ASCEND PERFORMANCE MATERIALS

application profile:
battery seals

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, 21SPG1, 21SPF1, 20NSP1, 47H

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

Application Description

A battery seal is a device that tightly seals a battery to prevent the loss of electrolytes. The plastic gasket is sealed to the cell by means of radial crimping pressure or by impact. A vent mechanism is incorporated into the gasket to release pressure, protecting against cell rupture and damage in the event of misuse under abusive conditions. The vent is designed to relieve excessive gas pressure that may be generated by prolonged short-circuiting, improper disposal during a fire, charging and/or incorrect insertion in devices.

Battery seals must possess excellent chemical resistance and maintain dimensional stability throughout their design life.

Vydyne Solutions

Product				21SPC	21SPG1	21SPF1	20NSP1	47H
Characteristics				• UL 94 V-2-rated • Translucent • Mold release	• General purpose • High flow • Mold release	• Rapid-cycling • High flow • Mold release	• Nucleated • Fastest-cycling • High flow • Mold release	• Impact-modified • Mold release
Property		**Test Method**	**Units**					
Tensile Stress at Yield		ISO 527	MPa	82	82	88	95	60
Nominal Tensile Strain at Break			%	25	25	20	13	22
Flexural Modulus		ISO 178	MPa	2,900	2,900	3,300	3,200	2,300
Flexural Strength			MPa	80	80	105	100	70
Notched Charpy Impact	23°	ISO 179	kJ/m²	6.0	6.0	6.0	6.0	19
	–30°		kJ/m²	5.0	5.0	5.0	5.0	17

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