



Print this page Flame Retardants

Additives

Exolit® OP 935

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Finer grained version of phosphinate flame retardant Exolit OP 930 for adhesive applications

Product Description

Exolit OP 935 is a white, fine-grained powder based on an organic phosphinate. The product is not hygroscopic and it is insoluble in water and common organic solvents like acetone, dichloromethane, MEK, toluene. Exolit OP 935 can easily be dispersed in solvents like acetone or MEK.

For more details see our [Innovation Spotlight video](#).

Benefits

- Based on an organic metal phosphinate
- Not hygroscopic, insoluble in water and common organic solvents like acetone, dichloromethane, MEK, toluene
- Good hydrolysis resistance
- Can easily be dispersed in solvents like acetone or MEK
- Halogen-free flame retardant with a high phosphorus content which is suitable for use in both thermoplastic and thermoset applications to meet the most stringent fire retardancy standards
- Suited for thermoplastic elastomers for cable applications
- Particularly suitable for very thin adhesive applications like flexible printed circuit boards due to its specifically designed particle size distribution; can be readily dispersed in epoxy resin systems when a high shear mixer is used
- Low smoke toxicity
- Non-halogenated flame retardant with favorable environmental and health profile

Specifications

Characteristics	Unit	Target Value	DS ¹⁾	TD ²⁾	Test Method
Phosphorus	% (w/w)	23.3 - 24.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Photometry after oxidizing dissolution; (11/17) or wavelength dispersive X-ray fluorescence spectrometry; (11/23)
Water / Moisture	% (w/w)	≤ 0.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Thermogravimetry 130°C; (11/03)
Density	g/cm ³	1.35	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bulk Density	g/L	100 - 250	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Decomposition Temperature	°C	> 300	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Particle Size Distribution	µm		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Laser diffraction in acetone; (11/47)
	D95	≤ 10			

¹⁾ Delivery specification: The product is monitored on a regular basis to ensure that it adheres to the specified values. Test methods: Clariant method numbers 11/xx in brackets.

²⁾ Technical data: The technical data are used solely to describe the product and are not subject to regular monitoring.

Applications

Exolit OP 935 is a halogen-free flame retardant with a high phosphorus content which is suitable for use in both thermoplastic and thermoset applications where the most stringent fire retardancy standards must be met.

Due to its specifically designed particle size distribution, Exolit OP 935 is particularly suitable for very thin adhesive applications like flexible printed circuits. It can be readily dispersed in epoxy resin systems when a high shear mixer is used.

Classification: UL 94: class V-1, 1.6 mm
concentration: approx. 10 parts Exolit / 100 parts resin

Classification: UL 94: class V-0, 1.6 mm

concentration: approx. 30 parts Exolit / 100 parts resin
or in combination with modified resins
or other flame retardants like ATH

Packaging and Handling

Delivery form

White powder

Packaging

Exolit OP 935 is delivered in 25 kg cartons.

Storage

Minimum shelf life is 12 months from the date of shipping when stored according to the said conditions.

More Information

For more details see our [Innovation Spotlight video](#).

EcoTain®

Products that offer outstanding sustainability advantages are awarded Clariant's EcoTain® label. EcoTain® products significantly exceed sustainability market standards, have best-in-class performance and contribute overall to sustainability efforts of the company and our customers. Find out more about: [EcoTain®](#).



PEOPLE



Non hazardous, studies on life cycle data available.



Saves lives and assets as a (halogen free) flame retardant. Supports the attainability of eco-labels for customer products.



PLANET



Phosphorus is on the EU list of critical raw materials but recycling is possible and actively investigated.



Very efficient production process with high yield, minimized waste and low water consumption.



PERFORMANCE



Extensive work with customers along the value chain, optimizing material performance and evaluating life cycle aspects with stakeholders.



Efficient at comparatively low loadings. Synergies with other halogen free flame retardants. High tracking resistance in E&E applications.

Safety

Further safety data and handling information are available from our current Material Safety Data Sheet. For disposal in accordance with the regulations the product should be treated as special waste and taken to a suitable incineration plant.

Contact Us;

Please contact us for safety and regulatory details or the Material Safety Data Sheet (MSDS).

www.clariant.com

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