

Chloroform

34854-2.5L

Version 1.4

Revision Date 16.12.2022

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

1.1. Product identifier

Product name : Chloroform
SDS-number : 000000020125
Type of product : Substance
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.
Chemical name : trichloromethane; chloroform
Index-No. : 602-006-00-4
REACH Registration Number : no data available

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

Use of the Substance/Mixture : Laboratory chemicals
Uses advised against : none

1.3. Details of the supplier of the safety data sheet

Company : Honeywell International Inc. Honeywell International, Inc.
115 Tabor Road 115 Tabor Road
07950-2546 Morris Plains Morris Plains, NJ 07950-2546
USA USA

Telephone :
For further information, please contact: : SafetyDataSheet@Honeywell.com

1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)
+1-303-389-1414 (Medical)
Country based Poison Control Center : see chapter 15.1

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute toxicity Category 4 - Oral
H302 Harmful if swallowed.
Acute toxicity Category 3 - Inhalation
H331 Toxic if inhaled.
Skin irritation Category 2
H315 Causes skin irritation.
Eye irritation Category 2
H319 Causes serious eye irritation.
Specific target organ toxicity - single exposure Category 3
H336 May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure Category 1
H372 Causes damage to organs through prolonged or repeated exposure if swallowed and inhaled.
Carcinogenicity Category 2
H351 Suspected of causing cancer.
Reproductive toxicity Category 2
H361d Suspected of damaging the unborn child.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms



Signal word

: Danger

Hazard statements

: 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 through prolonged or repeated exposure if

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swallowed and inhaled.

Precautionary statements	:	P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P284	In case of inadequate ventilation wear respiratory 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 + P313	IF exposed or concerned: Get medical advice/ attention.

2.3. Other hazards

Fire or intense heat may cause violent rupture of packages. Avoid inhalation of vapour or mist.

SECTION 3: Composition/information on ingredients

3.1. Substance

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
trichloromethane; chloroform	67-66-3 602-006-00-4 200-663-8	Acute Tox. 4; H302; Oral Acute Tox. 3; H331; Inhalation Skin Irrit. 2; H315 Eye Irrit. 2; H319 Carc. 2; H351 Repr. 2; H361d STOT RE 1; H372 STOT SE 3; H336	< 100 %	

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3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

Inhalation:

If inhaled, remove to fresh air. Keep patient warm and at rest. Call a physician.

Skin contact:

After contact with skin, wash immediately with plenty of water. Call a physician if irritation develops or persists.

Eye contact:

Protect unharmed eye. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion:

Rinse mouth with water. When swallowed, allow water to be drunk. Do NOT induce vomiting. Call a physician immediately.

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

No data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray
Foam
Carbon dioxide (CO₂)
Dry powder

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

Fire may cause evolution of:

Carbon oxides
Phosgene
Hydrogen chloride gas

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material.
Pick for disposal in tightly closed containers

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6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Wear personal protective equipment. Use only with adequate ventilation.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection.

Hygiene measures:

Keep working clothes separately. Take off all contaminated clothing immediately. Avoid contact with skin, eyes and clothing. Wash hands before breaks and at the end of workday.

7.3. Specific end use(s)

no additional data available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
trichloromethane; chloroform	EH40 WEL TWA	9,9 mg/m ³ 2 ppm		
trichloromethane; chloroform	EH40 WEL SKIN_DES			Can be absorbed through the skin.
trichloromethane; chloroform	EH40 WEL			Listed
trichloromethane; chloroform	EU ELV SKIN_DES			Can be absorbed through the skin.
trichloromethane; chloroform	EU ELV TWA	10 mg/m ³ 2 ppm		Indicative

TWA - Time weighted average
SKIN_DES - Skin designation:

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
trichloromethane; chloroform	Workers / Long-term systemic effects		2,5 mg/m ³	Inhalation	
trichloromethane; chloroform	Workers / Acute systemic effects		333 mg/m ³	Inhalation	
trichloromethane; chloroform	Workers / Long-term local effects		2,5 mg/m ³	Inhalation	
trichloromethane; chloroform	Workers / Long-term systemic effects		0,94mg/kg bw/d	Skin contact	
trichloromethane;	Consumers /		0,18 mg/m ³	Inhalation	

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chloroform	Long-term systemic effects				
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Component	Environmental compartment / Value	Remarks
trichloromethane; chloroform	Fresh water: 0,146 mg/l	Assessment factor: 10
trichloromethane; chloroform	Marine water: 0,015 mg/l	Assessment factor: 100
trichloromethane; chloroform	Sewage treatment plant: 0,048 mg/l	Assessment factor: 10
trichloromethane; chloroform	Fresh water sediment: 0,45 mg/kg dw	Assessment factor: 10
trichloromethane; chloroform	Marine sediment: 0,09 mg/kg dw	Assessment factor: 50
trichloromethane; chloroform	Soil: 0,56 mg/kg dw	

8.2. Exposure controls

Occupational exposure controls

Do not breathe vapours or spray mist.
The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Engineering measures

Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Hand protection:

Glove material: Viton®
Break through time: > 480 min
Glove thickness: 0,7 mm
Vitoject® 890

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Gloves must be inspected prior to use.

Replace when worn.

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer´s directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:

Safety goggles

Skin and body protection:

Protective suit

Wear suitable protective equipment.

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	sweet
molecular weight	:	119,38 g/mol
Melting point/range	:	-61,3 °C
Boiling point/boiling range	:	61 °C at 1.013 hPa
Upper explosion limit	:	Not applicable

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Lower explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	>650 °C
Decomposition temperature	:	At normal pressure may be distilled without decomposition.
pH	:	No data available
Viscosity, kinematic	:	No data available
Water solubility	:	0,8 g/l at 20 °C
Solubility in other solvents	:	soluble
Partition coefficient: n-octanol/water	:	log Pow 1,97 at: 20 °C
Vapour pressure	:	211 hPa at 20 °C
Density	:	1,485 g/cm ³ at 20 °C
Relative vapour density	:	4,12

9.2 Other Information

The product is not flammable.

Evaporation rate : No data available

Viscosity, dynamic : 0,56 mPa.s
at 20 °C

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SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability

At normal pressure may be distilled without decomposition.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Plastic materials can be attacked.
Strong oxidizing agents
Reactions with metals in powder form.
Alkali metals
Alkaline earth metals
Strong bases

10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:
Carbon oxides
Phosgene
Hydrogen chloride gas

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:
LD50
Species: Rat
Sex: male
Value: 908 mg/kg

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Method: OECD Test Guideline 401

LD50

Species: Rat

Sex: female

Value: 1.117 mg/kg

Method: OECD Test Guideline 401

Acute dermal toxicity:

No data available

Acute inhalation toxicity:

No data available

Skin irritation:

No data available

Eye irritation:

No data available

Respiratory or skin sensitisation:

Maximisation Test

Species: Guinea pig

Classification: non-sensitizing

Method: EEC 92/69, B.6

Mouse local lymph node assay

Species: Guinea pig

Classification: non-sensitizing

Repeated dose toxicity:

Species: Rat

Exposure time: 28 d

NOAEL 34 mg/kg

Germ cell mutagenicity:

Test Method: Ames test

Result: negative

Test Method: In vivo micronucleus test

Method: OECD Test Guideline 474

Result: negative

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Test Method: Unscheduled DNA synthesis
Method: OECD Test Guideline 486
Result: negative

Aspiration hazard:
No data available

11.2. Information on other hazards

Endocrine disrupting properties
No data available

Other information:
Solvent removes skin oil from the skin.
Solvent vapours have a narcotic effect if inhaled in high concentrations.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:
LC50
flow-through test
Species: *Oncorhynchus mykiss* (rainbow trout)
Value: 18 mg/l
Exposure time: 96 h

Toxicity to aquatic plants:
ErC50
static test
Species: Algae
Value: 13,3 mg/l

Toxicity to Microorganisms:
EC50
Species: *Nitrosomonas* sp
Value: 0,48 mg/l
Exposure time: 24 h

Toxicity to aquatic invertebrates:
EC50

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static test

Species: *Crassostrea gigas*

Value: 152,5 mg/l

Exposure time: 48 h

12.2. Persistence and degradability

Biodegradability:

Result: Not readily biodegradable.

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 is not considered to be persistent, bioaccumulating and toxic (PBT).

This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:

EC Directive 2006/12/EC; 2008/98/EEC

Regulation No. 1013/2006

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For personal protection see section 8.

SECTION 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

Marine pollutant: no

14.6 Special precautions for user

No data available

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Regulation (EC) No. 1907/2006, Annex XVII		This product contains an ingredient according to Annex XVII of the REACH Regulation1907/2006/EC.
Directive 2012/18/EC Listed in Regulation : H2: ACUTE TOXIC	Quantity: 50.000 kg Quantity: 200.000 kg	
Substances of very high concern (SVHC)		This product does not contain substances of very high concern

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		according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of ≥ 0.1 % (w/w).
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Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation); +46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

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Latvia	+37167042473
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Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

trichloromethane; chloroform : H302 Harmful if swallowed.

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- H331 Toxic if inhaled.
 - H315 Causes skin irritation.
 - H319 Causes serious eye irritation.
 - H351 Suspected of causing cancer.
 - H361d Suspected of damaging the unborn child.
 - H372 Causes damage to organs through prolonged or repeated exposure if swallowed and inhaled.
 - H336 May cause drowsiness or dizziness.
- 2-Methylbut-2-ene (Stabilizer) : H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very bioaccumulative substance
PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

This information should not constitute a guarantee for any specific product properties.
