

Durethan® A 30 S FN31 000000

Polyamide 66

LANXESS Asia/Pacific

Message:

PA 66, non-reinforced, injection molding, halogen free flame retardant, improved flowability

General Information				
UL YellowCard		E245249-100600971	E245249-101386019	
Additive		Flame Retardant		
Features		Flame Retardant		
		Good Flow		
		Halogen Free		
Agency Ratings		EC 1907/2006 (REACH)		
Processing Method		Injection Molding		
Resin ID (ISO 1043)		PA FR (30)		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.17	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 2577
Across Flow : 270°C, 2.00 mm ¹	1.1	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.10	--	%	
Flow : 270°C, 2.00 mm ³	1.1	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.10	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	3800	1500	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	85.0	50.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	4.1	> 20	%	ISO 527-2/50
Flexural Modulus ⁵ (23°C)	3700	1600	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% Strain,23°C	120	40.0	MPa	
23°C ⁶	125	55.0	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	5.8	7.8	%	ISO 178/A
ISO Shortname	PA 66, GFHR, 12-040	--		ISO 1874
Residual Moisture Content	0.030 to 0.070		%	Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	< 10	< 10	kJ/m ²	ISO 179/1eA

Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	50	80	kJ/m ²	
23°C	60 kJ/m ²	No Break		
Notched Izod Impact Strength (23°C)				ISO 180/1A
< 10		< 10	kJ/m ²	
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	55	60	kJ/m ²	
23°C	55 kJ/m ²	No Break		
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	212	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	80.0	--	°C	ISO 75-2/A
Vicat Softening Temperature				
230		--	°C	ISO 306/B120
Melting Temperature ⁸	265	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	8.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	7.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+15	1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+14	1.0E+13	ohms · cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	30	25	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.00	8.00		
23°C, 1 MHz	4.00	4.00		
Dissipation Factor				IEC 60250
23°C, 100 Hz	0.012	0.20		
23°C, 1 MHz	0.019	0.055		
Comparative Tracking Index (Solution A)	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (0.400 mm)	V-0	--		UL 94
Glow Wire Flammability Index (0.400 mm)	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (0.400 mm)	775	--	°C	IEC 60695-2-13
Oxygen Index ⁹	34	--	%	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 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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