

Durethan® DP 2131/20 W1 901317

Polyamide 6

LANXESS GmbH

Message:

PA 6, 20 % glass fibers, injection molding, weather stabilized, improved surface finish

General Information				
Filler / Reinforcement		Glass Fiber,20% Filler by Weight		
Features		Good Surface Finish		
		Good Weather Resistance		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.28	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Across Flow : 260°C, 3.00 mm ¹	0.67	--	%	
Across Flow : 120°C, 4 hr, 3.00 mm ²	0.20	--	%	
Flow : 260°C, 3.00 mm ³	0.22	--	%	
Flow : 120°C, 4 hr, 3.00 mm ⁴	0.070	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	198	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	7600	4700	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	150	100	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	7.0	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	6400	4100	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% Strain,23°C	197	110	MPa	
23°C ⁶	212	130	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	4.1	6.4	%	ISO 178/A
Burning Behavior ⁸ (> 1.00 mm)	passed	--		ISO 3795
ISO Shortname	PA 6, GHLR, 14-080, GF20	--		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

-30°C	< 10	--	kJ/m ²	
23°C	< 10	--	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	40	40	kJ/m ²	
23°C	45	60	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-30°C	< 10	< 10	kJ/m ²	
23°C	< 10	< 10	kJ/m ²	
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	30	30	kJ/m ²	
23°C	30	40	kJ/m ²	
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	4.00	--	J	
23°C	5.00	10.0	J	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	213	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	215	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	73.0	--	°C	ISO 75-2/C
Vicat Softening Temperature	> 200	--	°C	ISO 306/B120
Melting Temperature ⁹	222	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	2.3E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	8.9E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	2.0E+15	2.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	3.0E+15	1.0E+12	ohms·cm	IEC 60093
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.10	9.34		
23°C, 1 MHz	3.74	4.27		
Dissipation Factor				IEC 60250
23°C, 100 Hz	8.0E-3	0.22		
23°C, 1 MHz	0.018	0.065		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.800 mm	HB	--		
1.60 mm	HB	--		
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	270 to 290	°C
Mold Temperature	80.0 to 120	°C

NOTE		
1.	150x105x3mm, 80°C MT, 500 bar	
2.	150x105x3mm	
3.	150x105x3mm, 80°C MT, 500 bar	
4.	150x105x3mm	
5.	2.0 mm/min	
6.	2.0 mm/min	
7.	2 mm/min	
8.	US-FMVSS302	
9.	10°C/min	

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

