

Flame retardant Nylatron® 66 SA FR PA66 - DIN EN 45545-2 and UL94 V0 tested thermoplastic



A whole new set of opportunities and benefits for industrial applications

Challenge

Fire incidents in industrial and domestic environments are often caused by electrical equipment failures like overload, sparks or short-circuits. To prevent the risk of ignition and diffusion of flames, fire resistant materials like concrete, steel or ceramics are used. Once ignited however, the materials in the environment determine how quickly the flames spread, the level of smoke generation, and the time available to control the fire - or allow time to leave the scene. Nearly all organic materials become fuel for the fire. Plastics by definition are based on crude oil or similar organic materials and combust easily.

Opportunities

To increase the safety level and broaden the application opportunities of the use of plastics, flame retardant plastic materials have been developed. Flame retardant materials are defined by various testing methods and standards, which usually determine the self-extinguishing properties under certain conditions. Flame retardant properties can be achieved through specific formulation of the plastic compounds and the selection of the right processing method.



Added Value

General Engineering Plastic stock shapes manufactured in the extrusion process are generally difficult to adjust to flame retardant properties. Our polymer processing expertise and best-in-class-technologies made the development of the new Nylatron® 66 SA FR (Flame Retardant) material possible. It is a multi-purpose flame retardant material according to UL94 V0 that is available in sheets up to 50 mm thickness and rods up to 100 mm diameter.

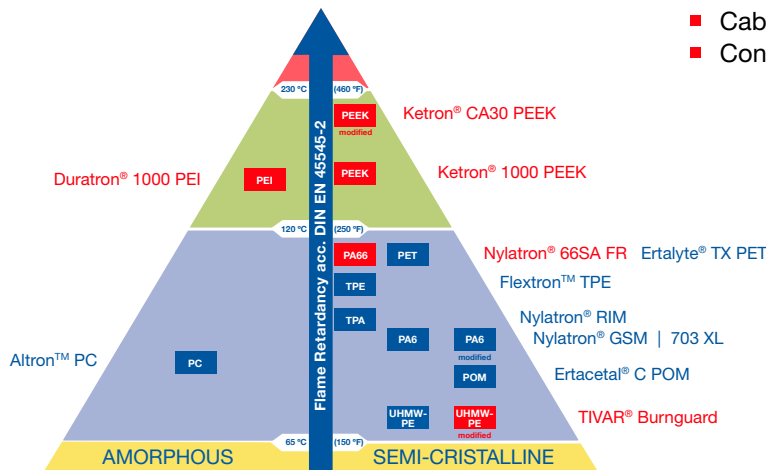
Why flame retardant materials?

- Time to escape is critical
- Flame retardant materials buy time
- Many factors influence the survival time

Nylatron® 66 SA FR PA66 Special Characteristics

- Ertalon® 66 SA based (PA 66) universal flame retardant product
- Flame retardancy UL94 V0 at 1 – 3mm wall thickness
- Compliant with EN 45545-2:2013 R24:HL3 and R26:HL3 for rail applications
- Mechanical property profile similar Ertalon® 6PLA PA6
- Absence of heavy metals and halogens – RoHS compliant
- Parts manufactured from Nylatron® 66 SA FR PA66 can be disposed according WEEE
- Fully compliant with REACH
- Low moisture absorption

The Mitsubishi Chemical Group, Advanced Materials Division's portfolio of DIN EN 45545-2 Tested Materials (highlighted in red)



Property Overview - Comparison to "Standard" Nylons

	Nylatron® 66 SA FR PA66	Ertalon® 6 SA PA6	Ertalon® 6 PLA PA6
Tensile Stress	+	o	+
Coefficient of Linear Thermal Expansion	+	o	+
Charpy	o	+	o
HDTa	+	o	+
Permanent Temperature	o	o	+
Maximum Temperature	+	o	+

Typical Applications

- Cable holders
- Cable clamps
- Cable channels
- Connectors



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Europe

Mitsubishi Chemical
Advanced Materials NV
Galgenveldstraat 12
8700 Tielt, Belgium
T +32[0] 51 42 35 11
F +32[0] 51 42 33 10
contact@mcam.com

North America

Mitsubishi Chemical
Advanced Materials Inc.
2120 Fairmont Avenue
PO Box 14235 - Reading, PA 19612-4235
T 800 366 0300 | +1 610 320 6600
F 800 366 0301 | +1 610 320 6638
contact@mcam.com

Asia-Pacific

Mitsubishi Chemical
Advanced Materials Asia Pacific Ltd.
Unit 7B, 35/F, Cable TV Tower,
9 Hoi Shing Road, Tsuen Wan, Hong Kong
T +852 2470 26 83
F +852 2478 99 66
contact@mcam.com

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