

# Starflam® 315J NT0725

copolyamide 66/6



Starflam 315J NT0725 (formerly Vydyne® ECO315J NT0725) is a non-halogenated, unreinforced, flame-retardant PA66/6 co-polymer compound designed with high ductility (20% elongation), high comparative tracking index (CTI), and low corrosion for improved electrical contact performance. It is stabilized to provide heat stability up to 125°C for 1,000 hours in a dry environment. It exhibits excellent toughness and ductility, allowing increased flexibility in product design needed for living hinges and snap fits. 315J NT0725 provides enhanced flow and is lubricated for machine feed and easy mold release.

## General

Additive	• Flame Retarding Agent	• Heat Stabilizer	• Lubricant
Features	• Crack Resistant • Good Mold Release • High Elongation • Organic Heat Stabilized	• Ductile • Good Toughness • Low Density	• Flame Retardant • Halogen Content, None • Lubricated
UL File Number	• E70062		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

## Physical

	dry	cond.	Unit	Test Standard
Density	1.16	-	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	1.4	*	%	
Flow : 23°C, 2.00 mm	1.2	*	%	
Water Absorption				ISO 62
23°C, 24 hr	0.8	*	%	
Equilibrium, 23°C, 50% RH	2.3	*	%	

## Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	3200	1200	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	75	42	MPa	ISO 527-2
Tensile Strain (Yield, 23°C)	3.5	23	%	ISO 527-2
Tensile Strain (Break, 23°C)	22	140	%	ISO 527-2
Flexural Modulus (23°C)	3200	1600	MPa	ISO 178
Flexural Strength (23°C)	92	45	MPa	ISO 178
Poisson's Ratio (23°C)	0.4			ISO 527-2

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Impact	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	5	15	kJ/m <sup>2</sup>	
-30°C	4	4	kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	N	N	kJ/m <sup>2</sup>	
-30°C	N	N	kJ/m <sup>2</sup>	
Notched Izod Impact Strength				ISO 180/1A
+23°C	5	13	kJ/m <sup>2</sup>	
-30°C	5	6	kJ/m <sup>2</sup>	

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	65	-	°C	
0.45 MPa, Unannealed	225	-	°C	
Melting Temperature	244	*	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	110	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	110	*	E-6/K	
RTI Elec				UL 746
0.400 mm	130		°C	
0.750 mm	130		°C	
1.50 mm	130		°C	
3.00 mm	130		°C	
RTI Imp				UL 746
0.400 mm	65		°C	
0.750 mm	65		°C	
1.50mm	85		°C	
3.00 mm	85		°C	
RTI Str				UL 746
0.400 mm	100		°C	
0.750 mm	100		°C	
1.50 mm	100		°C	
3.00 mm	110		°C	

Electrical	dry	cond.	Unit	Test Standard
Volume Resistivity (1.00 mm)	1E9	-	Ohm*m	IEC 60093
Dielectric Strength (1.00 mm)	13	-	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	5			ASTM D 495

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Comparative Tracking Index (3.00 mm)	600	V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746
0.400 mm	PLC 0		
0.750 mm	PLC 0		
1.50 mm	PLC 0		
3.00 mm	PLC 0		
High Voltage Arc Tracking Rate (HVTR), 3.00 mm	PLC 1		UL 746
Hot-wire Ignition (HWI)			UL 746
0.400 mm	PLC 4		
0.750 mm	PLC 4		
1.50 mm	PLC 4		
3.00 mm	PLC 3		

Flammability	dry	cond.	Unit	Test Standard
Flammability				UL 94
0.400 mm	V-0			
0.750 mm	V-0			
1.50 mm	V-0			
3.00 mm	V-0			
Glow Wire Flammability Index				IEC 60695-2-12
0.400 mm	960		°C	
0.750 mm	960		°C	
1.50 mm	960		°C	
3.00 mm	960		°C	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.400 mm	875		°C	
0.750 mm	875		°C	
1.50 mm	775		°C	
3.00 mm	725		°C	
Oxygen index	29	*	%	EN ISO 4589-2

Injection	Value	Unit
Drying Temperature	80	°C
Drying Time	4	h
Rear Temperature	240 - 270	°C
Middle Temperature	240 - 270	°C
Front Temperature	240 - 270	°C
Nozzle temperature	240 - 270	°C
Processing (Melt) Temperature	250 - 270	°C

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Mold Temperature

65 - 95

°C



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