C) C Water absorption (Saturation value) Water at 23 °C % ISO 62 6.5 C Water absorption (Equilibrium value) 23 °C; 50 % RH % ISO 62 1.9 C Density kg/m³ ISO 1183 1410 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280 </td <td>Flexural strength</td> <td>2 mm/min</td> <td>MPa</td> <td>ISO 178-A</td> <td>290</td> <td>180</td>	Flexural strength	2 mm/min	MPa	ISO 178-A	290	180
Thermal properties C Melting temperature 10 °C/min °C ISO 11357-1,-3 220 C Temperature of deflection under load 1.80 MPa °C ISO 75-1,-2 205 C Temperature of deflection under load 0.45 MPa °C ISO 75-1,-2 215 Vicat softening temperature 50 N; 120 °C/h °C ISO 306 >200 C Coefficient of linear thermal expansion, parallel 23 to 55 °C 10 ⁴/K ISO 11359-1,-2 0.2 C Coefficient of linear thermal expansion, transverse 23 to 55 °C 10 ⁴/K ISO 11359-1,-2 0.8 Other properties (23 °C) C Water absorption (Saturation value) Water at 23 °C % ISO 62 6.5 C Water absorption (Equilibrium value) 23 °C; 50 % RH % ISO 62 1.9 C Density kg/m³ ISO 1183 1410 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280	Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	4	5
C Melting temperature 10 °C/min °C ISO 11357-1,-3 220 C Temperature of deflection under load 1.80 MPa °C ISO 75-1,-2 205 C Temperature of deflection under load 0.45 MPa °C ISO 75-1,-2 215 Vicat softening temperature 50 N; 120 °C/h °C ISO 306 >200 C Coefficient of linear thermal expansion, parallel 23 to 55 °C 10°/K ISO 11359-1,-2 0.2 C Coefficient of linear thermal expansion, transverse 23 to 55 °C 10°/K ISO 11359-1,-2 0.8 Other properties (23 °C) C Water absorption (Saturation value) Water at 23 °C % ISO 62 6.5 C Water absorption (Equilibrium value) 23 °C; 50 % RH % ISO 62 1.9 C Density kg/m³ ISO 1183 1410 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280	Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	285	160
C Temperature of deflection under load 1.80 MPa °C ISO 75-1,-2 205 C Temperature of deflection under load 0.45 MPa °C ISO 75-1,-2 215 Vicat softening temperature 50 N; 120 °C/h °C ISO 306 >200 C Coefficient of linear thermal expansion, parallel 23 to 55 °C 10°/K ISO 11359-1,-2 0.2 C Coefficient of linear thermal expansion, transverse 23 to 55 °C 10°/K ISO 11359-1,-2 0.8 Other properties (23 °C) C Water absorption (Saturation value) Water at 23 °C Water absorption (Equilibrium value) 23 °C; 50 % RH % ISO 62 1.9 C Density Processing conditions for test specimens C ISO 294 280	Thermal properties					
C Temperature of deflection under load 0.45 MPa °C ISO 75-1,-2 215 Vicat softening temperature 50 N; 120 °C/h °C ISO 306 >200 C Coefficient of linear thermal expansion, parallel 23 to 55 °C 10⁴/K ISO 11359-1,-2 0.2 C Coefficient of linear thermal expansion, transverse 23 to 55 °C 10⁴/K ISO 11359-1,-2 0.8 Other properties (23 °C) C Water absorption (Saturation value) Water at 23 °C Vater absorption (Equilibrium value) 23 °C; 50 % RH Kg/m³ ISO 1183 1410 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280	C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	220	
Vicat softening temperature 50 N; 120 °C/h °C ISO 306 >200 C Coefficient of linear thermal expansion, parallel 23 to 55 °C 10 °/K ISO 11359-1,-2 0.2 C Coefficient of linear thermal expansion, transverse 23 to 55 °C 10 °/K ISO 11359-1,-2 0.8 Other properties (23 °C) C Water absorption (Saturation value) Water at 23 °C % ISO 62 6.5 C Water absorption (Equilibrium value) 23 °C; 50 % RH % ISO 62 1.9 C Density kg/m³ ISO 1183 1410 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280	C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	205	
C Coefficient of linear thermal expansion, parallel 23 to 55 °C 10⁴/K ISO 11359-1,-2 0.2 C Coefficient of linear thermal expansion, transverse 23 to 55 °C 10⁴/K ISO 11359-1,-2 0.8 Other properties (23 °C) C Water absorption (Saturation value) Water at 23 °C % ISO 62 6.5 C Water absorption (Equilibrium value) 23 °C; 50 % RH % ISO 62 1.9 C Density kg/m³ ISO 1183 1410 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280	C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	215	
C Coefficient of linear thermal expansion, transverse 23 to 55 °C 10 ⁴ /K ISO 11359-1,-2 0.8 Other properties (23 °C) C Water absorption (Saturation value) Water at 23 °C % ISO 62 6.5 C Water absorption (Equilibrium value) 23 °C; 50 % RH % ISO 62 1.9 C Density kg/m³ ISO 1183 1410 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280	Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	>200	
Other properties (23 °C) C Water absorption (Saturation value) Water at 23 °C % ISO 62 6.5 C Water absorption (Equilibrium value) 23 °C; 50 % RH % ISO 62 1.9 C Density kg/m³ ISO 1183 1410 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280	C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.2	
C Water absorption (Saturation value) Water at 23 °C % ISO 62 6.5 C Water absorption (Equilibrium value) 23 °C; 50 % RH % ISO 62 1.9 C Density kg/m³ ISO 1183 1410 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280	C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.8	,
C Water absorption (Equilibrium value) C Density Rg/m³ ISO 62 1.9 Rg/m³ ISO 1183 1410 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280	Other properties (23 °C)	,	,	,		
C Density kg/m³ ISO 1183 1410 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280	C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	6.5	
Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280	C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.9	,
C Injection molding-Melt temperature °C ISO 294 280	C Density		kg/m³	ISO 1183	1410	
	Processing conditions for test specimens					
	C Injection molding-Melt temperature		°C	ISO 294	280	
C Injection molding-Mold temperature °C ISO 294 80	C Injection molding-Mold temperature		°C	ISO 294	80	1
Processing recommendations	Processing recommendations					
Drying temperature dry air dryer °C - 80	Drying temperature dry air dryer		°C	-	80	
Drying time dry air dryer h - 2-6	Drying time dry air dryer	,	h	-	2-6	
Residual moisture content % Acc. to Karl 0.03-0.12 Fischer	Residual moisture content	,	%		0.03-0.12	
Melt temperature (Tmin - Tmax) °C - 270-290	Melt temperature (Tmin - Tmax)		°C	-	270-290	
Mold temperature °C - 80-120	Mold temperature		°C	-	80-120	

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.





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Test values

Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mould/die, the processing conditions and the coloring.

Processing note

Under the recommended processing conditions small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded. Since excessively high temperatures are generally the result of operator error or defects in the heating system, special care and controls are essential in these areas.

Conditioning

Conditioning in accordance with ISO 1110 (70 °C; 62 % r.h.)

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