



SAFETY DATA SHEET
According 1907/2006/EC (REACH)
453/2010/EC

FIRE FIGHTING FOAM. CLASS F FIRES

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

1.1. Product identifier:

Trade name: MINIBOMBERO

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

Aerosol to fire fighting foam. Class F fires.

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

Supplier/Manufacturer:

VS FOCUM, S.L.

Polígono Industrial de Porceyo. I-13. C/Galileo Galilei, 177. 33211 – Gijón. España.

Tlf: +34 985 30 71 45 / Fax: +34 985 16 86 39

info@vsfocum.com

www.vsfocum.com

E-mail competent person: mechave@vsfocum.com

1.4. Emergency telephone number:

+34 985 30 71 45 - Hours: 8:00 to 18:00 Monday to Friday (except holidays).

+34 620 80 86 17 – 24 hour

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture.

Classification according to Regulation (CE) No. 1272/2008:

Class	Hazard statements
Liquid gas	H280 – Contains gas under pressure; may explode if heated.

2.1.1. Main physicochemical properties: Non-flammable aerosol propellant. (see Section 9)

2.1.2. Stability and reactivity: May react with strong oxidizers. Avoid using the product on the fire of metals, electrically energized equipment and contact with materials that react with water. Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Store at temperatures not exceeding 50°C, even after used (see Section 10).

2.1.3. Toxicological information:

Eye contact: Not irritant.

Skin contact: Not irritant.

Inhalation: Not irritant.

Ingestion: Not a hazard in normal industrial use. Small amounts swallowed during normal handling operations are not likely to cause injury; swallowing large amounts may cause injury or irritation.

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2.2. Label Elements.

Labelling according to Regulation (EC) No. 1272/2008. The product is labelled according to the CLP regulation.

Hazard pictograms:



GHS04

Signal word: Warning

Hazardous ingredients:

1,1,1,2-tetrafluoroethane (R-134-a).

Hazard statements:

H280 – Contains gas under pressure; may explode if heated.

Precautionary statements:

General precautions (consumer products):

P102 – Keep out of reach of children.

Prevention:

P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251 - Do not pierce or burn, even after use.

Storage:

P410 + P412 – Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Not a hazardous aerosol content according to Directive 1999/45/EC.

2.3. Others hazards:

Results of PBT and vPvB assessment:

Components of the mixture are not considered to be persistent, bioaccumulating nor toxic (PBT).

Components of the mixture are not considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures.

Description: Aqueous mixture of surfactants and potassium acetate (Boldfoam F-40) and Non-flammable aerosol propellant (1,1,1,2-tetrafluoroethane).

Hazardous components:

Components	CAS Number; REACH/EC Number	Danger class Directive 67/548/EEC; CLP-Regulation (EC) 272/2008	Concentration range
1,1,1,2- tetrafluoroethane	811-97-2; 212-377-0	H280 Contains gas under pressure; may explode if heated	< 30%

Non Hazardous components: Potassium acetate (<35%), Fluorosurfactants (<3%) and Water (<60%)

Additional information: For the wording of the listed risk phrases refer to section 16.

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SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures.

If symptoms persist in case of doubt, seek medical advice with the MSDS of the product.

4.1.1. Inhalation: Supply fresh air; consult a doctor in case of doubt.

4.1.2. Skin contact: Take off the contaminated clothes and wash the stained skin of product with plenty of water. If skin irritation continues, consult a doctor.

4.1.3. Eyes contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

4.1.4. Swallowing: Rinse mouth with water. Spit liquid at again. Do not induce vomiting. Seek medical help.

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

No further relevant information available.

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

In the case of doubt or when malaise symptoms persist, seek for medical attention.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media.

Have emergency facilities or elements of action according to the local legislation.
Use Water, foam, carbon dioxide or dry chemical.

5.2. Special hazards arising from the substance or mixture.

Aerosol can explode because of internal pressure at temperatures exceeding 50°C. In this case, aerosols may be projected strongly during a fire. Keep containers cold spraying with water.
The combustion or the thermal decomposition of the product can generate carbon dioxide or carbon monoxide, hydrogen fluoride, fluorocarbons, carbonyl fluoride. The exposure to combustion products can be dangerous for the health.

5.3. Advice for fire fighters.

According the magnitude of the fire, it can be necessary the use of protection clothes for heat, independent respiratory equipment, gloves, protective goggles or facial mask and boots.

Additional information: Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures.

Not expose to open flame or potential ignition source. Wear individual safety protection. Particular danger of slipping on leaked/spilled product.

6.2. Environmental precautions.

Avoid the contamination of the soil, drainage systems and superficial or underground water. In the case of a great spill, inform to the competent authorities according the local legislation.

6.3. Methods and material for containment and cleaning up.

Ensure adequate ventilation. Contain spill. Cover with absorbent material. Collect spilled material and place in a closed and identified container.

6.4. Reference to other sections.

See section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See section 13 for disposal information.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling.

Avoid contact with eyes, skin or clothing. Avoid ingestion or inhalation. Wash the hands after each use. Eliminate all sources of ignition. Keep out of the reach of children. Do not pierce or burn, even after use. Do not use over burning metal or on live electrical equipment.

7.2. Conditions for safe storage, including any incompatibilities.

Store in original container or tanks designed for product storage, avoiding its evaporation and contamination with strange material. Store at temperatures between -40° C and 50° C. Local adequately ventilated.

7.3. Specific end use(s).

Do not exist particular recommendations different from already indicated for the use of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters.

Components with limit values that require monitoring at the workplace:
IOELV (European Union)

Components	Long-term value	Short-term value
1,1,1,2-tetrafluoroethane CAS: 811-97-2 CE: 212-377-0	1000ppm.	Data no available.

8.2. Exposure controls.

The usual precautionary measures should be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Do not eat, drink, smoke or sniff while aerosol discharge.

Remove all soiled and contaminated clothing immediately.

Avoid contact with eyes and skin.

After skin contact, cleanse skin thoroughly.

After contact with eyes, rinse immediately.

8.2.1. Respiratory protection:

With insufficient ventilation, use suitable breathing equipment.

8.2.2. Hand protection:

Protective gloves adapted.

8.2.3. Eye protection:

Security goggles.

8.2.4. Skin protection:

Suitable work clothes to avoid the contact with the product.

8.2.5. Environmental exposure control:

Avoid spills to the environmental.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Physical and chemical properties.

Appearance: Aerosol.

Odour: Characteristic.

Odour threshold: Not determined.

Freezing point: <-40°C

Flammability: Non-flammable aerosol propellant

Danger of explosion: Aerosol contains gas under pressure; present an explosion hazard if heated.

Gas: Vapor pressure at 50°C: 5,7bar

Physical state at normal atmospheric pressure 20°C: Gas

Critical temperature: 101,1°C.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Store at temperatures not exceeding 50°C. It can react with strong oxidants.

10.2. Chemical stability:

Stable in common environmental conditions and in the above mentioned range of temperature during its storage and manipulation.

10.3. Possibility of hazardous reactions:

Dangerous reactions don't take place when it is stored and manipulated correctly.

10.4. Conditions to avoid:

Avoid temperatures outside the range of storage (subsection 7.2.).

10.5. Incompatible materials:

Avoid use of products on burning metals, electrically-energized equipment and contact with strong oxidants and water reactive materials.

10.6. Hazardous decomposition products:

No hazardous decomposition products if instructions for storage and handling are followed.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects.

- a) Acute toxicity: LD₅₀ > 2000 mg/Kg (according composition).
- b) Irritation: Non irritating (OCDE 404, 2002).
- c) Corrosivity: Not corrosive (OCDE 404, 2002).
- d) Sensitisation: Data no available.
- e) Repeated dose toxicity: Data no available.
- f) Carcinogenicity: Data no available.
- g) Mutagen city: Data no available.
- h) Toxicity for reproduction: Data no available.

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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Mixture	LD ₅₀	CL ₅₀ mg/l. 96h	CE ₅₀ mg/l. 48h
1,1,1,2-tetrafluoroethane	>50% (inhalation)	450 Fish	980 Daphnia
Boldfoam F-40	>2.000 mg/Kg		

12.2. Persistence and degradability.

Mixture	COD	BOD ₅ /COD %5 days	Primary Biodegradation % 28 days
1,1,1,2-tetrafluoroethane	--	--	2-3%
Boldfoam F-40	337.000 mg O ₂ /l	66	82

12.3. Bio accumulative potential.

Data no available.

12.4. Mobility in soil.

Data no available. Avoid the contamination of the soil and water.

12.5. Results of PBT and vPvB assessment.

Components of the mixture are not considered to be persistent, bioaccumulating nor toxic (PBT).

Components of the mixture are not considered to be very persistent not very bioaccumulating (vPvB).

12.6. Others adverse effects.

The spill of the product will create copious quantities of foam. In the event of large spillage, let appropriate authorities know.

Ozone depletion potential (1,1,1,2- tetrafluoroethane) = 0

Global warming potential (1,1,1,2- tetrafluoroethane) = 1300

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods.

Recommendations:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Must be recycled or disposed of according to the regulations. Waste has to be classified according to the European Waste catalogue based on the identification of the waste generating source.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recomendaded cleansing agent: Water; if necessary, with cleansing agents.

SECTION 14: TRANSPORT INFORMATION

UN Number 1950 AEROSOL

2.2 Gas Non-flammable



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Road (RID)	
RID class	2
Danger code (Kemler)	20
Packaging group	---
Hazard label	2.2
Description of goods	1950 Aerosol
Air (ICAO-TI)	
ICAO class	2.2
Label	2.2
Packaging group	---
Packaging instructions	203 / Y203
Proper shipping name	Aerosol
Sea (IMDG)	
IMDG class	2.2
Label	2.2
Packaging group	---
EMS number	F-C, S-V
Marine pollutant	No
Proper shipping name	Aerosol

SECTION 15: REGULATORY INFORMATION

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

Directive 67/548/EEC: Classification, packaging and labelling of dangerous substances.

Directive 75/324/EEC: Aerosol dispensers.

Must comply with local legislation on occupational risk prevention and environment.

15.2. Chemical safety assessment.

Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Store at temperatures not exceeding 50°C.

SECTION 16: OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

16.1. Revisions.

Current Version: 3

Replaces version dated: 09/04/2015

Revision date: 17/09/2015

Reasons for amendments: Updating of hazardous raw material.

16.2. Legislation on Safety materials sheets.

This Safety Data Sheet has been developed according at Regulation (EC) No 1272/2008.

16.3. Relevant phrases

H280 – Contains gas under pressure; may explode if heated.

P102 – Keep out of reach of children.

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

P251 - Do not pierce or burn, even after use.

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16.4. Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

IMDG: International Maritime Code for Dangerous Goods.

IATA: International Air Transport Association.

16.5. Sources

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

Minimal training is recommended in the prevention of occupational hazards to personnel who will handle this product, in order to facilitate the understanding and interpretation of this safety data sheet and product labeling.