SAFETY DATA SHEET

Regulation (EC) No 1907/2006 (REACH), Annex II
(COMMISSION REGULATION (EU) No 453/2010)

Version 1 **Issue Date** 14-Nov-2014
Product Name Jincool® HFC-134a **Revision date** 14- Nov-2014

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

1.1. Product identifier

Product Name	Jincool® HFC-134a
CAS No	811-97-2
EC No	212-377-0
REACH registration number	01-2119459374-33-0006

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

Recommended Use	Refrigerant Foaming agent Aerosol
Uses advised against	No information available

1.3. Details of the supplier of the safety data sheet

Only representative	REACH24H CONSULTING GROUP
Address	Suite 1E, Paramount Court, Corrig Road, Sandyford, Dublin 18, Ireland
E-mail	Info@reach24h.com
Supplier	Sinochem Environmental Protection Chemicals (Taicang) Co., Ltd
Address	No.18, Binjiang Road, Shihua Park, Taicang, Jiangsu, PR of China
Postal Code	215433
Phone	+86-0512-53713136
FAX	+86-0512-53713177
E-mail	yuying@sinochem.com
Importer	
Address	
Postal Code	
Phone	
FAX	
E-mail	

1.4. Emergency telephone number

+86-0512-53713126, +86-0512-53713105 (Only office hours available.)
+86-0512-53713125 (outside office hours)
24-hour Emergency telephone:+86-13306223219

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Gases under pressure Liquefied gas - (H280)

Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

2.2. Label elements

Symbols/Pictograms

Signal word	Warning
Hazard Statements	Not applicable H280 - Contains gas under pressure; may explode if heated
Precautionary Statements	P410 + P403 - Protect from sunlight. Store in a well-ventilated place

2.3. Other hazards

No information available

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical Name	EC No	CAS No	Weight-%	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,1,1,2-Tetrafluoroethane	212-377-0	811-97-2	≥99.5	Not classified	Liq. Gas (H280)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Skin Contact

Wash with plenty of water. Clothing frozen to the skin should be thawed before being removed. In case of contact with liquefied gas, thaw frosted parts with lukewarm water. If skin irritation persists, call a physician.

Eye contact

IF IN 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.

Ingestion

Not an expected route of exposure. Do NOT induce vomiting. Rinse mouth. Get medical attention.

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

Symptoms may include tightness in the chest, flushing, headache, nausea, vomiting, respiratory depression, weakness, irregular heartbeat, abdominal pain, convulsions, and shock

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.

5.2. Special hazards arising from the substance or mixture
Thermal decomposition can lead to release of toxic/corrosive gases and vapors.
Hydrogen fluoride.

5.3. Advice for firefighters
Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate personnel to safe areas.
Avoid contact with skin, eyes or clothing.
Ensure adequate ventilation, especially in confined areas.
Remove all sources of ignition.
Do not touch damaged packages or spilled material.
Stop leak if you can do it without risk.

6.2. Environmental precautions
Prevent entry into waterways, sewers, basements or confined areas.

6.3. Methods and material for containment and cleaning up
Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4. Reference to other sections
See Section 7 for more information
See section 8 for more information
See section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.
Avoid contact with skin, eyes or clothing.
Ensure adequate ventilation, especially in confined areas.
Remove all sources of ignition.
Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

7.2. Conditions for safe storage, including any incompatibilities
Protect from sunlight.
Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)
Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical Name	Austria	United Kingdom	Switzerland	Spain	Germany
1,1,1,2-Tetrafluoroethane 811-97-2	STEL 4000 ppm STEL 16800 mg/m^3 TWA: 1000 ppm TWA: 4200 mg/m^3	TWA: 1000 ppm TWA: 4200 mg/m^3	TWA: 1000 ppm TWA: 4200 mg/m^3	-	STEL 8000 ppm STEL 33600 mg/m^3 TWA: 1000 ppm TWA: 4200 mg/m^3

Derived No Effect Level (DNEL)

Inhalation	Worker - inhalative, long-term - systemic	13936 mg/m³
	Consumer - inhalative, long-term - systemic	mg/m³

Predicted No Effect Concentration (PNEC)

Fresh Water	0.1 mg/L
Sea Water	0.01 mg/L
Freshwater sediment	0.75 mg/kg sediment dw
Impact on Sewage Treatment	73 mg/L

8.2. Exposure controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles)
Hand Protection	Wear protective gloves
Skin and body protection	Suitable protective clothing
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquefied gas
Color	colorless
Odor	Slight
Odor Threshold	No information available
pH	7.0
Melting point/freezing point	-101 - 103°C at 1013 hPa
Boiling point / boiling range	-26.1°C at 1013 hPa
Flash point	No information available
Evaporation rate	CL4 = 1 (Greater than 1)
Flammability (solid, gas)	Not flammable
Flammability Limit in Air	Not flammable
Vapor Pressure	5.74 Bar
Vapor density	3.52 (25°C air=1)
Density	1.21 g/cm³ (25°C-liquid density)
Relative density	No information available
Bulk density	No information available
Specific gravity	No information available
Water solubility	1 g/L (25°C pH=7)
Partition coefficient	Log Pow = 1.06 (25°C)
Autoignition temperature	>743°C (1atm)
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	Not an explosive
Oxidizing properties	Not applicable

9.2. Other information

No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability
Stable under normal conditions. Hazardous polymerization does not occur.

10.3. Possibility of hazardous reactions
None under normal processing.

10.4. Conditions to avoid
Extremes of temperature and direct sunlight. Heat, flames and sparks.

10.5. Incompatible materials
Alkali metal alloys. Finely powdered metals.

10.6. Hazardous decomposition products
Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Hydrogen fluoride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
1,1,1,2-Tetrafluoroethane	-	-	1500000 mg/m^3/4h (Rat)

Skin corrosion/irritation
Non-irritating to the skin.

Serious eye damage/eye irritation
No eye irritation.

Sensitization
No sensitization responses were observed.

Germ cell mutagenicity
Not classified.

Carcinogenicity
Not classified

Reproductive toxicity
Not classified.

STOT - single exposure
Not classified.

STOT - repeated exposure
Not classified.

Aspiration hazard
Not classified.

SECTION 12: Ecological information

12.1. Toxicity

Chemical Name	Algae/aquatic plants EC50	Fish LC50	Crustacea EC50
1,1,1,2-Tetrafluoroethane	142 mg/L/96h (green algae)(weight of evidence)	450 mg/L/96h (Oncorhynchus mykiss)	980 mg/L/48h (Daphnia magna)

12.2. Persistence and degradability
Not readily biodegradable.

12.3. Bioaccumulative potential
Material does not bioaccumulate.

12.4. Mobility in soil
No information available.

12.5. Results of PBT and vPvB assessment
This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

12.6. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Empty containers should be taken for local recycling, recovery or waste disposal.

SECTION 14: Transport information

14.1 UN Number	UN 3159
14.2 Proper shipping name	1,1,1,2-Tetrafluoroethane
14.3 Hazard Class	2.2
14.4 Packing Group	Not applicable
14.5 Environmental hazards	Not applicable
14.6 Special precautions	No information available
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

SECTION 15: Regulatory information

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

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
Take note of Directive 94/33/EC on the protection of young people at work
Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

International Inventories

Component	TSCA	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
1,1,1,2-Tetrafluoroethane 811-97-2 (99.5)	X	X	X	X	X	X	X	X

"-" Not Listed
"X" Listed

15.2. Chemical safety assessment
A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Issue Date	13-Mar-2014
Revision date	13-Mar-2014
Revision Note	Not applicable

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA - TWA (time-weighted average)
STEL - STEL (Short Term Exposure Limit)
Ceiling - Maximum limit value
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

Full text of H-Statements referred to under section 3

H280 - Contains gas under pressure; may explode if heated

Full text of R-phrases referred to under sections 2 and 3

Not classified

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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 process, unless specified in the text.

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