

Product Data Sheet

Apyrum XP

Apyrum XP 1003.11, Apyrum XP 1003.12, Apyrum XP 1004.01, Apyrum XP 1002.11, Apyrum XP 1002.12, Apyrum XP 1002.13, Apyrum XP 1002.14, Apyrum 201 Powder, Apyrum XP 1005.01, Apyrum XP 1005.04, Apyrum XP 1002.15, Apyrum XP 1002.16, Apyrum XP 1002.17, Apyrum XP 1002.18, Apyrum XP 1002.19 and Apyrum XP 1002.20

Product Description

The flame retardant Apyrum XP 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 XP is a white salt. It is an environmentally-friendly system that consists mainly of natural carboxylic salts and inorganic compounds. 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.

Apyrum XP can be used in many different industrial applications such as building and construction materials, furniture, films, and cables. Apyrum XP has shown synergistic effects with some mineral fillers, phosphate ester plasticizers, ATH and other compounds, making it even more cost efficient.

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

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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	White powder
Particle density: (g/cm ³)	~2
Bulk density (g/cm ³)	0,7-1,0
Dry substance at 105°C (%)	>99,0%
Solubility in water	Apyrum XP 1002.XX are non-soluble in water. Other Apyrum XP and Apyrum 201 are fully soluble in water.
pH when dissolved in water	7-9,5
Decomposition point (°C)	> 250
Melting point (°C)	Does not melt (decomposes)
Flame point (°C)	Does not burn
Flash point	Not applicable
Flammability (solid, gas)	Not flammable

Possible Specification Parameters

Water content

Particle size and fractions

Stability & Reactivity

Conditions to avoid:

Avoid high moisture environments

Materials to avoid:

Strong acids and bases

Hazardous decomposition products:

Not known

Handling & Storage

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

Storage: Keep bulk bagged and dry until used. Handle in a well-ventilated area if there is a risk for dust or if the product is dispersed or mixed.

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

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Shipping Information

Packaging sizes:	PP vacuum bag on pallets, bags of 20 Kg
Transportation classification:	Non-dangerous goods
REACH:	Preregistered in REACH
Minimum purchase order: service	Available from DEFLAMO sales or customer

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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