

Safety Data Sheet: FirePro Condensed Aerosol Generator

ACCORDING TO EC REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

SECTION 1: IDENTIFICATION OF THE ARTICLE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name (Article)	FirePro Condensed Aerosol Generator
Unique formula identifier (UFI)	Not applicable for articles
Models	FP-12SE; FP-12ST FP-20T; FP-20TH; FP-20SE; FP-20ST FP-40S; FP-40T; FP-40TH; FP-40SE; FP-40ST; FP-40SD FP-80S; FP-80T; FP-80TH; FP-80SE; FP-80ST; FP-80SD FP-100S; FP-100T; FP-100TH; FP-100SE; FP-100ST; FP-100SD; FP-100EX FP-200S; FP-200T; FP-200TH; FP-200SE; FP-200ST; FP-200SD; FP-200EX FP-500S; FP-500T; FP-500TH; FP-500SE; FP-500ST; FP-500SD; FP-500EX FP-1200; FP-1200S; FP-1200T; FP-1200TS; FP-1200EX FP-2000; FP-2000S; FP-2000T; FP-2000TS; FP-2000EX FP-3000; FP-3000S; FP-3000T; FP-3000TS; FP-3000EX FP-4200; FP-4200S; FP-4200T; FP-4200TS; FP-4200EX FP-5700; FP-5700S; FP-5700T; FP-5700TS; FP-5700EX

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Use:	Fire Extinguishing System Unit / Fire suppressant dispersing devices
Uses Advised Against:	None known

1.3 Details of the supplier of the safety data sheet

Company Identification:	FirePro Systems Limited
Address of Manufacturer:	8 Faleas street, Agios Athanasios, CY-4101, EU
Telephone:	+357 25379999
E-mail:	info@firepro.com
Office hours:	08:30 – 17:30

1.4 Emergency telephone number

Primary contact:	+357 25 376 146
Alternate contact:	+357 25 376 143

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

The article is considered hazardous as per Regulation (EC) No. 1272/2008 (CLP).

Classification: Explosive - Division 1.4

2.2 Label elements

Hazard Pictogram(s)



GHS01

Signal Word:	Warning
Hazard Statement:	H204: Fire or projection hazard.
Precautionary Statements:	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P234: Keep only in original packaging. P250: Do not subject to grinding/shock/friction

2.3 Other hazards

In case of the discharge, avoid exposure to the released agent. Hazards arising from the substance or mixture are reported in Section 5.2 of this document.

When the article is used as intended, the chemical mixture is enclosed within the metal housing of the article and therefore the possibility of any exposure to the mixture is limited.

Results of PBT and vPvB assessments

-PBT : Not applicable

-vPvB : Not applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixtures

Hazardous Ingredient(s)	CAS No.	EC No. REACH Reg No.	%W/W	Hazard Statement(s)	Code	Hazard Pictogram(s)
Potassium Nitrate	7757-79-1	231-818-8	77	Ox. Sol. 3	H272	GHS03
Epoxy resin polymer	25068-38-6	500-033-5	18	Skin Irrit. 2 Skin Sens. 1 Eye Irrit. 2 Aquatic Chronic 2	H315 H317 H319 H411	GHS07 GHS09
Potassium Carbonate	584-08-7	209-529-3	4	Skin Irrit. 2 Eye Irrit. 2 STOT SE 3	H315 H319 H335	GHS07
Magnesium powder or turnings (non-pyrophoric)	7439-95-4	231-104-6	1	Flam. Sol. 1 Water-react. 3	H228 H261	GHS02

The table above provides information on the mixture contained in the article.

Contains no non-classified vPvB substances or substances with a European Union workplace exposure limit.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

No hazard expected when used as intended. The following apply for accidental exposure to the released aerosol in case of an inadvertent article discharge. If symptoms persist, seek medical attention.

Inhalation	Evacuate the area immediately and move affected person to fresh air.
Skin Contact	If skin irritation occurs wash the affected area with water and soap.
Eye Contact	Flush eyes with water for several minutes. Remove contact lenses if applicable.
Ingestion	Not a likely route of exposure based on the form of the agent.

4.2 Most important symptoms and effects, both acute and delayed

Under normal conditions of use and in compliance with manufacturer guidelines, no symptoms or effects are anticipated. Depending on the conditions of discharge, hazardous gas acute exposure thresholds may be exceeded.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

In the event of fire, evacuate the area and inform the emergency services.

Suitable Extinguishing media	Not applicable. The article is a fire suppression device. All emergency protocols should be followed in case of fire. Water (or other medium depending on fire class) may be additionally used to suppress the fire hazard.
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Unsuitable extinguishing media	None known.
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5.2 Special hazards arising from the substance or mixture

Under normal conditions of use and in compliance with manufacturer guidelines, no significant hazards are anticipated.

When the article is activated, the mixture transforms into aerosol that may obscure visibility and will elevate the concentration of hazardous gases (i.e. CO, CO₂, NH₃, NO, NO₂) present within an enclosed space. The agent's fine solid particles (i.e. composed primarily of potassium carbonate - K₂CO₃ - with other potassium compounds present in lower concentrations) may cause respiratory irritation if inhaled in high concentrations. When the article is activated, safe thermal clearances shall be maintained from the outlets of the articles, as the agent is discharged at elevated temperatures. Elevated temperatures are observed on the surface of the article housing as well as in its immediate vicinity.

Exposure to the discharged agent shall be prevented, even at limited concentrations.
Do not enter an enclosure where aerosol has been deployed until the area is fully ventilated.
If entry is required, use appropriate breathing apparatus.

5.3 Advice for firefighters

Firefighters shall wear protective, fire-retardant clothing, including a full-face self-contained breathing apparatus (operated in positive pressure mode), when entering an area where an aerosol extinguishing agent has been deployed.

Articles that are not in use under normal conditions but become involved in a fire incident may pose a fire or projection hazard. Such articles may self-activate, resulting in the generation of aerosol. In such cases, warn and evacuate the surrounding area. Fight the fire from a reasonable distance.

When the articles are not in use under normal conditions but are indirectly involved in a fire incident, the fire extinguishing strategy shall consider the use of an appropriate extinguishing medium suitable for preventing the transfer of fire/heat to the articles.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
In case of fire, evacuate area and follow emergency protocols.
The product is designed to produce a controlled pyrotechnic effect for fire suppression.
Under normal conditions (standby and detection), there is no exposure to hazardous substances.

If the device is accidentally discharged, follow the safety guidelines of the manufacturer and the emergency evacuation procedures of the installation site. Ventilation of the affected area is necessary before re-entering.

6.2 Environmental precautions

No specific environmental precautions are required.

6.3 Methods and material for containment and cleaning up

Spilled mixture is not expected as this is enclosed in the metal housing of the articles. If these articles are spilled, they can be safely recovered by hand and should be inspected for damage prior to repacking.

Do not attempt to recover spilled articles unless it has been confirmed safe to do so. Suspect or damaged articles shall be discarded as per Section 13.

For the aerosol post-discharge residue clean-up, refer to manufacturer's guidelines.

6.4 Reference to other sections

Refer to Section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not subject the device to grinding, shock or friction. Handle with care to avoid accidental activation. Follow manufacturer's instructions.

Disassembly operations shall be conducted only by experienced personnel qualified to perform the task in compliance to the local laws and regulations. Consult the manufacturer for the more information.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, cool, well-ventilated area away from incompatibles. Keep away from fire sources, heat and protect against physical damage. Storage area should be clearly marked and accessible only by authorized personnel. The article shall be stored in the original packaging.

Storage temperature	-10 °C to +50 °C
Relative Humidity	80% Max
Storage life	15 years
Incompatible materials	None known

7.3 Specific end uses

The FirePro Condensed Aerosol Generator is designed for fire suppression in enclosed spaces. Use only as instructed by the manufacturer and following the applicable local laws and regulations. Refer to product manual for proper installation and operation instructions. Installation, commissioning and maintenance shall only be performed by trained and authorised personnel.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

Not applicable. No occupational exposure limits have been established for the components of this article. Exposure to the released agent should be avoided. Hazards related agent discharge are reported in Section 5.1. If exposed, follow the first aid measures found in Section 4.

8.2 Exposure controls

8.2.1. Appropriate engineering controls

Under normal conditions of use, no specific engineering controls are required.

8.2.2. Personal protection equipment



Eye Protection

Not required under normal conditions of use. Shall be used during the various installation, maintenance or clean-up operations



Skin protection

Not required under normal conditions of use.
Heat resistant gloves shall be used if generators are handled prior to cooling post-discharge.
Protective gloves/clothing is recommended when handling post-discharged articles.



Respiratory protection

Not required under normal conditions of use (i.e. stand-by mode), however, in case of activation the area shall be ventilated completely after discharge.
No entry before ventilation process is complete.
Use appropriate breathing apparatus if entry is required before complete ventilation.
Clean-up should be conducted by trained personnel according to manufacturer's instructions.

8.2.3. Environmental Exposure Controls

Not required under normal conditions of use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Solid
Colour	Not applicable.
Odour	Not applicable.
Melting point/freezing point	Not applicable.
Boiling point or initial boiling point and boiling range	Not applicable.
Flammability	Not applicable.
Lower and upper explosion limit	Not known.
Flash Point	Not applicable.
Auto-ignition temperature	300°C
Decomposition Temperature	Not applicable.
pH	Not applicable.
Kinematic Viscosity	Not applicable.
Solubility	Solubility (Water): Partial.
Partition coefficient n-octanol/water	Not applicable.
Vapour pressure	Not applicable.
Density and/or relative density	Relative density: Not applicable.
Relative vapour density	Not applicable.
Particle characteristics	Not applicable.

9.2 Other information

No further relevant information available.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No reactivity under normal specified storage or installation conditions.

10.2 Chemical Stability

Stable under normal specified storage or installation conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known when used as intended.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not subject the device to grinding, shock or friction.
Only trained and authorised personnel should conduct installation, commissioning, maintenance and decommissioning of the article.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

When the article is activated, the mixture transforms into aerosol that may obscure visibility and will elevate the concentration of hazardous gases (i.e. CO, CO₂, NH₃, NO, NO₂) present within an enclosed space.
The agent's fine solid particles (i.e. composed primarily of potassium carbonate - K₂CO₃ - with other potassium compounds present in lower concentrations) may cause respiratory irritation if inhaled in high concentrations.
When the article is activated, safe thermal clearances shall be maintained from the outlets of the articles, as the agent is discharged at elevated temperatures. Elevated temperatures are observed on the surface of the article housing as well as in its immediate vicinity.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - Ingestion	No data available
Acute toxicity - Skin Contact	No data available
Acute toxicity - Inhalation	No data available
Skin corrosion/irritation	No data available
Serious eye damage/irritation	No data available
Skin sensitization data	No data available
Respiratory sensitization data	No data available
Germ cell mutagenicity	There is no evidence of mutagenic potential.
Carcinogenicity	No evidence of carcinogenicity.
Reproductive toxicity	No data available
Lactation	No data available
STOT - single exposure	No data available
STOT - repeated exposure	No data available

11.2 Information on other hazards

When the article is activated, the mixture transforms into aerosol that may obscure visibility and will elevate the concentration of hazardous gases (i.e. CO, CO₂, NH₃, NO, NO₂) present within an enclosed space.
The agent's fine solid particles (i.e. composed primarily of potassium carbonate - K₂CO₃ - with other potassium compounds present in lower concentrations) may cause respiratory irritation if inhaled in high concentrations.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity - Aquatic invertebrates	No further relevant information available.
Toxicity - Fish	No further relevant information available.
Toxicity - Algae	No further relevant information available.
Toxicity - Sediment Compartment	No further relevant information available.
Toxicity - Terrestrial Compartment	No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment No further relevant information available.

12.6 Endocrine disrupting properties No further relevant information available.

12.7 Other adverse effects No further relevant information available.

The mixture contained in these articles is enclosed within a metal housing and it is isolated from the surrounding environment, presenting no ecological hazards when used as intended. Do not release, unmonitored into the environment.

In case of the article discharge, the generated agent has negligible global warming potential and zero ozone depletion potential.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

The article shall be disposed of in accordance with local applicable regulations. Contact the manufacturer for specific disposal instructions. Empty containers and packaging materials may be recycled if free from residues.

13.2 Additional Information

This article contains pyrotechnic materials that shall be handled by expert authorised personnel for the purposes dismantling and disposal. Exercise caution and follow manufacturer guidelines to prevent accidental activation.

SECTION 14: TRANSPORT INFORMATION

The below UN entry is only applicable for articles transported in the original packaging as prepared by the manufacturer in alignment to the corresponding special provisions.

Section	Relevant Information	IATA	IMDG	ADR/RID
14.1	UN number	UN3559		
14.2	UN proper shipping name	Fire suppressant dispersing devices		
14.3	Transport Hazard class	9		
14.4	Packing group	-		
14.5	Environmental Hazards	Not applicable		
14.6	Special precautions for user	See Section 2.2		
14.7	Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable		
Additional Information	Packing Instructions	961	P902	P902
	Special Provisions	A232	407	407
	Max net quantity/pkg	Passenger aircraft – 25kg Cargo aircraft - 100kg	-	-
	Excepted / Limited Qty	Forbidden		

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

European Regulations	Authorisations and/or Restrictions On Use
Candidate List of Substances of Very High Concern for Authorisation	Not listed
REACH: ANNEX XIV list of substances subject to authorisation	Not listed
REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Not listed
Community Rolling Action Plan (CoRAP)	Not listed
Regulation (EU) N° 2019/1021 of the European Parliament and of the Council on persistent organic pollutants	Not listed
Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer	Not listed

European Regulations	Authorisations and/or Restrictions On Use
Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of hazardous chemicals	Not listed
Directive 2013/29/EU on the harmonisation of the laws of the Member States relating to the making available on the market of pyrotechnic articles	Pyrotechnic article

15.2 Chemical safety Assessment

Not Applicable.

SECTION 16: OTHER INFORMATION

Under normal use conditions (standby mode), the article (generator) presents no significant hazard since the ingredients listed in section 3.2 have been pre-mixed and moulded into a stable form. This blended composition is securely enclosed within a metallic housing, ensuring no environmental exposure. When the generator unit is activated, these chemical elements are entirely consumed during the internal controlled reaction and the active agent released mainly consists of potassium carbonate particulates.

An incident involving dangerous goods shall be reported to the authority having jurisdiction as defined by the applicable local guidelines.

Training Advice

Regular safety training as appropriate and as required by the guidelines of the local authorities having jurisdiction.

Disclaimer

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