

**FROST AEROSOL**

**SAFETY DATA SHEET**

(REACH regulation (EC) n° 1907/2006 - n° 453/2010)

**SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identifier**

Product name : FROST SPRAY  
Product code : 01616

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

**1.3. Details of the supplier of the safety data sheet**

Ragione Sociale : Condor Foto Sas  
Indirizzo : Via Prinetti, 32 – 20127 Milano MI – Italy  
Tel. + 39 02 26110946 Fax +39 02 26147831  
Email: condor@condorfoto.it  
Web: [www.condorfoto.it](http://www.condorfoto.it)

**1.4. Emergency telephone number : +39 0266101029.**

Association/Organisation : Poison center Hospital Niguarda (Milano).

**SECTION 2 : HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Flammable aerosol, Category 1 (Aerosol 1, H222 - H229).

This mixture does not present a health hazard with the exception of possible occupational exposure thresholds (see paragraphs 3 and 8).

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

**In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.**

Extremely flammable (F+, R12).

This mixture does not present a health hazard with the exception of possible occupational exposure thresholds (see paragraphs 3 and 8).

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

**2.2. Label elements**

Mixture for aerosol application.

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Hazard pictograms :



GHS02

Signal Word :

DANGER

Hazard statements :

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

Precautionary statements - General :

P102 Keep out of reach of children.

Precautionary statements - Prevention :

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

Precautionary statements - Storage :

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

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**2.3. Other hazards**

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC)  $\geq$  0.1% published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

Intentional misuse of the preparation by concentrating and inhaling the vapours can be harmful or fatal.

**SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2. Mixtures**

**Composition :**

Identification	(EC) 1272/2008	67/548/EEC	Note	%
INDEX: 109_87_5 CAS: 109-87-5 EC: 203-714-2 REACH: 01-2119664781-31	GHS02 Dgr Flam. Liq. 2, H225	F F;R11	[1]	25 $\leq$ x % < 50
METHYLAL INDEX: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7 REACH: 01-2119474691-32	GHS02, GHS04 Dgr Flam. Gas 1, H220	F+ F+;R12	C [1]	10 $\leq$ x % < 25
BUTANE (< 0,1 % 1,3-BUTADIENE) INDEX: 601-004-00-0 CAS: 75-28-5 EC: 200-857-2 REACH: 01-2119474691-32	GHS02, GHS04 Dgr Flam. Gas 1, H220	F+ F+;R12	C [1]	10 $\leq$ x % < 25
ISOBUTANE INDEX: 601-003-00-5 CAS: 74-98-6 EC: 200-827-9 REACH: 01-2119486944-21	GHS02, GHS04 Dgr Flam. Gas 1, H220	F+ F+;R12	[1]	10 $\leq$ x % < 25
PROPANE				

**Information on ingredients :**

[1] Substance for which maximum workplace exposure limits are available.

**SECTION 4 : FIRST AID MEASURES**

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

**4.1. Description of first aid measures**

**In the event of exposure by inhalation :**

In the event of massive inhalation, remove the person exposed to fresh air. Keep warm and at rest.

**In the event of splashes or contact with eyes :**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists : Get medical advice/attention.

**In the event of splashes or contact with skin :**

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**In the event of swallowing :**

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

**4.2. Most important symptoms and effects, both acute and delayed**

See section 11.

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### 4.3. Indication of any immediate medical attention and special treatment needed

If you feel unwell, seek medical advice (show the label if possible). If symptoms persist, always call a doctor.

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## SECTION 5 : FIREFIGHTING MEASURES

Flammable.

Chemical powders, carbon dioxide and other extinguishing gas are suitable for small fires.

### 5.1. Extinguishing media

If the aerosols are exposed to a fire : keep containers cool by spraying with water from a protected position.

#### Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- water with AFFF (Aqueous Film Forming Foam) additive

Prevent the effluent of fire-fighting measures from entering drains or waterways.

#### Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

### 5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO<sub>2</sub>)

In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

### 5.3. Advice for firefighters

Fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

If possible, stop the product stream. Spray from a protected position till the containers are cool. If possible, take the aerosols outside. Keep public on a distance.

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## SECTION 6 : ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

#### For non first aid worker

Because of the organic solvents contained in the mixture, eliminate sources of ignition and ventilate the area.

#### For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

### 6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

### 6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.

### 6.4. Reference to other sections

No data available.

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## SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

### 7.1. Precautions for safe handling

Always wash hands after handling.

Ensure that there is adequate ventilation, especially in confined areas.

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### Fire prevention :

Handle in well-ventilated areas.

Vapours are heavier than air. They can spread along the ground and form mixtures that are explosive with air.

Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits.

Do not spray on a naked flame or any incandescent material.

Do not pierce or burn, even after use.

Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected.

Keep packages tightly closed and away from sources of heat, sparks and naked flames.

Do not use tools which may produce sparks. Do not smoke.

Prevent access by unauthorised personnel.

### Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Do not breathe in aerosols.

Packages which have been opened must be reclosed carefully and stored in an upright position.

### Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

### 7.2. Conditions for safe storage, including any incompatibilities

No data available.

### Storage

Keep out of reach of children.

Keep away from all sources of ignition - do not smoke.

Keep well away from all sources of ignition, heat and direct sunlight.

The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Storage in a dry, frost-free and well ventilated place.

### Packaging

Always keep in packaging made of an identical material to the original.

### 7.3. Specific end use(s)

No data available.

## SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Occupational exposure limits :

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
109-87-5	1000 ppm	-	-	-	-
106-97-8	1000 ppm	-	-	-	-
75-28-5	1000 ppm	-	-	-	-
74-98-6	1000 ppm	-	-	-	-

- Germany - AGW (BAuA - TRGS 900, 21/06/2010) :

CAS	VME :	VME :	Excess	Notes
109-87-5	1000 ml/m <sup>3</sup>	3200 mg/m <sup>3</sup>	2(II)	DFG
106-97-8	1000 ml/m <sup>3</sup>	2400 mg/m <sup>3</sup>	4(II)	DFG
75-28-5	1000 ml/m <sup>3</sup>	2400 mg/m <sup>3</sup>	4(II)	DFG
74-98-6	1000 ml/m <sup>3</sup>	1800 mg/m <sup>3</sup>	4(II)	DFG

- France (INRS - ED984 :2008) :

CAS	VME-ppm :	VME-mg/m <sup>3</sup> :	VLE-ppm :	VLE-mg/m <sup>3</sup> :	Notes :	TMP No :
109-87-5	1000	3100	-	-	-	84
106-97-8	800	1900	-	-	-	-

- UK / WEL (Workplace exposure limits, EH40/2005, 2007) :

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CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
109-87-5	1000 ppm	1250 ppm	-	-	-
106-97-8	600 ppm	750 ppm	-	-	-

**Derived no effect level (DNEL) or derived minimum effect level (DMEL):**

METHYLAL (CAS: 109-87-5)

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Workers.**

Dermal contact.  
Long term systemic effects.  
17.9 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Inhalation.  
Long term systemic effects.  
126.6 mg of substance/m3

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Consumers.**

Ingestion.  
Long term systemic effects.  
9.6 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Long term systemic effects.  
5.7 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

S IDENTIFICATION  
Long term systemic effects.  
39 mg of substance/m3

**Predicted no effect concentration (PNEC):**

METHYLAL (CAS: 109-87-5)

Environmental compartment:  
PNEC :

Soil.  
4.6538 mg/kg

Environmental compartment:  
PNEC :

Fresh water.  
14.577 mg/l

Environmental compartment:  
PNEC :

Sea water.  
1.4577 mg/l

Environmental compartment:  
PNEC :

Fresh water sediment.  
13.135 mg/kg

Environmental compartment:  
PNEC :

Marine sediment.  
1.3135 mg/kg

Environmental compartment:  
PNEC :

Waste water treatment plant.  
10000 mg/l

**8.2. Exposure controls**

**Personal protection measures, such as personal protective equipment**

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

**- Eye / face protection**

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles in accordance with standard EN166.

Do not spray in the direction of the eyes.

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### - Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Type of gloves recommended :

- Natural latex
- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVC (polyvinyl chloride)
- Butyl Rubber (Isobutylene-isoprene copolymer)

Not necessary at efficient use. Wash your hands after contact with skin.

### - Body protection

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

Not necessary at efficient use. Wash skin that has been in contact with the product, with water and soap.

### - Respiratory protection

Do not breathe spray. Use only in well-ventilated areas.

### Exposure controls linked to environmental protection

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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## SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

#### General information :

Physical state :	Fluid liquid. Spray.
Color :	White
Odour :	Specific

#### Important health, safety and environmental information

pH :	Not relevant.
Boiling point/boiling range :	Not relevant.
Vapour pressure (50°C) :	Not relevant.
Density :	0.691
Water solubility :	Soluble.
Melting point/melting range :	Not relevant.
Self-ignition temperature :	Not relevant.
Decomposition point/decomposition range :	Not relevant.
Chemical combustion heat :	Not specified.
Inflammation time :	Not specified.
Deflagration density :	Not specified.
Inflammation distance :	Not specified.
Flame height :	Not specified.
Flame duration :	Not specified.
Flash point :	< 0 °C
Flammability :	Extremely flammable

### 9.2. Other information

VOC (g/l) :	530.34
Pressure at 20°C :	± 3.5 bar

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## SECTION 10 : STABILITY AND REACTIVITY

### 10.1. Reactivity

No data available.

### 10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

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### 10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

Under normal conditions of storage and use, hazardous reactions will not occur.

### 10.4. Conditions to avoid

Any apparatus likely to produce a flame or to have a metallic surface at high temperature (burners, electric arcs, furnaces etc.) must not be allowed on the premises.

Avoid :

- heat
- frost

Protect from sunlight and do not expose to temperatures exceeding 50°C. Keep away from heat and sources of ignition. Storage in a dry, frost-free and well ventilated place.

### 10.5. Incompatible materials

No materials known by which a dangerous reaction can appear.

### 10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO<sub>2</sub>)

The product is stable. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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## SECTION 11 : TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

Splashes in the eyes may cause irritation and reversible damage

#### 11.1.1. Substances

##### Acute toxicity :

METHYLAL (CAS: 109-87-5)

Oral route :

LD50 = 6423 mg/kg

Species : Rat

OECD Guideline 423 (Acute Oral toxicity Acute Toxic Class Method)

Dermal route :

LD50 > 5000 mg/kg

Species : Rabbit

OECD Guideline 402 (Acute Dermal Toxicity)

##### Germ cell mutagenicity :

METHYLAL (CAS: 109-87-5)

No mutagenic effect.

##### Carcinogenicity :

METHYLAL (CAS: 109-87-5)

Carcinogenicity Test :

Negative.

No carcinogenic effect.

##### Reproductive toxicant :

METHYLAL (CAS: 109-87-5)

No toxic effect for reproduction

#### 11.1.2. Mixture

No toxicological data available for the mixture.

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**SECTION 12 : ECOLOGICAL INFORMATION**

**12.1. Toxicity**

**12.1.1. Substances**

METHYLAL (CAS: 109-87-5)

Fish toxicity :

LC50 > 1000 mg/l

Species : Danio rerio

Duration of exposure : 96 h

OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity :

EC50 > 1000 mg/l

Species : Daphnia magna

Duration of exposure : 48 h

OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

**12.1.2. Mixtures**

No aquatic toxicity data available for the mixture.

**12.2. Persistence and degradability**

Butane/Isobutane/Propane : Expected to be readily biodegradable.

**12.2.1. Substances**

METHYLAL (CAS: 109-87-5)

Biodegradability :

no degradability data is available, the substance is considered as not degrading quickly.

**12.3. Bioaccumulative potential**

Butane/Isobutane/Propane : Not expected to be dangerous for the aquatic environment.

**12.4. Mobility in soil**

Butane/Isobutane/Propane : If released into the environment, the product will rapidly disperse into the atmosphere where it will undergo photochemical degradation.

**12.5. Results of PBT and vPvB assessment**

No data available.

**12.6. Other adverse effects**

No data available.

**SECTION 13 : DISPOSAL CONSIDERATIONS**

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

**13.1. Waste treatment methods**

Do not pour into drains or waterways.

**Waste :**

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

**Soiled packaging :**

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

**SECTION 14 : TRANSPORT INFORMATION**

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2013 - IMDG 2012 - ICAO/IATA 2014).

**14.1. UN number**

1950



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**14.2. UN proper shipping name**

UN1950=AEROSOLS, flammable

**14.3. Transport hazard class(es)**

- Classification :



2.1

ADR/RID Label : Limited Quantity : 2.1 is not applicable.

**14.4. Packing group**

-

**14.5. Environmental hazards**

-

**14.6. Special precautions for user**

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	2	5F	-	2.1	-	1 L	190 327 344 625	E0	2	D

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ
	2.1	See SP63	-	SP277	F-D,S-U	63 190 277 327 344 959	E0

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	2.1	-	-	203	75 kg	203	150 kg	A145 A167 A145 A167 A802	E0
	2.1	-	-	Y203	30 kg G	-	-	A145 A167 A802	E0

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

No data available.

**SECTION 15 : REGULATORY INFORMATION**

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

**- Classification and labelling information included in section 2:**

The following regulations have been used:

- Directive 67/548/EEC and its adaptations
- Directive 1999/45/EC and its adaptations
- Directive 75/734/CEE modified by directive 2013/10/UE
- EU Regulation No. 1272/2008 amended by EU Regulation No. 487/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 758/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 944/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 605/2014.

**- Container information:**

No data available.

**- Particular provisions :**

No data available.

**15.2. Chemical safety assessment**

No data available.

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**SECTION 16 : OTHER INFORMATION**

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

**In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.**

Hazard symbols :



Extremely flammable

Risk phrase :

R 12 Extremely flammable.

Safety phrase :

S 16 Keep away from sources of ignition - No smoking.

S 2 Keep out of the reach of children.

S 46 If swallowed, seek medical advice immediately and show this container or label.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material.

S 51 Use only in well-ventilated areas.

**Title for H, EUH and R indications mentioned in section 3:**

H220 Extremely flammable gas.

H225 Highly flammable liquid and vapour.

R 11 Highly flammable.

R 12 Extremely flammable.

**Abbreviations :**

DNEL : Derived No-Effect Level

PNEC : Predicted No-Effect Concentration

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefährdungsklasse (Water Hazard Class).

GHS02 : Flame