Durethan® BKV 15 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6-Copolymer, 15 % glass fibers, injection molding

General Information	
UL YellowCard	E245249-473580
Filler / Reinforcement	Glass Fiber,15% Filler by Weight
Features	Copolymer
Processing Method	Injection Molding
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1)
	Isochronous Stress vs. Strain (ISO 11403-1)
	Isothermal Stress vs. Strain (ISO 11403-1)
	Secant Modulus vs. Strain (ISO 11403-1)
	Shear Modulus vs. Temperature (ISO 11403-1)
	Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity				
	1.22			
--	1.23	--	g/cm³	ASTM D792
23°C	1.23	--	g/cm³	ISO 1183
Apparent Density	0.70	--	g/cm³	ISO 60
Molding Shrinkage				ISO 2577
Across Flow : 280°C, 3.00 mm [1]	0.88	--	%	
Across Flow : 120°C, 4 hr, 3.00 mm [2]	0.21	--	%	
Flow : 280°C, 3.00 mm [3]	0.29	--	%	
Flow : 120°C, 4 hr, 3.00 mm [4]	0.080	--	%	
Water Absorption				ISO 62
Saturation, 23°C	8.5	--	%	
Equilibrium, 23°C, 50% RH	2.6	--	%	
Hardness	**Dry**	**Conditioned**	**Unit**	**Test Method**
Ball Indentation Hardness	170	80.0	MPa	ISO 2039-1
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus				

23°C [5]	6200	3100	MPa	ASTM D638
23°C	6000	3000	MPa	ISO 527-2/1
Tensile Strength				
Break, 23°C	130	70.3	MPa	ASTM D638
Break, 23°C	125	75.0	MPa	ISO 527-2/5
Tensile Elongation				
Break, 23°C	3.0	5.0	%	ASTM D638
Break, 23°C	3.0	12	%	ISO 527-2/5
Flexural Modulus				
23°C	5400	2900	MPa	ASTM D790
23°C [6]	5200	3100	MPa	ISO 178/A
Flexural Strength				
23°C	200	120	MPa	ASTM D790
3.5% Strain,23°C	180	90.0	MPa	ISO 178/A
23°C [7]	200	120	MPa	ISO 178/A
Flexural Strain at Flexural Strength [8] (23°C)	5.0	8.0	%	ISO 178/A
ISO Shortname	PA 6/66, GR, 14-060, GF15	--		ISO 1874
Residual Moisture Content	0.030 to 0.12		%	Karl Fisher

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°C	< 10	< 10	kJ/m²	
-30°C	< 10	< 10	kJ/m²	
23°C	< 10	10	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	35	35	kJ/m²	
23°C	45	70	kJ/m²	
Notched Izod Impact				
-40°C, 3.18 mm	53	53	J/m	ASTM D256
23°C, 3.18 mm	64	250	J/m	ASTM D256
-40°C	< 10	< 10	kJ/m²	ISO 180/1A
-30°C	< 10	< 10	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	30	30	kJ/m²	
23°C	30	80	kJ/m²	
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	3.00	--	J	
23°C	4.00	--	J	
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2

-30°C	585	--	N	
23°C	644	--	N	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load				
0.45 MPa, Unannealed, 39.9 mm	215	--	°C	ASTM D648
0.45 MPa, Unannealed	210	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	190	--	°C	ISO 75-2/A
1.8 MPa, Annealed, 3.99 mm	200	--	°C	ASTM D648
8.0 MPa, Unannealed	60.0	--	°C	ISO 75-2/C
Vicat Softening Temperature				
--	200	--	°C	ISO 306/B50
--	> 200	--	°C	ISO 306/B120
Melting Temperature [9]	213	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	3.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	8.0E-5	--	cm/cm/°C	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	1.0E+13 to 1.0E+14	1.0E+12	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Electric Strength				IEC 60243-1
23°C, 1.00 mm	40	35	kV/mm	
23°C, 3.00 mm	35	31	kV/mm	
Dielectric Constant				
23°C, 50 Hz [10]	4.00	15.0		IEC 60250
23°C, 1 MHz [11]	4.00	5.00		IEC 60250
23°C, 100 Hz	4.00	10.0		IEC 60250
Dissipation Factor				IEC 60250
23°C, 50 Hz	5.0E-3	0.50		
23°C, 100 Hz	5.0E-3	0.20		
	0.015	0.12		
23°C, 1 MHz	0.015	0.16		
Comparative Tracking Index				
Solution A	600	--	V	IEC 60112
Solution B	425	--	V	IEC 60112
--	--	425	V	ASTM D3638
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Burning Rate [12] (1.00 mm)	< 60	--	mm/min	ISO 3795
Flame Rating				UL 94

1.60 mm	HB	--		
3.20 mm	HB	--		
Glow Wire Flammability Index (2.00 mm)	650	--	°C	IEC 60695-2-12
Oxygen Index [13]	22	--	%	ISO 4589-2

Injection	Dry	Unit	Test Method
Drying Temperature - Dry Air Dryer	80.0		°C
Drying Time - Dry Air Dryer	2.0 to 6.0		hr
Processing (Melt) Temp	260 to 290		°C
Mold Temperature	80.0 to 100		°C

NOTE	
1.	150x105x3mm, 80°C MT, 500 bar
2.	150x105x3mm
3.	150x105x3mm, 80°C MT, 500 bar
4.	150x105x3mm
5.	1.0 mm/min
6.	2.0 mm/min
7.	2.0 mm/min
8.	2 mm/min
9.	10°C/min
10.	Tinfoil Electrodes
11.	Tinfoil Electrodes
12.	US-FMVSS302
13.	Procedure A

Recommended distributors for this material

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