Vydyne® ECO315J NT0725

Polyamide 66/6 Copolymer

Ascend Performance Materials Operations LLC

Message:

Vydyne ECO315J NT0725 is a non-halogenated, unfilled, flame-retardant PA66/6 copolymer with excellent toughness and ductility. It is stabilized to provide heat stability up to 125°C for 1,000 hours in a dry environment. ECO315J NT0725 is also lubricated for machine feed and easy mold release and has an Underwriters Laboratories UL 94 flammability classification of V-0 at 0.4 mm (0.016") thick.

General Information	
UL YellowCard	E70062-249073
Additive	Lubricant Flame retardancy
Features	Low density Good cracking resistance Good toughness Lubrication Good demoulding performance Halogen-free Extended tensile rate ductility Flame retardancy
Uses	Lighting Applications Electrical/Electronic Applications Electrical components Electrical housing Electrical appliances Industrial application Active hinge Fasteners Switch Connector Automotive Electronics spool Printed circuit board
UL File Number	E70062
Appearance	Natural color
Forms	Particle
Processing Method	Injection molding

Physical	Dry	Conditioned	Unit	Test Method
Density	1.16	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Lateral flow: 23°C, 2.00mm	1.4	--	%	ISO 294-4
Traffic: 23°C, 2.00mm	1.2	--	%	ISO 294-4
Water Absorption				ISO 62
23°C, 24 hr	0.80	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.3	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (23°C)	5000	3500	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	75.0	52.0	MPa	ISO 527-2
Tensile Strain				ISO 527-2
Yield, 23°C	5.5	20	%	ISO 527-2
Fracture, 23°C	25	30	%	ISO 527-2
Flexural Modulus (23°C)	3200	1560	MPa	ISO 178
Flexural Strength (23°C)	92.0	45.0	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	5.4	--	kJ/m²	ISO 179/1eA
23°C	5.4	--	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	--		ISO 179/1eU
23°C	No Break	--		ISO 179/1eU
Notched Izod Impact (23°C)	6.0	--	kJ/m²	ISO 180
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, not annealed	225	--	°C	ISO 75-2/B
1.8 MPa, not annealed	65.0	--	°C	ISO 75-2/A
Melting Temperature	244	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C, 2.00mm	1.1E-4	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C, 2.00mm	1.1E-4	--	cm/cm/°C	ISO 11359-2
RTI Elec				UL 746
0.40 mm	130	--	°C	UL 746
0.75 mm	130	--	°C	UL 746

1.5 mm	130	--	°C	UL 746
3.0 mm	130	--	°C	UL 746
RTI Imp				UL 746
0.40 mm	65.0	--	°C	UL 746
0.75 mm	65.0	--	°C	UL 746
1.5 mm	85.0	--	°C	UL 746
3.0 mm	85.0	--	°C	UL 746
RTI				UL 746
0.40 mm	100	--	°C	UL 746
0.75 mm	100	--	°C	UL 746
1.5 mm	100	--	°C	UL 746
3.0 mm	110	--	°C	UL 746
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Volume Resistivity (0.750 mm)	1.0E+11	--	ohms·cm	IEC 60093
Dielectric Strength (1.00 mm)	13	--	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	PLC 5	--		ASTM D495
Comparative Tracking Index (3.00 mm)	600	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.40 mm	PLC 0	--		UL 746
0.75 mm	PLC 0	--		UL 746
1.5 mm	PLC 0	--		UL 746
3.0 mm	PLC 0	--		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 1	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.40 mm	PLC 4	--		UL 746
0.75 mm	PLC 4	--		UL 746
1.5 mm	PLC 4	--		UL 746
3.0 mm	PLC 3	--		UL 746
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
0.40 mm	V-0	--		UL 94
0.75 mm	V-0	--		UL 94
1.5 mm	V-0	--		UL 94
3.0 mm	V-0	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
0.40 mm	960	--	°C	IEC 60695-2-12
0.75 mm	960	--	°C	IEC 60695-2-12
1.5 mm	960	--	°C	IEC 60695-2-12

3.0 mm	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature				IEC 60695-2-13
0.40 mm	875	--	°C	IEC 60695-2-13
0.75 mm	875	--	°C	IEC 60695-2-13
1.5 mm	775	--	°C	IEC 60695-2-13
3.0 mm	725	--	°C	IEC 60695-2-13
Oxygen Index	29	--	%	ISO 4589-2

Injection	Dry	Unit
Drying Temperature	80	°C
Drying Time	4.0	hr
Suggested Max Regrind	50	%
Rear Temperature	240 - 270	°C
Middle Temperature	240 - 270	°C
Front Temperature	240 - 270	°C
Nozzle Temperature	240 - 270	°C
Processing (Melt) Temp	250 - 270	°C
Mold Temperature	65 - 95	°C

Recommended distributors for this material

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