SAFETY DATA SHEET

FreezeBOSS INTENSE / EXTREME

PlumBOSS AUSTRALIA PTY LTD

Catalogue number: **FBI-E500**
Version No: **1.2**
Issue date: **6/12/2018**
Safety Data Sheet according to WHS and ADG requirements

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

Product Identifier

Product name	FreezeBOSS INTENSE / EXTREME Replacement Spray Can 500g (415ml)
Chemical Name	1,1,1,2-tetrafluoroethane
Synonyms	FBI-E500
Other means of identification	Not Available

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

Relevant identified uses	Pipe freezer

Details of the manufacturer/importer

Registered company name	PlumBOSS AUSTRALIA PTY LTD
Address	53 Taylor Street Bulimba QLD 4171 Australia
Telephone	(07) 3373 3500
Fax	(07) 3373 3533
Website	www.plumboss.com.au
Email	info@plumboss.com.au

Emergency telephone number

Association / Organisation	Poisons Information Centre
Emergency telephone numbers	13 1126
Other emergency telephone numbers	(07) 3373 3500

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

NON-HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the Model WHS Regulations and the ADG Code.

Poisons Schedule	Not Applicable
GHS Classification [1]	Not Applicable

Label elements

Hazard pictogram(s)	Not applicable
SIGNAL WORD	**NOT APPLICABLE**

Hazard statement(s)

AUH044	Risk of explosion if heated under confinement.

Precautionary statement(s) Prevention

P102	Keep out of reach of children

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501	Dispose of contents / container in accordance with local government regulations

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

CAS No	% [weight]	Name
811-97-2	60-100	1,1,1,2-tetrafluoroethane

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If aerosols come in contact with the eyes Immediately hold the eyelids apart and flush the eye with fresh running water Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs.. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If solids or aerosol mists are deposited upon the skin: Flush skin and hair with running water (and soap if available). DO NOT use solvents. Seek medical attention in the event of irritation.
Inhalation	If aerosols, fumes or combustion products are inhaled: Remove to fresh air. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Seek medical advice / attention.
Ingestion	Not considered a normal route of entry. Do not induce vomiting Avoid giving alcohol, milk or oils. If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

Extinguishing media	Carbon dioxide, foam, dry chemical, water fog or water mist. DO NOT use water jet.

Special hazards arising from the substrate or mixture

Fire incompatibility	Avoid contamination with oxidising agents

Advice for firefighters

Fire Fighting	The product is non-combustible. Wear self-contained breathing apparatus and protective gloves.
Fire/Explosion Hazard	Heating may cause expansion or decomposition leading to violent rupture of containers. Decomposes on heating and may emit toxic fumes of carbon monoxide, carbon dioxide, hydrogen fluoride and other pyrolysis products typical of burning organic material.
HAZCHEM	2YE

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Spills	Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Wear protective clothing, impervious gloves and safety glasses. Collect residues and place in sealed and labelled drums for disposal in accordance with local government regulations. Shut off all possible sources of ignition and increase ventilation. Soak up spill with non-combustible absorbent material. such as vermiculite or sand If safe to do so, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated. Undamaged cans should be gathered and stowed safely. Prevent, spillage from entering drains and water-courses, using any means available DO NOT enter confined space where gas may have collected.

	Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials such as oxidising agents. When handling, DO NOT eat, drink or smoke. DO NOT incinerate or puncture aerosol cans. DO NOT spray directly on humans, exposed food or food utensils Protect container against physical damage Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can
Other information	Do not store at above 50˚C. Keep out of sunlight

Conditions for safe storage, including any incompatibilities

Suitable container	Aerosol cans
Storage incompatibility	Oxidising agents e.g. bleach

PACKAGE MATERIAL INCOMPATIBILITIES
Not Available

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	1,1,1,2-tetrafluoroethane	1,1,1,2-tetrafluoroethane	1000 ppm / 4240 mg/m3	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material Name	TEEL-1	TEEL-2	TEEL-3
1,1,1,2-tetrafluoroethane	HFC 134a (Tetrafluroethane,1,1,1,2-)	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
1,1,1,2-tetrafluoroethane	Not Available	Not Available

Exposure controls

Appropriate engineering controls	Use with good ventilation. If ventilation is poor use a local exhaust fan.
Personal protection	
Eye and face protection	Safety glasses with side shields or chemical goggles Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly
Hands/feet protection	Wear general protective gloves
Respiratory protection	If engineering controls are not effective in controlling airborne exposure, then an approved respirator with a replaceable organic vapours filter should be used

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Colourless aerosol		
Physical state	Compressed liquid	**Relative density (Water = 1)**	Not Available
Odour	Mild	**Molecular weight (g/mol)**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature(°C)**	Not Applicable
pH (as supplied)	Not applicable	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Partition coefficient n-octanol / water**	Not Available
Flash point (°C)	Not Applicable	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not flammable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Viscosity (cSt)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water (g/L)	Not Available	**pH as a solution**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Stable under normal conditions Unstable in the presence of incompatible material Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
Ingestion	Not normally a hazard due to physical form of product.
Skin Contact	There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. May cause frostbite injuries caused by uncontrolled release of compressed gas resulting in inflammation and tissue destruction
Eye	May cause irritation.
Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Main route of exposure to the gas in the workplace is by inhalation.

Toxicity

	TOXICITY	IRRITATION
1,1,1,2-tetrafluoroethane	Inhalation (rat) LC50: 1500 mg/l/4h [2]	Not Available

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

	END POINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
1,1,1,2-tetrafluoroethane	LC50	96	Fish	29.671mg/L	3
	EC50	48	Crustacea	980mg/L	5
	EC50	96	Algae or other aquatic plants	97.260mg/L	3
	NOEC	72	Algae or other aquatic plants	ca.13.2mg/L	2

LEGEND:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

DO NOT discharge into sewers or waterways

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
1,1,1,2-tetrafluoroethane	HIGH	HIGH

Bio accumulative potential

Ingredient	Bioaccumulation
1,1,1,2-tetrafluoroethane	LOW (LogKOW = 1.68)

Mobility in soil

Ingredient	Mobility
1,1,1,2-tetrafluoroethane	LOW (KOC = 96.63)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / packaging disposal	DO NOT incinerate or puncture aerosol cans Product residues and containers should be disposed of in accordance with local government regulations.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG):

UN number	1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	Class: 2.2 Sub risk: Not Applicable
Packing group	Not Applicable
Environmental hazard	Not Applicable
Special precautions for user	Special provisions: 63 190 277 327 344 381 Limited quantity: 1000ml

Air transport (ICAO-IATA / DGR)

UN number	1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	ICAO/IATA Cass: 2.2 ICAO/IATA Sub risk: Not Applicable ERG code: 2L
Packing group	Not Applicable
Environmental hazard	Not Applicable
Special precautions for user	Special provisions: A98 A145 A167 A802 Cargo Only Packing Instructions: 203 Cargo Only Maximum Qty / Pack: 150 kg Passenger and Cargo Packing Instructions: 203 Passenger and Cargo Maximum Qty / Pack: 75 kg Passenger and Cargo Limited Packing Instructions: Y203 Passenger and Cargo Limited Maximum Qty/ Pack: 30 kg G

Sea Transport (IMDR- Code /GGV See)

UN number	1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	IMDG Cass: 2.2 IMDG Sub risk: Not Applicable
Packing group	Not Applicable
Environmental hazard	Not Applicable
Special precautions for user	EMS Number: F-D, S-U Special Provisions: 63 190 277 327 344 381 959 Limited Quantities: 1000 ml

SECTION 15 REGULATORY INFORMATION

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

1,1,1,2-TETRAFLUOROETHANE (811-97-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Inventory of Chemical Substances (AICS)

SECTION 16 OTHER INFORMATION

Revision Date	28/11/2018
Initial Date	23/06/2014

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at: www.chemwatch.net/references

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC-TWA;	Permissible Concentration-Time Weighted Average
PC-STEL:	Permissible Concentration-Short Term Exposure Limit
IARC:	International Agency for Research on Cancer
ACGIH:	American Conference of Government Industrial Hygienists
STEL:	Short Term Exposure Limit
TEEL:	Temporary Emergency Exposure Limit
IDLH:	Immediate Danger to Life or Health Concentrations
OSF:	Odour Safety Factor
NOAEL:	No Observed Effects Level
TLV:	Threshold Limit Value
LOD:	Limit Of Detection
OTV:	Odour Threshold Value
BCF:	Bio Concentration Factors
BEI:	Biological Exposure Index

End of SDS