

SAFETY DATA SHEET

HCS-2012 APPENDIX D TO §1910.1200

Version 2.0.0
Product Name R508B

Issue Date 06-May-2016
Revision date 14-August-2018

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

Product identifier

Product Name R508B

Other means of identification

No information available.

Recommended use of the chemical and restrictions on use

Recommended Use Refrigerant for professional use in ultra-low temperature freezers.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Eppendorf AG
Address Barkhausenweg 1
D-22339 Hamburg
Postal Code D-22339
Phone +49 40 53801-0
Information provided by Eppendorf Application-Hotline
telephone/fax: +49 1803 66 67 89 / +49 4053 99 01 25
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Importer Eppendorf North America, Inc.
Address 102 Motor Parkway
Postal Code Hauppauge, NY 11788-5178, USA
Phone +1 800 645 3050
FAX +1 516 334 7506
E-mail info@eppendorf.com

Emergency telephone number

For medical advice (in German and English):
+49 (0)551 192 40 (Giftinformationszentrum Nord)

2. HAZARDS IDENTIFICATION

GHS Classification

Gases under pressure Liquefied gas
Specific target organ toxicity (single exposure) Category 3

Label elements

Symbols/Pictograms



Signal word Warning
Hazard Statements Contains gas under pressure; may explode if heated.
May cause drowsiness or dizziness.
Precautionary Statements

Prevention	Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.
Response	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Storage	Call a POISON CENTER or doctor if you feel unwell. Protect from sunlight. Store in a well-ventilated place. Store in a well-ventilated place. Keep container tightly closed.
Disposal	Store locked up. Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

No information available.

Unknown acute toxicity

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**

Mixture

<u>Chemical Name</u>	<u>CAS No</u>	<u>Weight-%</u>
Hexafluoroethane	76-16-4	54
Trifluoromethane	75-46-7	46

4. FIRST AID MEASURES**Description of first aid measures**

General advice	In case of accident or unwellness, seek medical advice immediately. Remove contaminated clothing and shoes.
Inhalation	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.
Skin Contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation persists, call a physician.
Eye contact	Not an expected route of exposure.
Ingestion	Not an expected route of exposure.

Most important symptoms and effects, both acute and delayed

May cause drowsiness or dizziness.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Extinguishing media**

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

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors: carbonyl fluoride, carbon monoxide, hydrogen fluoride.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Remove all sources of ignition. Use personal protection recommended in Section 8.

Methods and material for containment and cleaning up

Stop leak if you can do it without risk. Ventilate affected area.

7. HANDLING AND STORAGE

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Do not breathe dust/fume/gas/mist/vapors/spray. When using do not eat, drink or smoke. Remove all sources of ignition. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep/store only in original container. Keep container below 50°C in a well ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	Denmark	European Union
Trifluoromethane (CAS #: 75-46-7)	TWA: 2.5 mg/m ³ F	-	-	TWA: 2.5 mg/m ³	-

Chemical Name	Latvia	France	Finland	Germany	Italy
Trifluoromethane (CAS #: 75-46-7)	TWA: 2 ppm TWA: 20 mg/m ³	-	-	TWA: 1 mg/m ³ Skin	-

Chemical Name	Norway	United Kingdom	Australia	Austria	Belgium
Trifluoromethane (CAS #: 75-46-7)	-	-	2.5 mg/m ³	-	-

Appropriate engineering controls

Use with local exhaust ventilation.

Individual protection measures, such as personal protective equipment

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Gas
Color	Colourless
Odor	Ethereal
	Poor warning properties at low concentrations.
Odor Threshold	Not determined
pH	Not determined
Melting point/freezing point	Not determined
Boiling point / boiling range	-88.3 °C
Flash point	Not determined
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined

Flammability Limit in Air	Not determined
Vapor Pressure	Not determined
Vapor density	Not determined
Density	Not determined
Relative density, gas	3.3 (air=1)
Partition coefficient (LogPow)	Not determined
Autoignition temperature	Not determined
Decomposition temperature	Not determined
Kinematic viscosity	Not determined
Dynamic viscosity	Not determined
Explosive properties	Not determined
Oxidizing properties	Not determined

Other information

Molecular weight	95.4
Critical temperature	14 °C

10. STABILITY AND REACTIVITY**Reactivity**

No known effects under normal use conditions.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

No information available.

Conditions to avoid

Keep away from sources of ignition — No smoking.

Incompatible materials

None known.

Hazardous Decomposition Products

Thermal decomposition yields toxic products which can be corrosive in the presence of moisture.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation	No known effect based on information supplied.
Eye contact	No known effect based on information supplied.
Skin Contact	No known effect based on information supplied.
Ingestion	No known effect based on information supplied.

Information on toxicological effects**Acute toxicity**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Trifluoromethane (CAS #: 75-46-7)	-	-	> 663000 ppm /4h

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT - single exposure

May cause drowsiness or dizziness.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants EC50	Fish LC50	Crustacea EC50
Trifluoromethane (CAS #: 75-46-7)	154.54mg/L :96 h Green Algae	633.26mg/L :96 h Pimephales promelas	323.05mg/L :48 h Daphnia magna

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.
 Contaminated packaging Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT

UN/ID No. 3163
 UN Proper shipping name LIQUIFIED GAS, N.O.S.(contains hexafluoroethane, trifluoromethane)
 Hazard Class 2.2
 Packing Group None
 Special precautions No information available
 Marine pollutant Not applicable

15. REGULATORY INFORMATION

International Inventories

Component	AICS	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	TSCA
Hexafluoroethane 76-16-4	X	X	X	X	X	X	X	X
Trifluoromethane 75-46-7	X	X	X	X	X	X	X	X

"-" Not Listed

"X" Listed

US Federal Regulations

SARA 313

Not applicable

SARA 311/312 Hazard Categories

Not applicable

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Trifluoromethane 75-46-7	-	X	-	-

CERCLA

Not applicable

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hexafluoroethane 76-16-4	X	-	-
Trifluoromethane 75-46-7	X	-	-

16. OTHER INFORMATION

Revision Note

Issue Date 06-May-2016
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 Revision Note Change UN-Number

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

Disclaimer

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----- End of Safety Data Sheet -----