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 retardancy	
Features	Good liquidity Halogen-free Flame retardancy	
Processing Method	Injection molding	

Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.17	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 2577
Vertical flow direction: 270°C, 2.00mm [1]	1.1	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm [2]	0.10	--	%	ISO 2577
Flow direction: 270°C, 2.00mm [3]	1.1	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm [4]	0.10	--	%	ISO 2577
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	ISO 178/A
23°C [6]	125	55.0	MPa	ISO 178/A
Flexural Strain at Flexural Strength [7] (23°C)	5.8	7.8	%	ISO 178/A
ISO Shortname	PA 66, GFHR, 12-040; ISO 1043-PA FR (30)			ISO 1874
Residual Moisture Content	0.030 - 0.070		%	Karl Fisher
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	< 10	< 10	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU

-30°C	50	80	kJ/m²	ISO 179/1eU
23°C	60 kJ/m²	No Break		ISO 179/1eU
Notched Izod Impact (23°C)	< 10	< 10	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	55	60	kJ/m²	ISO 180/1U
23°C	55 kJ/m²	No Break		ISO 180/1U
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, not annealed	212	--	°C	ISO 75-2/B
1.8 MPa, not annealed	80.0	--	°C	ISO 75-2/A
Vicat Softening Temperature	230	--	°C	ISO 306/B120
Melting Temperature [8]	265	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	8.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	7.0E-5	--	cm/cm/°C	ISO 11359-2
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
Dielectric 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		IEC 60250
23°C, 1 MHz	4.00	4.00		IEC 60250
Dissipation Factor				IEC 60250
23°C, 100 Hz	0.012	0.20		IEC 60250
23°C, 1 MHz	0.019	0.055		IEC 60250
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 - 6.0		hr	
Processing (Melt) Temp	260 - 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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