

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 27 Oct 2022

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

### 1.1. Product name:

Chloroform-d, cont. 0.03 v/v% TMS, stab. with Ag

### 1.1. Catalog No.:

1056

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Permoserstrasse 15

04318 Leipzig  
Germany

Tel. +49 341 5295 183  
Fax. +49 341 5295 182  
E-mail: info@armar-europa.de

## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture  
Classification according to Regulation (EC) No 1272/2008  
Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 3), H331  
Skin irritation (Category 2), H315  
Eye irritation (Category 2), H319  
Carcinogenicity (Category 2), H351  
Reproductive toxicity (Category 2), H361d  
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336  
Specific target organ toxicity - repeated exposure, Oral (Category 1), Liver, Kidney, H372

### 2.2. Label elements

#### 2.2.1. Pictogram



#### 2.2.2.

2.2 Label elements  
Labelling according Regulation (EC) No 1272/2008  
Pictogram Signal word Danger  
Hazard statement(s)  
H302 Harmful if swallowed.  
H315 Causes skin irritation.

H319 Causes serious eye irritation.  
H331 Toxic if inhaled.  
H336 May cause drowsiness or dizziness.  
H351 Suspected of causing cancer.  
H361d Suspected of damaging the unborn child.  
H372 Causes damage to organs (Liver, Kidney) through prolonged or repeated exposure if swallowed.  
Precautionary statement(s)  
P201 Obtain special instructions before use.  
P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.  
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 + P313 IF exposed or concerned: Get medical advice/ attention.  
Supplemental Hazard Statements  
none  
For use in industrial installations only.  
**2.3 Other hazards**  
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances  
Synonyms : Deuteriochloroform  
Formula : CCl<sub>3</sub>D  
Molecular weight : 120,38 g/mol  
CAS-No. : 865-49-6  
EC-No. : 212-742-4  
Component Classification Concentration  
Chloroform-D1-Deuteration  
Acute Tox. 4; Acute Tox.  
3; Skin Irrit. 2; Eye Irrit.  
≤ 100 % 2; Carc. 2; Repr. 2; STOT  
SE 3; STOT RE 1; H302,  
H331, H315, H319, H351,  
H361d, H336, H372  
Concentration limits:  
20 %: STOT SE 3, H336;

#### 3.1.1. Formula

CCl<sub>3</sub>D

### 3.1.2. Molecular Weight (g/mol)

120.38

### 3.1.3. CAS-No.

865-49-6

## 4. FIRST AID MEASURES

### 4.1 Description of first-aid measures

#### General advice

First aider needs to protect himself. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides, Hydrogen chloride gas

Not combustible.

Ambient fire may liberate hazardous vapours

5.3 Advice for firefighters  
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### 5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system

## 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures  
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.  
For personal protection see section 8.
- 6.2 Environmental precautions  
Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up  
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.
- 6.4 Reference to other sections  
For disposal see section 13.

## 7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling  
Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.  
For precautions see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities  
Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.  
Store under inert gas. Light sensitive. hygroscopic
- 7.3 Specific end use(s)  
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters Components with workplace control parameters Component CAS-No. Value Control parameters  
Basis  
Chloroform-d  
865-49-6  
TWA 2 ppm  
10 mg/m<sup>3</sup>  
Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values Remarks  
Identifies the possibility of significant uptake through the skin Indicative  
TWA  
2 ppm  
9.9 mg/m<sup>3</sup>  
UK. EH40 WEL - Workplace Exposure Limits  
Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used
- 8.2 Exposure controls Appropriate engineering controls  
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
- Eye/face protection  
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- Skin protection  
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.  
The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.
- Body Protection  
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- Respiratory protection  
Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose

combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: liquid, clear

Color: colorless

b) Odor characteristic c) Odor Threshold No data available

d) pH No data available

e) Melting

point/freezing point

Melting point/range: -64 °C - lit.

f) Initial boiling point

and boiling range

60,9 °C - lit.

g) Flash point > 60 °C at ca.1.019,2 hPa - closed cup - Regulation (EC) No.

440/2008, Annex, A.9

h) Evaporation rate No data available

i) Flammability (solid,  
gas)

No data available

j) Upper/lower

flammability or

explosive limits

No data available

k) Vapor pressure ca.265,31 hPa at ca.25 °C

l) Vapor density 4,12 - (Air = 1.0)

m) Relative density 1,500 g/cm<sup>3</sup> at 25 °C

n) Water solubility 4,6 g/l at 20 °C - Regulation (EC) No. 440/2008, Annex, A.6

o) Partition coefficient:

n-octanol/water

log Pow: 1,5 at 20 °C - Bioaccumulation is not expected.

p) Autoignition

temperature

No data available

q) Decomposition

temperature

Distillable in an undecomposed state at normal pressure.

r) Viscosity No data available

s) Explosive properties No data available

t) Oxidizing properties No data available 9.2 Other safety information

Surface tension 72,3 mN/m at 0,99g/l at 20 °C

- Surface tension

Relative vapor

density

4,12 - (Air = 1.0)

## 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 information available 10.5 Incompatible materials  
Bases, Aluminum, Strong oxidizing agents, Magnesium, Sodium/sodium oxides, Lithium  
10.6 Hazardous decomposition products  
Other decomposition products - No data available  
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen  
chloride gas  
In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects  
Acute toxicity  
LD50 Oral - Rat - male - 908 mg/kg  
(OECD Test Guideline 401)  
Skin corrosion/irritation  
Skin - Rabbit  
Result: Irritating to skin. - 24 h  
Remarks: (ECHA)  
Drying-out effect resulting in rough and chapped skin.  
Serious eye damage/eye irritation  
Eyes - Rabbit  
Result: Irritating to eyes.  
Remarks: (ECHA)  
Respiratory or skin sensitization  
Maximization Test - Guinea pig  
Result: negative  
(Regulation (EC) No. 440/2008, Annex, B.6)  
Germ cell mutagenicity  
Ames test  
Salmonella typhimurium  
Result: negative  
(ECHA)  
In vitro mammalian cell gene mutation test  
mouse lymphoma cells  
Result: positive  
(ECHA)  
Rat - male - Bone marrow  
Result: positive  
(ECHA) Carcinogenicity  
Suspected of causing cancer.  
IARC: 2B - Group 2B: Possibly carcinogenic to humans (Chloroform-D1-Deuteration)  
Reproductive toxicity  
Suspected of damaging the unborn child.  
Specific target organ toxicity - single exposure  
May cause drowsiness or dizziness.  
(in analogy to similar products) Specific target organ toxicity - repeated exposure  
Oral - Causes damage to organs through prolonged or repeated exposure. - Liver, Kidney  
Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)  
Aspiration hazard  
No data available  
Additional Information  
RTECS: Not available  
Vomiting, Gastrointestinal disturbance, Cough, irritant effects, Shortness of breath  
To the best of our knowledge, the chemical, physical, and toxicological properties have not  
been thoroughly investigated.

## 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to daphnia  
and other aquatic  
invertebrates

static test EC50 - Daphnia magna (Water flea) - 79 mg/l - 48 h

Remarks: (ECHA)

Toxicity to algae static test ErC50 - Chlamydomonas reinhardtii (green algae) - 13,3  
mg/l - 72 h

Remarks: (ECHA)

Toxicity to bacteria static test EC50 - activated sludge - 0,48 mg/l - 24 h

Remarks: (ECHA)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 14 d

Result: 0 % - Not readily biodegradable.

(OECD Test Guideline 301C)

Theoretical oxygen  
demand

1.346 mg/g

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent,  
bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at  
levels of 0.1% or higher.

12.6 Other adverse effects

No data available

### 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and  
containers, or contact us there if you have further questions

### 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 1888 IMDG: 1888 IATA: 1888

14.2 UN proper shipping name

ADR/RID: CHLOROFORM

IMDG: CHLOROFORM

IATA: Chloroform

14.3 Transport hazard class(es)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

No data available

## 15. REGULATORY INFORMATION

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use  
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

: Chloroform-D1-Deuteration

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

## 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our 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. For lab use only!