



Vydyne® PA66 compounds have been specified in electrical and electronic applications for many years. Plastic components in these applications are subject to exacting regulatory requirements, including fire safety standards. They also must demonstrate superior mechanical and thermal performance while maintaining dimensional integrity. The performance, quality and consistency of our products make the difference in your applications.

Products Used: 21SPC, 21SPF, R535H, M344, 909

Application Description

The lighting industry around the world is transforming itself with increasing focus on energy efficiency and intelligent controls. Regulatory agencies around the world continue to phase out incandescent bulbs for energy-saving alternatives. The regulatory changes have prompted manufacturers to respond with modern component design upgrades using materials that comply with the new performance and sustainability standards.

PA66 is used in electrical lighting components such as connectors and bobbins. Connectors link a lighting fixture to the rest of the electrical circuit. Connectors are required to have excellent strength, fatigue toughness, retain key physical and mechanical properties at elevated temperatures (RTI), and be fire-safe during their functional life. Vydyne 21SPF with its excellent balance of properties has been successfully deployed within this application.

Coil bobbins are permanent containers for the wire windings, acting to form the shape of the coil. They serve as passive electrical components in inductors, chokes, transformers and relays. Coil bobbins must possess high strength, electrical resistance (insulation), thermal resistance (RTI) and chemical resistance. Vydyne R535H, a glass-reinforced PA66, has been found useful in bobbin applications due to its superior strength retention at elevated temperatures typically associated with high-intensity LED and fluorescent bulbs.



For more information, see your Ascend representative or visit www.ascendmaterials.com.

Vydyne Solutions

Product			21SPC	21SPF	R535H	M344	909
Characteristics			<ul style="list-style-type: none"> • Translucent • Mold release 	<ul style="list-style-type: none"> • Fast-cycling • Opaque • Mold release 	<ul style="list-style-type: none"> • 35% GF • Heat-stabilized • Mold release 	<ul style="list-style-type: none"> • Unfilled PA66/6 • Halogenated FR • High elongation 	<ul style="list-style-type: none"> • 25% GF PA66/6 • Halogenated FR • Mold release
Property	Test Method	Units					
Flame Class	UL 94	—	V-2, 0.4 mm	V-2, 0.4 mm	HB, 0.75 mm	V-0, 0.4 mm 5VA, 2.0 mm	V-0, 0.4 mm 5VA, 1.5 mm
Hot-wire Ignition (HWI)	UL 746A	PLC	PLC 4, 0.71 mm PLC 3, 1.5 mm	PLC 4, 0.71 mm PLC 3, 1.5 mm	PLC 4, 0.75 mm	PLC 0, 0.71 mm	PLC 0, 0.75 mm
High Amp Arc Ignition (HAI)	UL 746A	PLC	PLC 0, 0.71 mm	PLC 0, 0.71 mm	PLC 0, 0.75 mm	PLC 0, 0.71 mm	PLC 0, 0.75 mm
Comparative Tracking Index (CTI)	IEC 60112	PLC	PLC 0	PLC 0	PLC 2	PLC 1	PLC 2
Dielectric Strength	IEC 60243	kV/mm	26	26	20	26	—
High-voltage Arc Tracking Rate (HVTR)	UL 746A	PLC	PLC 0	PLC 0	PLC 1	PLC 1	PLC 3
Inclined-plane Tracking (IPT)	IEC 60587	minutes	120 at 1 kV	120 at 1 kV	—	—	—
High-voltage, Low-current Arc Resistance	ASTM D495	PLC	PLC 5	PLC 5	PLC 6	PLC 6	PLC 6
UL 1446/IEC 85		Class	B	B	B and F	—	B and F