

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

Catalogue Number	CS-T-78850
Product Name	Halothane
CAS No.	151-67-7
Category	API
Synonyms	Not available
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email sales@clearsynth.com for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

- Skin irritation (Category 2)
- Serious eye damage/eye irritation (Category 2)
- Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning



Hazard Statement(s)

Code	Statement
H315	Causes skin irritation.
H318	Causes serious eye damage.

H335	Not available
H341	Not available
H360	Not available
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	Not available
H361	Not available
H370	Not available
H372	Not available

Precautionary Statement(s)

Code	Statement
P203	Not available
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P264+P265	Not available
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P354+P338	Not available
P317	Not available
P318	Not available
P319	Get medical help if you feel unwell.
P321	Specific treatment (see ... on this label).
P332+P317	If skin irritation occurs: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation

P260	Not available
P270	Not available
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present
P308+P316	Not available
P337+P317	If eye irritation persists: Get medical help.

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Halothane

CAS Number : 151-67-7

Molecular Formula : Not available

Molecular Weight : Not available

Parent Chemical : Not available

Synonyms : Not available

Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures

- General advice: Remove from exposure. Show this safety data sheet to the doctor in attendance.
- Inhalation: Move person to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, seek medical attention.
- Skin contact: Remove contaminated clothing and shoes. Wash skin with plenty of water and soap.
- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention if irritation persists.
- Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Not available.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically. Not available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

- Suitable extinguishing media: Use extinguishing measures appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture

- Hazardous combustion products: Not available.

5.3 Advice for firefighters

- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Cool containers with water spray if exposed to fire.
- Avoid breathing fire gases/fumes.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Evacuate unnecessary personnel.
- Ensure adequate ventilation.
- Avoid breathing vapors/mist.
- Use appropriate personal protective equipment (see Section 8).

6.2 Environmental precautions

- Prevent further leakage or spillage if safe to do so.
- Avoid release to the environment. Prevent entry into drains, surface waters, or soil.

6.3 Methods and material for containment and cleaning up

- Contain spill. Absorb with inert absorbent material.
- Collect in suitable, closed containers for disposal.
- Clean contaminated area after material pickup.

6.4 Reference to other sections

- See Section 8 for personal protective equipment and Section 13 for disposal considerations.

SECTION-7: Handling and storage

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 and eyes.
- Avoid breathing vapors/mist.
- Use only with adequate ventilation.
- Keep container tightly closed when not in use.

7.2 Conditions for safe storage, including any incompatibilities

- Store in a cool, dry, well-ventilated place.
- Keep in original container, tightly closed.
- Protect from heat and direct sunlight.
- Incompatible materials: Not available.

7.3 Specific end use(s)

- API. Not available.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- Occupational exposure limits: Not available.
- Biological limit values: Not available.

8.2 Exposure controls

- Engineering controls: Provide adequate ventilation. Use local exhaust where vapors may be generated.
- Personal protective equipment (PPE):
 - Eye/face protection: Safety glasses with side shields or chemical splash goggles.
 - Skin protection: Protective gloves. Wear protective clothing as appropriate.
 - Respiratory protection: If ventilation is inadequate, use appropriate respiratory protection.
 - Hygiene measures: Wash hands after handling. Remove contaminated clothing and wash before reuse.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available

Property	Value
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

SECTION 10: Stability and reactivity

10.1 Reactivity

- No data available.

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- No data available.

10.4 Conditions to avoid

- Heat, flames, and other sources of ignition. Not available.

10.5 Incompatible materials

- Not available.

10.6 Hazardous decomposition products

- Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute toxicity: Prospective, serial blood testing often demonstrates minor transient elevations in serum aminotransferase levels in the 1 to 2 weeks after major surgery and anesthesia with halothane and other halogenated anesthetics. Appearance of ALT levels above 10 times the upper limit of normal, however, is uncommon and points to significant hepatotoxicity. Clinically apparent, severe hepatic injury from halothane is rare, occurring in ~1/15,000 cases after initial exposure, but in ~1/1,000 cases after repeated exposures. The injury is marked by acute elevations in serum aminotransferase levels (5- to 50-fold) and appearance of jaundice within 2 to 14 days of surgery. There are usually minimal increases in alkaline phosphatase levels. Fever occurs before onset of jaundice in a high proportion of patients and eosinophilia in up to 30%. Rash and arthralgias can also accompany the onset of hepatic injury. The acute liver injury may be self-limited and resolve within 4 to 8 weeks, but can be severe and lead to acute liver failure. A strong risk factor is previous exposure to any of the halogenated anesthetics and particularly a history of halothane hepatitis or unexplained fever and rash after anesthesia with one of these agents. Other risk factors are hypotension, older age, obesity and concurrent use of CYP 2E1 inducers. The

differential diagnosis of acute liver injury after surgery and anesthesia is sometimes difficult, and a clinical picture similar to halothane hepatitis can be caused by shock or ischemia, sepsis, other idiosyncratic forms of drug induced liver injury and acute viral or herpes hepatitis. Indeed, many cases of severe liver injury arising soon after surgery and attributed to halothane or other halogenated anesthetics in the literature probably represent liver injury from shock and ischemia. Factors favoring the diagnosis of ischemic hepatitis are rapid onset after surgery, extremely high values for ALT, AST and LDH, and subsequent rapid fall in serum enzymes. Likelihood score: A (well known cause of clinically apparent liver injury). LC50 (rat) = 29,000 ppm

- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: No data available.
- Carcinogenicity: A4; Not classifiable as a human carcinogen.
- Reproductive toxicity: irritation eyes, skin, respiratory system; confusion, drowsiness, dizziness, nausea, analgesia, anesthesia; cardiac arrhythmias; liver, kidney damage; decreased audio-visual performance; In Animals: reproductive effects
- STOT-single exposure: No data available.
- STOT-repeated exposure: Prospective, serial blood testing often demonstrates minor transient elevations in serum aminotransferase levels in the 1 to 2 weeks after major surgery and anesthesia with halothane and other halogenated anesthetics. Appearance of ALT levels above 10 times the upper limit of normal, however, is uncommon and points to significant hepatotoxicity. Clinically apparent, severe hepatic injury from halothane is rare, occurring in ~1/15,000 cases after initial exposure, but in ~1/1,000 cases after repeated exposures. The injury is marked by acute elevations in serum aminotransferase levels (5- to 50-fold) and appearance of jaundice within 2 to 14 days of surgery. There are usually minimal increases in alkaline phosphatase levels. Fever occurs before onset of jaundice in a high proportion of patients and eosinophilia in up to 30%. Rash and arthralgias can also accompany the onset of hepatic injury. The acute liver injury may be self-limited and resolve within 4 to 8 weeks, but can be severe and lead to acute liver failure. A strong risk factor is previous exposure to any of the halogenated anesthetics and particularly a history of halothane hepatitis or unexplained fever and rash after anesthesia with one of these agents. Other risk factors are hypotension, older age, obesity and concurrent use of CYP 2E1 inducers. The differential diagnosis of acute liver injury after surgery and anesthesia is sometimes difficult, and a clinical picture similar to halothane hepatitis can be caused by shock or ischemia, sepsis, other idiosyncratic forms of drug induced liver injury and acute viral or herpes hepatitis. Indeed, many cases of severe liver injury arising soon after surgery and attributed to halothane or other halogenated anesthetics in the literature probably represent liver injury from shock and ischemia. Factors favoring the diagnosis of ischemic hepatitis are rapid onset after surgery, extremely high values for ALT, AST and LDH, and subsequent rapid fall in serum enzymes. Likelihood score: A (well known cause of clinically apparent liver injury). /HUMAN EXPOSURE STUDIES/ (Retrospective survey) of operating room personnel chronically exposed to low concentrations of inhalation anesthetics indicate that pregnancies in female personnel and wives of male personnel may be subject to an increased incidence of spontaneous abortions, stillbirths, and possibly birth defects. However, the methods used in obtaining and interpreting the data in these studies have been questioned.
- Aspiration hazard: No data available.

Likely routes of exposure

- See Inhalation.

Symptoms related to the physical, chemical and toxicological characteristics

- Potential symptoms of overexposure are irritation of eyes, skin, respiratory system... .

SECTION 12: Ecological information

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12.1 Toxicity

- Not available.

12.2 Persistence and degradability

- Not available.

12.3 Bioaccumulative potential

- Not available.

12.4 Mobility in soil

- Not available.

12.5 Results of PBT and vPvB assessment

- Not available.

12.6 Endocrine disrupting properties

- Not available.

12.7 Other adverse effects

- Not available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Do not discharge to drains or the environment.
- Incineration or disposal via a licensed waste contractor may be appropriate.
- Waste code: Not available.

SECTION 14: Transport information

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- UN number: Not available.
- UN proper shipping name: Not available.
- Transport hazard class(es): Not available.
- Packing group: Not available.
- Environmental hazards: Not available.
- Special precautions for user: Not available.
- Transport in bulk according to IMO instruments: Not available.

SECTION 15: Regulatory information

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

- Not available.

15.2 Chemical safety assessment

- Not available.

SECTION 16: Other information

SECTION 16: Other information

- Product name: Halothane
- Catalog No.: CS-T-78850
- CAS No.: 151-67-7
- Supplier: Clearsynth Labs Ltd., Mumbai, India
- Emergency phone: +91-22-245045900

Disclaimer

- The information provided is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The supplier shall not be held liable for any damage resulting from handling or from contact with the above product.

Revision information

- Not available.

DISCLAIMER

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