Durethan® DP 1801/30 H3.0 000000

Polyamide 6

LANXESS Asia/Pacific

Message:

PA 6, 30 % glass fibers, injection molding, halogen free flame retardant

General Information	
UL YellowCard	E245249-473609
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight
Additive	Flame retardancy
Features	Halogen-free Flame retardancy
Processing Method	Injection molding

Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.40	--	g/cm³	ISO 1183
Apparent Density	0.70	--	g/cm³	ISO 60
Molding Shrinkage				ISO 2577
Vertical flow direction: 260°C, 2.00mm [1]	0.70	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm [2]	0.20	--	%	ISO 2577
Flow direction: 260°C, 2.00mm [3]	0.60	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm [4]	0.20	--	%	ISO 2577
Water Absorption (Saturation, 23°C)	5.9	--	%	ISO 62
Hardness	**Dry**	**Conditioned**	**Unit**	**Test Method**
Ball Indentation Hardness	194	--	MPa	ISO 2039-1
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (23°C)	7600	3400	MPa	ISO 527-2/1
Tensile Stress				
Yield, 23°C	96.0	50.0	MPa	ISO 527-2/50
Fracture, 23°C	93.0	47.0	MPa	ISO 527-2/5
Tensile Strain				
Yield, 23°C	2.4	9.7	%	ISO 527-2/50
Fracture, 23°C	4.0	28	%	ISO 527-2/5
Flexural Modulus [5] (23°C)	7300	3200	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% strain, 23°C	170	65.0	MPa	ISO 178/A
23°C [6]	170	75.0	MPa	ISO 178/A

Flexural Strain at Flexural Strength [7] (23°C)	4.0	6.9	%	ISO 178/A
ISO Shortname	PA 6, GFHR, 14-080, GF30; ISO 1043-PA GF FR (30)			ISO 1874
Residual Moisture Content	0.030 - 0.070		%	Karl Fisher
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-40°C	< 10	--	kJ/m²	ISO 179/1eA
-30°C	< 10	--	kJ/m²	ISO 179/1eA
23°C	< 10	--	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	50	84	kJ/m²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-40°C	< 10	--	kJ/m²	ISO 180/1A
-30°C	< 10	--	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	35	80	kJ/m²	ISO 180/1U
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, not annealed	210	--	°C	ISO 75-2/B
1.8 MPa, not annealed	180	--	°C	ISO 75-2/A
Vicat Softening Temperature	210	--	°C	ISO 306/B120
Melting Temperature [8]	222	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	6.1E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	4.0E-5	--	cm/cm/°C	ISO 11359-2
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	1.0E+13	--	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	--	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	38	--	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI)	PLC 1	--		UL 746
Comparative Tracking Index (Solution A)	550	--	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
0.800 mm	V-2	--		UL 94
1.60 mm	V-2	--		UL 94
3.00 mm	V-2	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
0.800 mm	960	--	°C	IEC 60695-2-12

1.60 mm	960	--	°C	IEC 60695-2-12
3.00 mm	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature				IEC 60695-2-13
0.750 mm	725	--	°C	IEC 60695-2-13
1.50 mm	725	--	°C	IEC 60695-2-13
3.00 mm	725	--	°C	IEC 60695-2-13
Oxygen Index [9]	30	--	%	ISO 4589-2

Injection	Dry	Unit	Test Method
Drying Temperature - Dry Air Dryer	80.0		°C
Drying Time - Dry Air Dryer	2.0 - 6.0		hr
Processing (Melt) Temp	250 - 270		°C
Mold Temperature	80.0 - 100		°C

NOTE	
1.	60x60x2mm, 80°C MT, 600 bar
2.	60x60x2mm
3.	60x60x2mm, 80°C MT, 600 bar
4.	60x60x2mm
5.	2.0 mm/min
6.	2.0 mm/min
7.	2 mm/min
8.	10°C/min
9.	Procedure A

Recommended distributors for this material

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