

SAFETY DATA SHEET

according to Regulation (EU) 2015/830

Page 1/7

Harp[®] 134a

Revision 0

Revision date 2017-06-21

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	Harp [®] 134a
REACH Registration Number	01-2119459374-33
CAS No.	811-97-2
EC No.	212-377-0

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

Product Use	[SU3] Industrial uses: Uses of substances as such or in preparations at industrial sites; ----- [SU22] Professional uses: Public domain (administration, education, entertainment, services, craftsmen);
Restricted use	[SU21] Consumer uses: Private households (= general public = consumers);
Description	Gas.

1.3. Details of the supplier of the safety data sheet

Company	Harp International Limited
Address	Gellihirion Industrial Estate Pontypridd Rhondda Cynon Taff CF37 5SX UK
Web	www.harpintl.com
Telephone	+44 (0)1443 842 255
Fax	+44 (0)1443 841 805
Email	harp@harpintl.com
Email address of the competent person	safety@harpintl.com

1.4. Emergency telephone number


Emergency telephone number	+44 (0) 1270 502891 24 Hours
-----------------------------------	---------------------------------

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - EC 1272/2008	Compressed gas: H280;
---	-----------------------

2.2. Label elements

Hazard pictograms	
--------------------------	---

Harp® 134a

Revision 0

Revision date 2017-06-21

2.2. Label elements

Signal Word	Warning
Hazard Statement	Compressed gas: H280 - Contains gas under pressure; may explode if heated.
Precautionary Statement: Storage	P410+P403 - Protect from sunlight. Store in a well-ventilated place.

2.3. Other hazards

Other hazards	Asphyxiant in high concentrations. May cause cold burns/frostbite.
---------------	--

SECTION 3: Composition/information on ingredients

3.1. Substances

67/548/EEC / 1999/45/EC

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification	M-factor.
Harp® 134a (1,1,1,2-Tetrafluoroethane (HFC 134a))		811-97-2	212-377-0	01-2119459374-33	90 - 100%		

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification	M-factor.
Harp® 134a (1,1,1,2-Tetrafluoroethane (HFC 134a))		811-97-2	212-377-0	01-2119459374-33	90 - 100%	Compressed gas: H280;	

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air.
Eye contact	Rinse immediately with plenty of water.
Skin contact	Frostbite: treat as thermal burns.
Ingestion	Ingestion is not considered a potential route of exposure.

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

Inhalation	Seek medical attention if irritation or symptoms persist.
Eye contact	Seek medical attention if irritation or symptoms persist.
Skin contact	Frostbite: treat as thermal burns.
Ingestion	Ingestion is not considered a potential route of exposure.

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

Inhalation	If you feel unwell, seek medical advice (show the label where possible).
Eye contact	Seek medical attention if irritation or symptoms persist.
Skin contact	Seek medical attention if irritation or symptoms persist.
Ingestion	Ingestion is not considered a potential route of exposure.

SECTION 5: Firefighting measures

5.1. Extinguishing media

	Use extinguishing media appropriate to the surrounding fire conditions.
--	---

5.2. Special hazards arising from the substance or mixture

	This product is not flammable in air under ambient conditions of temperature and pressure. Certain mixtures of the product and air under pressure may be flammable. At high temperature :, Thermal decomposition giving toxic and corrosive products :, Gaseous hydrogen fluoride (HF)., Carbon oxides.
--	---

5.3. Advice for firefighters

	Wear self contained breathing apparatus and protective clothing. Cool containers / tanks with water spray. Ensure a system for the rapid emptying of containers. In case of fire nearby, remove
--	---

Harp® 134a

Revision 0

Revision date 2017-06-21

5.3. Advice for firefighters

exposed containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation of the working area. Avoid contact with skin and eyes. Evacuate personnel to a safe area. Wear self contained breathing apparatus and protective clothing. Vapours are heavier than air.

6.2. Environmental precautions

Do not release into the environment.

6.3. Methods and material for containment and cleaning up

Recovery: Allow to evaporate.
Elimination: See chapter 13.

6.4. Reference to other sections

See section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION for further information.
See section 13. DISPOSAL CONSIDERATIONS for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ensure adequate ventilation of the working area. Avoid contact with eyes and skin. Adopt best Manual Handling considerations when handling, carrying and dispensing. Keep away from sources of ignition - No smoking. Do not eat, drink or smoke in areas where this product is used or stored. When using do not eat or drink. Wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed. Keep in a cool, dry, well ventilated area. Store in correctly labelled containers. Keep away from sources of ignition - No smoking. Store out of direct sunlight. Storage temperature: <45°C.

Suitable packaging

Stainless steel. Steel.

7.3. Specific end use(s)

See section 1.2. Relevant identified uses of the substance or mixture and uses advised against for further information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure controls.

8.1.1. Exposure Limit Values

Harp® 134a (1,1,1,2-Tetrafluoroethane (HFC 134a))	WEL 8-hr limit ppm: 1000	WEL 8-hr limit mg/m3: 4240
	WEL 15 min limit ppm: -	WEL 15 min limit mg/m3: -
	WEL 8-hr limit mg/m3 total - inhalable dust:	WEL 15 min limit mg/m3 total - inhalable dust:
	WEL 8-hr limit mg/m3 total - respirable dust:	WEL 15 min limit mg/m3 total - respirable dust:


8.2. Exposure controls

Harp® 134a

Revision 0

Revision date 2017-06-21

8.2. Exposure controls

	
8.2.1. Appropriate engineering controls	Ensure adequate ventilation of the working area.
8.2.2. Individual protection measures	Wear protective clothing.
Eye / face protection	Approved safety goggles.
Skin protection - Handprotection	Wear suitable gloves.
Skin protection - Other	Wear suitable protective clothing.
Respiratory protection	Wear suitable respiratory equipment when necessary.
Occupational exposure controls	Keep away from food, drink and animal feedingstuffs.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Gas
Colour	Colourless
Odour	Slight
Odour threshold	No data available
Freezing Point	No data available
Evaporation rate	No data available
Water solubility	No data available
Fat Solubility	No data available
Soluble in	No data available
Partition coefficient (n-octanol/water)	No data available
Partition coefficient	No data available
Autoignition temperature	> 743 °C
Decomposition temperature	> 370 °C
Vapour pressure	= 0.574 MPa
Vapour density	= 4.24 kg/m ³
Relative density	= 1.21 (H ₂ O = 1 @ 20 °C)
Initial boiling point	- 26 °C
Melting point	- 108 °C
Flash point	Not applicable.
pH	Not applicable.
Flammability (solid, gas)	Not applicable.
Viscosity	Not applicable.
Explosive properties	Not applicable.
Oxidising properties	Not applicable.
Solubility	No data available

9.2. Other information

Harp® 134a

Revision 0

Revision date 2017-06-21

9.2. Other information

VOC (Volatile organic compounds)	Not relevant
Conductivity	No data available
Surface tension	No data available
Gas group	No data available
Benzene Content	No data available
Lead content	No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

	Stable under normal conditions. The gaseous product in presence of air can form, under certain conditions of temperature and pressure, a flammable mixture.
--	---

10.2. Chemical stability

	Stable under normal conditions. The gaseous product in presence of air can form, under certain conditions of temperature and pressure, a flammable mixture.
--	---

10.3. Possibility of hazardous reactions

	No data is available on this product.
--	---------------------------------------

10.4. Conditions to avoid

	Keep away from heat and sources of ignition. Avoid contact with flames and red hot metallic surfaces.
--	---

10.5. Incompatible materials

	Alkaline hydroxides. Alkaline earth metals. Strong oxidising agents. Finely divided metals.
--	---

10.6. Hazardous decomposition products

	At high temperature ; Thermal decomposition giving toxic and corrosive products ; Gaseous hydrogen fluoride (HF)., Carbon oxides. Decomposition temperature: >370°C.
--	--

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	Slightly harmful by inhalation. As with other volatile aliphatic halogenated compounds, through vapour accumulation and/or inhalation of large quantities, the product can cause ; Loss of consciousness and cardiac disorders aggravated by stress and lack of oxygen, risk of mortality.
Skin corrosion/irritation	Ejection of liquefied gas : frostbite possible.
Serious eye damage/irritation	Ejection of liquefied gas : frostbite possible.
Respiratory or skin sensitisation	No data available.
Germ cell mutagenicity	No data available.
Carcinogenicity	No data available.
Reproductive toxicity	No data available.
STOT-single exposure	No data available.
STOT-repeated exposure	No data available.
Aspiration hazard	No data available.
Repeated or prolonged exposure	No data available.

11.1.4. Toxicological Information

	No data available
--	-------------------

SECTION 12: Ecological information

Harp® 134a

Revision 0
Revision date 2017-06-21

12.1. Toxicity

No data available

12.2. Persistence and degradability

Not readily biodegradable.

12.3. Bioaccumulative potential

Does not bioaccumulate.

Partition coefficient

Harp® 134a No data available

12.4. Mobility in soil

No data is available on this product.

12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating, toxic (PBT), nor very persistent, very bioaccumulating (vPvB).

12.6. Other adverse effects

Global warming potential (GWP): Global warming potential with respect to CO₂ = 1430 (IPCC Assessment Report 4).
Ozone depletion potential: Ozone depletion potential; ODP; (R-11 = 1), Value:.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of in compliance with all local and national regulations.

Disposal methods

Contact a licensed waste disposal company.

SECTION 14: Transport information

Hazard pictograms



14.1. UN number

UN3159

14.2. UN proper shipping name

1,1,1,2-TETRAFLUOROETHANE

14.3. Transport hazard class(es)

ADR/RID	2
Subsidiary risk	-
IMDG	2.2
Subsidiary risk	-
IATA	2.2
Subsidiary risk	-

14.4. Packing group

Packing group -

Harp® 134a

Revision 0

Revision date 2017-06-21

14.5. Environmental hazards

Environmental hazards	No
Marine pollutant	No

14.6. Special precautions for user

	No data is available on this product.
--	---------------------------------------

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

	No data is available on this product.
--	---------------------------------------

ADR/RID

Hazard ID	20
Tunnel Category	(C/E)

IMDG

EmS Code	F-C S-V
----------	---------

IATA

Packing Instruction (Cargo)	200
Maximum quantity	150 kg
Packing Instruction (Passenger)	200
Maximum quantity	75 kg

SECTION 15: Regulatory information

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

Regulations	REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.
-------------	---

15.2. Chemical safety assessment

	No data is available on this product.
--	---------------------------------------

SECTION 16: Other information

Other information

Text of Hazard Statements in Section 3	Compressed gas: H280 - Contains gas under pressure; may explode if heated.
--	--

Further information

	The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.
--	--