

# Safety Data Sheet

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

Revision date: 13.05.2018

Version: 6.4

Print date: 13.05.2018

## SECTION 1: Identification

### Product identifier

Trade name/designation:	Chloroform ACS
Product No.:	BDH1109
Synonymes:	no data available
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 telephone

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

### Preparation Information

VWR International - Product Information Compliance

E-mail sds@vwr.com

## SECTION 2: Hazards 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
Carcinogenicity, category 2	H351
Reproductive toxicity, category 2	H361
Acute toxicity, category 3, inhalation	H331
Specific target organ toxicity (repeated exposure), category 1	H372
Acute toxicity, category 4, oral	H302
Eye irritation, category 2	H319
Skin irritation, category 2	H315

### 2.2 Label elements

#### Labelling in accordance with (SOR/2015-17)

#### Hazard pictograms



Signal word: Danger

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

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/none

## SECTION 3: Composition / information on ingredients

### 3.1 Substances

not applicable

### 3.2 Mixtures

**Hazardous ingredients GHS Classification in accordance with (SOR/2015-17)**

Substance name	Concentration	Product identifier	Hazard classes and hazard categories
Chloroform	> 99%	CAS No.: 67-66-3	Carc. 2 - H351 Repr. 2 - H361 Acute Tox. 3 - H331 STOT RE 1 - H372 Acute Tox. 4 - H302 Eye Irrit. 2 - H319 Skin Irrit. 2 - H315
2-Methyl-2-butene	< 1%	CAS No.: 513-35-9	Flam. Liq. 2 - H225 Acute Tox. 4 - H302 Asp. Tox. 1 - H304

## SECTION 4: First aid measures

### 4.1 General information

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

#### After inhalation

Call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

#### In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

#### **After eye contact**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

#### **In case of ingestion**

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

#### **4.2 Most important symptoms/effects, acute and delayed**

no data available

#### **4.3 Indication of any immediate medical attention and special treatment needed**

no data available

#### **4.4 Self-protection of the first aider**

First aider: Pay attention to self-protection!

#### **4.5 Information to physician**

no data available

### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

The product itself does not burn.  
Co-ordinate fire-fighting measures to the fire surroundings.

##### **Extinguishing media which must not be used for safety reasons**

no restriction

#### **5.2 Specific hazards arising from the chemical**

In case of fire may be liberated:  
Pyrolysis products, toxic

#### **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**

In case of major fire and large quantities: Remove persons to safety.

#### **6.2 Environmental precautions**

Discharge into the environment must be avoided.

### 6.3 Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Collect in closed and suitable containers for disposal.

### 6.4 Additional information

Clear spills immediately.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

All work processes must always be designed so that the following is as low as possible: Inhalation skin contact Eye contact Use extractor hood (laboratory). If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

### 7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: no data available

Keep container tightly closed and in a well-ventilated place. Keep/Store only in original container.

### 7.3 Specific end use(s)

no data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value
Chloroform	Gestis	CA	LTV	24.4 mg/m <sup>3</sup> - 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 (maximum wearing time):	120-240 min

By long-term hand contact

Suitable material:	PVA (Polyvinyl alcohol)
Thickness of the glove material:	-
Breakthrough time (maximum wearing 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 skin and eyes. 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) Odour:	ether-like
(c) Odour threshold:	85-307 ppm

#### Safety relevant basic data

(d) pH:	no data available
(e) Melting point/freezing point:	-63 °C
(f) Initial boiling point and boiling range:	60.5-61.5 °C
(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) Vapour pressure:	160 mmHg (20 °C)
(l) Vapour density:	4.12
(m) Relative density:	1.492 g/cm <sup>3</sup> (20 °C)
(n) Solubility(ies)	
Water solubility (g/L):	no data available
Soluble (g/L) in Ethanol:	no data available
(o) Partition coefficient: n-octanol/water:	no data available
(p) Auto-ignition temperature:	no data available
(q) Decomposition temperature:	no data available
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	0.58 mPa*s (20 °C)
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable

### 9.2 Other information

Bulk density:	not applicable
Refraction index:	no data available
Dissociation constant:	no data available
Surface tension:	no data available
Henry constant:	no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

## 10.2 Chemical stability

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

## 10.3 Possibility of hazardous reactions

no data available

## 10.4 Conditions to avoid

no data available

## 10.5 Incompatible materials

no data available

## 10.6 Hazardous decomposition products

no data available

## 10.7 Additional information

no data available

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Acute effects

#### Acute oral toxicity:

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

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

2-Methyl-2-butene - LD50: < 200 mg/kg - Rat - (Merck KGaA)

#### Acute dermal toxicity:

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

2-Methyl-2-butene - LD50: < 2000 mg/kg - Rat - (IUCLID)

#### Acute inhalation toxicity:

Chloroform - LC50: 47702 mg/m<sup>3</sup> - Rat - (National Library of Medicine ChemID Plus (NLM CIP))

2-Methyl-2-butene - LC50: > 61000 ppm - Rat - (IUCLID)

### 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 sensitising  
 After inhalation: not sensitising

**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**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

no data available	ACGIH	IARC	NTP	OSHA

**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:**

Chloroform - 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:**

Chloroform - 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: no data available

## 12.4 Mobility in soil:

no data available

## 12.5 Results of PBT/vPvB assessment

no data available

## 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: no data available

#### Appropriate disposal / Package

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

#### 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 data available
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

### Additional information

Indication of changes:                      general update

*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.*