LANXESS
Energizing Chemistry

Data sheet

Durethan BKV215 000000

PA 6-Copolymer, 15 % glass fibers, injection molding, improved impact strength

ISO Shortname: ISO 16396-PA 6/66-I,GF15,GR,S14-040

Property	Test Condition	Unit	Standard	guide value	
				d.a.m.	cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 280 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.59	
C Molding shrinkage, transverse	60x60x2; 280 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.61	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.14	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.15	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	4500	2400
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	85	55
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	4.5	15
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	70	80
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	80	75
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	20	35
C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	12	12
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	18	30
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	10	10
Flexural modulus	2 mm/min	MPa	ISO 178-A	4000	2200
Flexural strength	2 mm/min	MPa	ISO 178-A	130	80
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	5.0	7.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	125	60
C Puncture maximum force	23 °C	N	ISO 6603-2	1003	
C Puncture maximum force	-30 °C	N	ISO 6603-2	650	
C Puncture energy	23 °C	J	ISO 6603-2	13	32
C Puncture energy	-30 °C	J	ISO 6603-2	4.8	
Ball indentation hardness		N/mm²	ISO 2039-1	110	55
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	214	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	175	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	205	
C Temperature of deflection under load	8.00 MPa	°C	ISO 75-1,-2	60	
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	0.4	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10-4/K	ISO 11359-1,-2	1.5	
C Burning behavior UL 94	1.5 mm	Class	UL 94	HB	
C Oxygen index	Method A	%	ISO 4589-2	22	
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	650	
Burning behavior US-FMVSS302			ISO 3795	passed	
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	200	
Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	3.5	10
C Relative permittivity	1 MHz	-	IEC 60250	3.2	3.7
C Dissipation factor	100 Hz	10-4	IEC 60250	60	1500
C Dissipation factor	1 MHz	10-4	IEC 60250	150	800
C Volume resistivity		Ohm·m	IEC 60093	1E11	1E10
C Surface resistivity		Ohm	IEC 60093	1E15	1E13
C Electric strength	1 mm	kV/mm	IEC 60243-1	43	43
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	7.0	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	2.0	
C Density		kg/m³	ISO 1183	1180	
Bulk density		kg/m³	ISO 60	600	

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
	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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Typical Properties

Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

Flammability

Flammability results are based on small-scale laboratory tests for purposes of relative comparison and are not intended to reflect the hazards presented by this or any other material under actual fire conditions.

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Color and Visual Effects

Type and quantity of pigments or additives used to obtain certain colors and special visual effects can affect mechanical properties.

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Date: 01.05.2019