



ACCORDING TO US CFR 1910.1200

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

1.1 Product identifier

Product Name	2,2-dichloro-1,1,1-trifluoroethane (R-123).
Synonym(s)	DICHLOROTRIFLUOROETHANE, HCFC-123, Refrigerant 123.
CAS No.	306-83-2
EC No.	206-190-3

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

Identified Use(s)	Refrigerant.
Uses Advised Against	Not known.

1.3 Details of the supplier of the safety data sheet

Company Identification	Hudson Technologies Company
Address	PO Box 1541 One Blue Hill Plaza Pearl River, New York USA
Postal code	10965
Telephone:	+1 (800) 953 2244
Fax	+1 (845) 512 6070
E-mail	information@hudsontech.com

1.4 Emergency telephone number

Emergency Phone No.	+1 (800) 501 4376
CHEMTREC (U.S.)	+1 (800) 424 9300
INTERNATIONAL	+1 (703) 527 3887

2.3 Other hazards

May cause asphyxiation when concentrations are sufficient to reduce oxygen below safe breathing levels.

May cause frost-bite.

2.4 Additional Information

This SDS is available in languages other than English.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT(S)	Common Names	CAS No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
2,2-dichloro-1,1,1-trifluoroethane	DICHLOROTRIFLUOROETHANE, HCFC-123, Refrigerant 123.	306-83-2	100	STOT SE 2 H371 STOT RE 2 H373 Ozone. 1 H420	GHS07 GHS08

4. SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

- Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if necessary. If breathing has stopped, apply artificial respiration.
- Skin Contact: Flush skin with large amounts of water. Thaw frosted parts with lukewarm water. Do not rub affected area. If symptoms persist, obtain medical attention.
- Eye Contact: Flush eyes with water for at least 15 minutes while holding eyelids open. If symptoms persist, obtain medical attention.
- Ingestion: Wash out mouth with water. Get medical advice/attention if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: High concentrations: Irregular heartbeats,



SAFETY DATA SHEET

04-Apr-2017

Unconsciousness, Death.

4.3 Indication of any immediate medical attention and special treatment needed

IF exposed or concerned: Call a POISON CENTER/doctor.

Notes to a physician: Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with special caution.

5. SECTION 5: FIREFIGHTING MEASURES

Non-flammable.

5.1 Extinguishing media

Suitable Extinguishing media As appropriate for surrounding fire.

Unsuitable extinguishing media None.

5.2 Special hazards arising from the substance or mixture

The product should not be allowed to exist with air above atmospheric pressure or at high temperatures; or in an oxygen enriched environment. Decomposes in a fire giving off toxic fumes: Carbonyl fluoride, Carbonyl halides, Hydrofluoric Acid.

5.3 Advice for fire-fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions. Keep containers cool by spraying with water if exposed to fire.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate area. Shut off leaks if without risk. Ensure adequate ventilation. Do not breathe vapour. Wear appropriate personal protective equipment, avoid direct contact.

6.2 Environmental precautions

Do not release large quantities into the surface water or into drains.

6.3 Methods and material for containment and cleaning up

Absorb spillage in suitable inert material.

6.4 Reference to other sections

See Also Section 8, 13.

7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide adequate ventilation. Do not breathe vapour. Wear protective gloves/protective clothing/eye protection/face protection. Do not drag, roll, slide or drop cylinders. Use a suitable hand truck design for cylinder movement. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. Never insert an object into valve cap openings. Doing so may damage valve causing a leak to occur. Secure cylinders in an upright position at all times, close all valves when not in use. Keep closed even when empty. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

Store locked up.

Storage temperature <125°F (<52°C)

Storage life Stable under normal conditions.

Incompatible materials Aluminium, Metals.

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits None assigned.

8.2 Exposure controls

Appropriate engineering controls Use with ventilation, local exhaust ventilation or breathing protection.

Personal protection equipment

Wear suitable eye/face protection.



Eye Protection



Skin protection

Wear suitable gloves.



Respiratory protection

Wear suitable respiratory protective equipment.

Thermal hazards

Not applicable.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Liquid.
	Color: Colorless.
Odor	Slight ethereal.
Odor threshold	Not established.
pH	Neutral.
Melting point/freezing point	-160.6°F (-107 °C)
Initial boiling point and boiling range	82°F (27.8 °C)
Flash Point	Not applicable.
Evaporation rate	> 1
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapor pressure	13psi @ 25°C (77°F)
Vapor density	5.3 @ 25°C (77°F)
Density	1456 kg/m ³ @ 25°C (77°F)
Relative density	1.47
Solubility(ies)	Solubility (Water) : Soluble. Solubility (Other): Not available.
Partition coefficient: n-octanol/water	2.17
Auto-ignition temperature	Not applicable.
Decomposition Temperature (°C)	> 752°F (>400°C)
Viscosity	Not available.
Explosive properties	Not explosive.



SAFETY DATA SHEET

04-Apr-2017

Oxidizing properties	Not oxidizing.
9.2 Other information	
Percent Volatile (%)	100%
Volatile Organic Compound Content (%)	Gas.

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	. Stable under normal conditions. Certain mixtures of HCFCs or HFCs with chlorine may become flammable or reactive under certain conditions.
10.2 Chemical Stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	No hazardous reactions known if used for its intended purpose.
10.4 Conditions to avoid	Keep away from heat and direct sunlight.
10.5 Incompatible materials	Aluminium, Metals.
10.6 Hazardous decomposition product(s)	Halogens, halogen acids and possibly carbonyl halides.

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	
Acute toxicity - Ingestion	Low acute toxicity.
Acute toxicity - Skin Contact	Low acute toxicity. LD50 (rabbit) = >2000mg/kg
Acute toxicity - Inhalation	Low acute toxicity. LD50 (rat) = >9000mg/kg
Skin corrosion/irritation	Mild irritant
Serious eye damage/irritation	Moderate irritant
Skin sensitization data	Not classified.
Respiratory sensitization data	Not classified.



SAFETY DATA SHEET

04-Apr-2017

Germ cell mutagenicity	There is no evidence of mutagenic potential.
Carcinogenicity	No evidence of carcinogenicity.
Reproductive toxicity	Not classified.
Lactation	Not classified.
STOT - single exposure	May cause damage to organs .
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure: Liver, Central nervous system.
Aspiration hazard	Not classified.
11.2 Other information	Not known.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity - Aquatic invertebrates	Low toxicity to invertebrates. EC50 (48 hour) (Daphnia magna): 17.2mg/l
Toxicity - Fish	Low toxicity to fish. LC50 (96 hour) (Rainbow trout): 55.5mg/l
Toxicity - Algae	Low toxicity to algae.
Toxicity - Sediment	Not classified.

Compartment

Toxicity - Terrestrial	Not classified.
------------------------	-----------------

Compartment

12.2. Persistence and Degradation

Not readily biodegradable. Persistent.

12.3. Bioaccumulative potential

The substance has low potential for bioaccumulation.

12.4. Mobility in soil

Soluble in water. The substance is predicted to have high mobility in soil.

12.5 Other adverse effects

Harms public health and the environment by destroying ozone in the upper atmosphere.

13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Do not reuse empty containers without commercial cleaning or



SAFETY DATA SHEET

04-Apr-2017

reconditioning. Refer to manufacturer/supplier for information on recovery/recycling.

13.2 Additional Information

Disposal should be in accordance with local, state or national legislation.

R-123 is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling

14. SECTION 14: TRANSPORT INFORMATION

NOT CLASSIFIED AS DANGEROUS FOR TRANSPORT.

15. SECTION 15: REGULATORY INFORMATION

15.1 Federal

Toxic and hazardous substances Not listed.

(29 CFR 1910; Subpart Z)

National emission standards for Not listed.

hazardous air pollutants (40 CFR

61.01)

Title III Consolidated List of Lists 2,2-dichloro-1,1,1-trifluoroethane
(CAS No.: 306-83-2)

TSCA (Toxic Substance Control 2,2-dichloro-1,1,1-trifluoroethane
Act) (CAS No.: 306-83-2)

SARA 313 Toxic Chemicals 2,2-dichloro-1,1,1-trifluoroethane
(CAS No.: 306-83-2)

CAA 602 - Ozone Depleting 2,2-dichloro-1,1,1-trifluoroethane
Substances (ODS) (CAS No.: 306-83-2) – Class II ODS.

15.2 State

State Right to Know Lists Listed in: New Jersey.

Proposition 65 (California) Not listed.

15.3 Other

OSPAR List of Chemicals for Not listed.

Priority Action

NTP (National Toxicology Program) Not listed.

OSHA Not listed.

(List of Highly Hazardous Chemicals, Toxics and Reactives)

IARC (International Agency for Research on Cancer) Not listed.

16. SECTION 16: OTHER INFORMATION

The following sections contain 1-16 revisions or new statements:

NFPA		HMIS	
Health	1	Health	1
Fire	0	Flammability	0
Instability	1	Physical hazards	1

LEGEND:

Hazard Pictogram(s)



GHS07

Hazard Statement(s)



GHS08

H371: May cause damage to organs.

H373: May cause damage to organs through prolonged or repeated exposure .

Precautionary Statement(s)

P260: Do not breathe vapour.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P308+P311: IF exposed or concerned: Call a POISON CENTER/doctor.

P314: Get medical advice/attention if you feel unwell.



SAFETY DATA SHEET

04-Apr-2017

P405: Store locked up.

Additional Information required by Federal Standard 313 Rev. E:

Contract or Solicitation Number: SPE4A6-16-D-0226

Manufacturer/Contractor CAGE: 7DSQ0

National Stock Number (NSN): 6830013913106

Specification Reference:

Disclaimers

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Hudson Technologies Company gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Hudson Technologies Company accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.