

Durethan BKV115H3.0 000000 DUS008

PA 6, 15 % glass fibers, injection molding, improved impact strength, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6-I,GF15,GHR,S14-060

Rheological properties	Property	Test Condition	Unit	Standard	guide value _{d.a.m.}	cond.
C Molding shrinkage, transverse	Rheological properties					
**C	C Molding shrinkage, parallel	*	%	ISO 294-4	0.45	
Post-shrinkage, transverse	C Molding shrinkage, transverse	•	%	ISO 294-4	0.55	
Mechanical properties (23 °C/50 % r. h.) CTensile modulus	Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.10	
CTensile modulus 1 mm/min MPa ISO 527-1,-2 5600 2800 CTensile Stress at break 5 mm/min MPa ISO 527-1,-2 115 65 CTensile Strein at break 5 mm/min % ISO 527-1,-2 4 12 CCharpy impact strength 23 °C kJ/m² ISO 179-1eU 65 80 CCharpy impact strength -30 °C kJ/m² ISO 179-1eU 50 -50 CCharpy notched impact strength -30 °C kJ/m² ISO 179-1eA <10	Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.15	
C Tensile Stress at break 5 mm/min MPa ISO 527-1,-2 115 65 C Tensile Strain at break 5 mm/min % ISO 527-1,-2 4 12 C Charpy impact strength 23 °C kJ/m² ISO 179-1eU 65 80 C Charpy impact strength -30 °C kJ/m² ISO 179-1eU 50 15 C Charpy notched impact strength -30 °C kJ/m² ISO 179-1eA <10	Mechanical properties (23 °C/50 % r. h.)					
CTensile Strain at break 5 mm/min % ISO 527-1,-2 4 12 C Charpy impact strength 23 °C kJ/m² ISO 179-1eU 65 80 C Charpy impact strength -30 °C kJ/m² ISO 179-1eU 50 C Charpy notched impact strength 23 °C kJ/m² ISO 179-1eA <10	C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	5600	2800
C Charpy impact strength 23 °C kJ/m² ISO 179-1eU 65 80 C Charpy impact strength -30 °C kJ/m² ISO 179-1eU 50 C Charpy notched impact strength 23 °C kJ/m² ISO 179-1eA <10	C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	115	65
C Charpy impact strength -30 °C kJ/m² ISO 179-1eU 50 C Charpy notched impact strength 23 °C kJ/m² ISO 179-1eA <10	C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	4	12
CCharpy notched impact strength 23 °C kJ/m² ISO 179-1eA <10 15 CCharpy notched impact strength -30 °C kJ/m² ISO 179-1eA <10	C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	65	80
C Charpy notched impact strength -30 °C kJ/m² ISO 179-1eA <10 <10 Flexural modulus 2 mm/min MPa ISO 178-A 4900 2500 Flexural strength 2 mm/min MPa ISO 178-A 185 95 Flexural strean at flexural strength 2 mm/min % ISO 178-A 5 8 Flexural stress at 3.5 % strain 2 mm/min MPa ISO 178-A 165 70 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,-2 195 C Temperature of deflection under load 0.45 MPa °C ISO 75-1,-2 215 Glow wire test (GWIT) 0.75 mm °C IEC 60695-2-13 725 Glow wire test (GWIT) 1.5 mm °C IEC 60695-2-13 700 Other properties (23 °C) C Density kg/m³ ISO 1183 1228	C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	50	
Flexural modulus	C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	<10	15
Flexural strength	C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	<10	<10
Flexural strain at flexural strength	Flexural modulus	2 mm/min	MPa	ISO 178-A	4900	2500
Flexural stress at 3.5 % strain 2 mm/min MPa ISO 178-A 165 70	Flexural strength	2 mm/min	MPa	ISO 178-A	185	95
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,-2 195 C Temperature of deflection under load 0.45 MPa °C ISO 75-1,-2 215 Glow wire test (GWIT) 0.75 mm °C IEC 60695-2-13 725 Glow wire test (GWIT) 1.5 mm °C IEC 60695-2-13 700 Other properties (23 °C) C Density kg/m³ ISO 1183 1228 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280 C Injection molding-Mold temperature °C ISO 294 80 Processing recommendations Drying temperature dry air dryer °C - 80 Drying time dry air dryer h - 2-6 Residual moisture content % Acc. to Karl Fischer Melt temperature (Tmin - Tmax) °C - 260-290	Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	5	8
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,-2 195 C Temperature of deflection under load 0.45 MPa °C ISO 75-1,-2 215 Glow wire test (GWIT) 0.75 mm °C IEC 60695-2-13 725 Glow wire test (GWIT) 1.5 mm °C IEC 60695-2-13 700 Other properties (23 °C) C Density kg/m³ ISO 1183 1228 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280 C Injection molding-Mold temperature °C ISO 294 80 Processing recommendations Drying temperature dry air dryer °C - 80 Drying time dry air dryer °C - 80 Processidual moisture content % Acc. to Karl Fischer 0.03-0.12 Melt temperature (Tmin - Tmax) °C - 260-290	Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	165	70
C Temperature of deflection under load 1.80 MPa °C ISO 75-1,-2 195 C Temperature of deflection under load 0.45 MPa °C ISO 75-1,-2 215 Glow wire test (GWIT) 0.75 mm °C IEC 60695-2-13 725 Glow wire test (GWIT) 1.5 mm °C IEC 60695-2-13 700 Other properties (23 °C) C Density kg/m³ ISO 1183 1228 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280 C Injection molding-Mold temperature °C ISO 294 80 Processing recommendations Drying temperature dry air dryer °C - 80 Drying time dry air dryer h - 2-6 Residual moisture content % Acc. to Karl Fischer 0.03-0.12 Melt temperature (Tmin - Tmax) °C - 260-290	Thermal properties					
CTemperature of deflection under load 0.45 MPa °C ISO 75-1,-2 215 Glow wire test (GWIT) 0.75 mm °C IEC 60695-2-13 725 Glow wire test (GWIT) 1.5 mm °C IEC 60695-2-13 700 Other properties (23 °C) C Density kg/m³ ISO 1183 1228 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280 C Injection molding-Mold temperature °C ISO 294 80 Processing recommendations Drying temperature dry air dryer °C - 80 Drying time dry air dryer h - 2-6 Residual moisture content % Acc. to Karl Fischer Melt temperature (Tmin - Tmax) °C - 260-290	C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	220	
Glow wire test (GWIT)	C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	195	
Glow wire test (GWIT) 1.5 mm °C IEC 60695-2-13 700 Other properties (23 °C) C Density kg/m³ ISO 1183 1228 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280 C Injection molding-Mold temperature °C ISO 294 80 Processing recommendations Drying temperature dry air dryer °C - 80 Drying time dry air dryer h - 2-6 Residual moisture content % Acc. to Karl Fischer 0.03-0.12 Melt temperature (Tmin - Tmax) °C - 260-290	C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	215	
Other properties (23 °C) C Density kg/m³ ISO 1183 1228 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280 C Injection molding-Mold temperature °C ISO 294 80 Processing recommendations Drying temperature dry air dryer °C - 80 Drying time dry air dryer hh - 2-6 Residual moisture content % Acc. to Karl Fischer Melt temperature (Tmin - Tmax) °C - 260-290	Glow wire test (GWIT)	0.75 mm	°C	IEC 60695-2-13	725	
C Density kg/m³ ISO 1183 1228 Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280 C Injection molding-Mold temperature °C ISO 294 80 Processing recommendations Drying temperature dry air dryer °C - 80 Drying time dry air dryer hh - 2-6 Residual moisture content % Acc. to Karl Fischer Melt temperature (Tmin - Tmax) °C - 260-290	Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	700	
Processing conditions for test specimens C Injection molding-Melt temperature °C ISO 294 280 C Injection molding-Mold temperature °C ISO 294 80 Processing recommendations Drying temperature dry air dryer °C - 80 Drying time dry air dryer h - 2-6 Residual moisture content Melt temperature (Tmin - Tmax) °C - 260-290	Other properties (23 °C)	·			,	
C Injection molding-Melt temperature °C ISO 294 280 C Injection molding-Mold temperature °C ISO 294 80 Processing recommendations Drying temperature dry air dryer °C - 80 Drying time dry air dryer h - 2-6 Residual moisture content Melt temperature (Tmin - Tmax) °C - 260-290	C Density		kg/m³	ISO 1183	1228	
C Injection molding-Mold temperature C ISO 294 80 Processing recommendations Drying temperature dry air dryer C - 80 Drying time dry air dryer Drying time dry air dryer Residual moisture content Melt temperature (Tmin - Tmax) C ISO 294 80 - 80 - 80 - 2-6 - 80 - 2-6 - 80 - 2-6 - 80 - 2-6 - 80 - 2-6 - 80 - 2-6 - 80 - 2-6 - 80 - 2-6 - 80 - 2-6 - 80 - 2-6 - 80	Processing conditions for test specimens	·			,	
Processing recommendations Drying temperature dry air dryer Drying time dry air dryer Note: The second of the s	C Injection molding-Melt temperature		°C	ISO 294	280	
Drying temperature dry air dryer Drying time dry air dryer h - 2-6 Residual moisture content % Acc. to Karl Fischer Melt temperature (Tmin - Tmax) °C - 80 - 2-6 **C Acc. to Karl Fischer 0.03-0.12 Fischer	C Injection molding-Mold temperature		°C	ISO 294	80	
Drying time dry air dryer Residual moisture content Melt temperature (Tmin - Tmax) h - 2-6 Acc. to Karl Fischer 0.03-0.12 C - 260-290	Processing recommendations					
Residual moisture content % Acc. to Karl Fischer 0.03-0.12 Melt temperature (Tmin - Tmax) °C - 260-290			°C	-	80	
Residual moisture content % Acc. to Karl Fischer 0.03-0.12 Melt temperature (Tmin - Tmax) °C - 260-290	Drying time dry air dryer		h	-	2-6	
	Residual moisture content		%		0.03-0.12	,
Mold temperature °C - 80-100	Melt temperature (Tmin - Tmax)		°C	-	260-290	
	Mold temperature		°C	-	80-100	

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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