

Safety Data Sheet

According to Hazardous Products Regulation (SOR/2015-17)

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SECTION 1: Identification

Product identifier

Trade name/designation:	Chloroform Stabilized with Amylene
Product No.:	BDH83626
Synonymes:	none
CAS No.:	67-66-3
Other means of identification:	

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

Recommended Use:	For Further Manufacturing Use Only
Uses advised against:	Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet

Supplier

VWR International

Street	2360 Argentia Road
Postal code/City	Mississauga, Ontario Canada L5N 5Z7
Telephone	+1-800-932-5000 toll-free within US/Canada
Telefax:	+1-610-728-2103

Emergency phone number

Telephone +1-613-996-6666 (Canutec, 24 hrs/day, 7 days/week, Canada)

Preparation Information

VWR International - Product Information Compliance

E-mail SDS@avantorsciences.com

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Classification according to Hazardous Products Regulation (SOR/2015-17)

Hazard classes and hazard categories	Hazard statements
Acute toxicity, category 3, inhalation	H331
Acute toxicity, category 4, oral	H302
Skin irritation, category 2	H315
Eye irritation, category 2	H319
Carcinogenicity, category 2	H351
Reproductive toxicity, category 2	H361
Specific target organ toxicity (repeated exposure), category 1	H372

2.2 Label elements

Labelling in accordance with (SOR/2015-17)

Hazard pictograms



Signal word: Danger

Hazard statements	
H331	Toxic if inhaled.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary statements	
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor/...

Hazards not otherwise classified (HNOC)

none

SECTION 3: Composition / information on ingredients

3.1 Substances

Substance name	Chloroform
Molecular formula	CHCl ₃
Molecular weight	119.38 g/mol
CAS No.	67-66-3

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Do not leave affected person unattended. If unconscious but breathing normally, place in recovery position and seek medical advice. Take off immediately all contaminated clothing. When in doubt or if symptoms are observed, get medical advice. Show the safety data sheet to the doctor in attendance.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of respiratory tract irritation, consult a physician. If breathing is irregular or stopped, administer artificial respiration. Call a POISON CENTER or doctor/physician.

In case of skin contact

Remove contaminated, saturated clothing immediately. Wash with plenty of soap and water. If skin irritation occurs: Get medical help. If extensive skin contact: get medical help immediately and kept under medical surveillance (hospitalization).

After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

In case of ingestion

Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person or a person with cramps. Do not give water or any other liquid to drink (alcohol increases the toxic effects). Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

Self-protection of the first aider

First aider: Pay attention to self-protection! Wear personal protection equipment (refer to section 8). In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

4.2 Most important symptoms/effects, acute and delayed

Cough. Shortness of breath. Respiratory depression. Cardiac arrhythmias. Headache. Nausea. Vomiting. Dizziness. Cardiac arrest.
After ingestion: Nausea. Vomiting. Abdominal pain.

4.3 Indication of any immediate medical attention and special treatment needed

Chloroform is easily resorbed by skin and mucous membranes. About 40% of resorbed chloroform is exhaled unchanged. Alcohol increases the toxic effects. If chloroform was involved in fire, phosgene may have been formed. Inhalation of phosgene can lead to toxic pulmonary oedema formation after several hours. Administer oxygen, if necessary intubation and ventilation. In the event of severe poisoning hyperventilation should be considered. Do not administer catecholamines because of the cardiac effect caused by the product. N-acetylcysteine should be administered within 12 hours of exposure as an attempt to counteract liver and kidney damage. Patients should be monitored in hospital for at least 48 hours after initial treatment due to possible severe liver and kidney damage (hepatorenal syndrome) and toxic pulmonary oedema (ARDS) with a latency of 2 to 3 days. After Ingestion: Do not induce vomiting. No oral administration of fluids, activated charcoal or laxatives, no gastric lavage but aspiration of the liquid from the stomach via a nasogastric tube while protecting against intubation, if this is possible within 60 minutes. Since chloroform is radiopaque, ingestion can be detected by an X-ray overview of the abdomen. The effectiveness of the decontamination can be checked with a subsequent X-ray.

SECTION 5: Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Non-combustible liquids
Co-ordinate fire-fighting measures to the fire surroundings.
Water spray
Alcohol resistant foam.
BC-powder
Sand
Carbon dioxide (CO₂)

Extinguishing media which must not be used for safety reasons

Full water jet

5.2 Specific hazards arising from the chemical

In case of fire may be liberated:
Carbon monoxide
Carbon dioxide (CO₂)
Hydrogen chloride (HCl)

5.3 Advice for firefighters

DO NOT fight fire when fire reaches explosives.
Protective equipment and precautions for firefighters:
Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Do not allow run-off from fire-fighting to enter drains or water courses.

Do not inhale explosion and combustion gases.
Use water spray/stream to protect personnel and to cool endangered containers.
In case of fire: Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Wear personal protection equipment (refer to section 8). Avoid contact with eyes and skin. Do not breathe gas/fume/vapor/spray. Remove victim out of the danger area. Stop leak if safe to do so.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

Large spills: Dike or dam to contain for later disposal. Take up mechanically, placing in appropriate containers for disposal. Small spills: Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Dispose according to legislation.

6.4 Additional information

Personal protection equipment (PPE): see section 8 Disposal information: see section 13 Decomposition products in case of fire: see section 5.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling
Wear personal protection equipment (refer to section 8).
Avoid contact with eyes and skin.
Avoid inhalation of the product.
Use extractor hood (laboratory).
Provide adequate ventilation.
Measures to prevent fire, aerosol and dust generation
Usual measures for fire prevention.
Measures required to protect the environment
Do not allow uncontrolled discharge of product into the environment.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: Ambient temperature
Storage: Keep container tightly closed and in a well-ventilated place. Keep/Store only in original container. Protect from moisture. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Suitable container/equipment material: Glass Steel Stainless steel Unsuitable container/equipment material: Aluminium Polyethylene PVC (polyvinyl chloride)

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

Ingredient (Designation)	Source	Country	parameter	Limit value
Chloroform	CNESST	CA	VEMP	24.4 mg/m ³ - 5 ppm

8.2 Engineering controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protection equipment (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

Eye/face protection

Eye glasses with side protection

Skin protection

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

By short-term hand contact

Suitable material: Butyl caoutchouc (butyl rubber)/FKM (fluoro rubber)
 Thickness of the glove material: 0,70 mm
 Breakthrough time: 120-240 min

By long-term hand contact

Suitable material: PVA (Polyvinyl alcohol)
 Thickness of the glove material: -
 Breakthrough time: > 480 min

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

Additional information

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Environmental exposure controls

no data available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Color:	colorless
(b) Odor:	no data available
(c) Odor threshold:	no data available

Safety relevant basic data

(d) pH:	no data available
(e) Melting point/freezing point:	-63 °C
(f) Initial boiling point and boiling range:	61.7 °C (1013 hPa)
(g) Flash point:	no data available
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	not applicable
(j) Flammability or explosive limits	
Lower explosion limit:	no data available
Upper explosion limit:	no data available
(k) Vapor pressure:	210 hPa (20 °C)
(l) Vapor density:	4.12 (20 °C)
(m) Density:	1.4832 g/cm ³ (20 °C)
(n) Solubility(ies)	
Water solubility:	8 g/l (20 °C)
(o) Partition coefficient: n-octanol/water:	1.97 (20 °C)
(p) Auto-ignition temperature:	982 °C
(q) Decomposition temperature:	not applicable
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	0.56 mPa*s (20 °C)
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable
(u) Particle characteristics:	does not apply to liquids

9.2 Other information

Bulk density:	no data available
Refraction index:	1.4476 (589 nm; 20 °C)
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is non-reactive under normal conditions.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Violent reaction with:
Oxidizing agent, strong
Strong acid
Alkali (lye)
Perchlorates

10.4 Conditions to avoid

Protect from moisture.
Keep away from heat.
Possible decomposition might be provoked.

10.5 Incompatible materials

Alkali metals
Aluminium
Reacts with strong oxidizing agents.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.
Thermal decomposition
Carbonyl dichloride (phosgene)
Hydrogen chloride (HCl)
Decomposition products in case of fire: see section 5.

10.7 Additional information

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects

Acute oral toxicity:

LD50: > 695 mg/kg - Rat - (RTECS)

LDLo: > 2514 mg/kg - Human - (RTECS)

Acute dermal toxicity:

LD50: > 20 g/kg - Rabbit - (National Library of Medicine ChemID Plus (NLM CIP))

Acute inhalation toxicity:

LC50: 47702 mg/m³ - Rat - (National Library of Medicine ChemID Plus (NLM CIP))

Irritant and corrosive effects

Primary irritation to the skin:

Causes skin irritation.

Irritation to eyes:

Causes serious eye irritation.

Irritation to respiratory tract:

not applicable

Respiratory or skin sensitization

In case of skin contact: not sensitizing

In case of inhalation: not sensitizing

STOT-single exposure

not applicable

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

Suspected of causing cancer.

Germ cell mutagenicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Aspiration hazard

not applicable

Other adverse effects

no data available

Additional information

no data available

SECTION 12: Ecological information

12.1 Ecotoxicity

Fish toxicity:

LC50: 28 mg/l (96 h) - Pearson, C.R., and G. McConnell 1975. Chlorinated C1 and C2 Hydrocarbons in the Marine Environment. Proc.R.Soc.Lond.B Biol.Sci. 189:305-332

Daphnia toxicity:

LC50: 66.8 mg/l (48 h) - Gersich, F.M., F.A. Blanchard, S.L. Applegath, and C.N. Park 1986. The Precision of Daphnid (Daphnia magna Straus, 1820) Static Acute Toxicity Tests. Arch. Environ. Contam. Toxicol. 15(6):741-749

Algae toxicity:

no data available

Bacteria toxicity:

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: 1.97 (20 °C)

12.4 Mobility in soil:

no data available

12.5 Results of PBT/vPvB assessment

not applicable

12.6 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: 070103

Appropriate disposal / Package

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself. This material and its container must be disposed of as hazardous waste. Do not open container by force. Warning: Do not refill! Do not pierce or burn, even after use.

Additional information

no data available

SECTION 14: Transport information**Land transport (TDG)**

UN-No.:	1888
Proper Shipping Name:	CHLOROFORM
Class(es):	6.1
Packing group:	III
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	

Sea transport (IMDG)

UN-No.:	1888
Proper Shipping Name:	CHLOROFORM
Class(es):	6.1
Classification code:	
Hazard label(s):	6.1
Packing group:	III
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	
Segregation group:	10
EmS-No.	F-A S-A
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	not relevant

Air transport (ICAO-TI / IATA-DGR)

UN-No.:	1888
Proper Shipping Name:	CHLOROFORM
Class(es):	6.1
Classification code:	
Hazard label(s):	6.1
Packing group:	III
Special precautions for user:	

SECTION 15: Regulatory information

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

Domestic Substance List:

SECTION 16: Other information

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists
DOT - Department of Transportation
IARC - International Agency for Research on Cancer
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations
ICAO-TI - International Civil Aviation Organization-Technical Instructions
IMDG - International Maritime Code for Dangerous Goods
LTV - Long Term Value
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety & Health Administration
PBT - Persistent, Bioaccumulative and Toxic
PEL - Permissible Exposure Limit
STV - Short Term Value
SVHC - Substances of Very High Concern
TDG - Transport of Dangerous Goods
TLV - Threshold Limit Value
vPvB - very Persistent, very Bioaccumulative

Key literature references and sources for data

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

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25.10.2022	1.0	25.10.2022

Additional information

Indication of changes general update

If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.