

Product Data Sheet

Apyrum BIO-FR Canvas

Product Description

The flame retardant Apyrum BIO-FR Canvas is an additive formulated to provide a system that offers a unique combination of advantages:

- **High performance flame retardant properties such as smoke reduction, reduction in acidity of the residue, reduction in heat release, and self-extinguishing attributes.**
- **Environmentally friendly during its entire life cycle.**

Apyrum BIO-FR is a water-based solution. It is an environmentally-friendly system that consists mainly mix of potassium salts. All of the components of Apyrum can be classified and approved as food additives. It poses no harm to the human body and has a unique environmental profile.

The versatility of the Apyrum system allows Apyrum to be tailored to a specific application. Apyrum Liquid can be used in most types of materials such as polyester, polyamide, polyurethane, bitumen, rubber, latex, cellulose-based materials, PVAc, PVA and lacquer. Apyrum Liquid can be used in many different industrial applications such as building and construction materials, furniture, woven and non-woven fabrics, paper and board, transportation and electronics, adhesives, coatings and sealants.

Apyrum Liquid may also be used in combination with other systems in order to provide further improvement of existing flame retardant properties.

Benefits and Features

Apyrum is highly stable and durable.

Apyrum fulfills the demands made on a chemical flame retardant:

- High flame-retarding capabilities,
- Harmless to both health and the environment,
- Gives a variety of materials flame retardant properties,
- Cost- efficient.

System Description

Apyrum products are based on a method that changes the physical and chemical processes that takes place when a material is exposed to high heat, e.g. fire. To achieve the optimal balance between the physical, mechanical, and fire properties of the material, Apyrum must interact with the physical and chemical properties of the material, both during application and when exposed to heat.

Apyrum is an intumescent flame retardant system that functions in multiple ways depending on the material and prevailing conditions; these functions include:

Endothermic reaction with superior thermal energy absorption

Intumescent / charring reaction which also prevents dripping of material in liquid state

Production of a char layer insulation removing fuel from the heat source and blocking oxygen

Smoke suppressant.

Typical Physical Properties

Appearance	Transparent to slightly yellowish liquid
Odour:	Odourless to slight smell of vinegar
Density (g/cm ³):	1,18±0,05
Water content:	30-70%
Solubility in water:	Soluble in every concentration
pH:	7,2±0,5
Melting point (°C):	Does not melt
Flame point (°C):	Does not burn
Boiling point (°C):	Does not boil
Flash point:	Not applicable
Flammability	Not flammable

Possible Specification Parameters

Content of active substance

Density

pH-value

Decomposition point

Surfactants, pigments and other process additives

Stability & Reactivity

Materials to avoid:

Inorganic chlorine compounds

Hazardous decomposition products:

Not known

Handling & Storage

Handling: The contents of an opened package are influenced by air moisture and should be handled according to technical specifications.

Storage: Keep tightly capped until used. Handle in a well-ventilated area if there is risk for dust or when the product is dissolved in water.

Requirement for storage and packing: Keep in an area having a dry, stable temperature.

Shipping Information

Packaging sizes:	Bottles, drums, barrels and IBC containers
Transportation classification:	Non-dangerous goods
REACH:	Preregistered in REACH
Minimum purchase order:	Available from DEFLAMO sales or customer service

These properties are general and do not constitute a specification either in part or as a whole. Specification data is available on request from DEFLAMO sales, customer service, or customer technical service.

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