

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,30% Filler by Weight		
Additive		Flame Retardant		
Features		Flame Retardant		
		Halogen Free		
Agency Ratings		EC 1907/2006 (REACH)		
Processing Method		Injection Molding		
Resin ID (ISO 1043)		PA GF FR (30)		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.40	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Across Flow : 260°C, 2.00 mm ¹	0.70	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.20	--	%	
Flow : 260°C, 2.00 mm ³	0.60	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.20	--	%	
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
Break, 23°C	93.0	47.0	MPa	ISO 527-2/5
Tensile Strain				
Yield, 23°C	2.4	9.7	%	ISO 527-2/50
Break, 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	
23°C ⁶	170	75.0	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	4.0	6.9	%	ISO 178/A
ISO Shortname	PA 6, GFHR, 14-080, GF30	--		ISO 1874
Residual Moisture Content	0.030 to 0.070		%	Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°C	< 10	--	kJ/m ²	
-30°C	< 10	--	kJ/m ²	
23°C	< 10	--	kJ/m ²	
Charpy Unnotched Impact Strength (23°C)	50	84	kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength				ISO 180/1A
-40°C	< 10	--	kJ/m ²	
-30°C	< 10	--	kJ/m ²	
Unnotched Izod Impact Strength (23°C)	35	80	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	210	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	180	--	°C	ISO 75-2/A
Vicat Softening Temperature	210	--	°C	ISO 306/B120
Melting Temperature ⁸	222	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	6.1E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	4.0E-5	--	cm/cm/°C	
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
Electric 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	--		
1.60 mm	V-2	--		
3.00 mm	V-2	--		

Glow Wire Flammability Index				IEC 60695-2-12
0.800 mm	960	--	°C	
1.60 mm	960	--	°C	
3.00 mm	960	--	°C	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.750 mm	725	--	°C	
1.50 mm	725	--	°C	
3.00 mm	725	--	°C	
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 to 6.0		hr	
Processing (Melt) Temp	250 to 270		°C	
Mold Temperature	80.0 to 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			

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