

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Chloroform for analysis, Reag. Ph. Eur.

Revision date: 14.07.2023

Product code: 27523

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

1.1. Product identifier

Chloroform for analysis, Reag. Ph. Eur.

Substance name: trichloromethane
REACH Registration Number: 01-2119486657-20-XXXX
CAS No: 67-66-3
Index No: 602-006-00-4
EC No: 200-663-8

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

Use of the substance/mixture

Laboratory chemicals
Industrial uses: Uses of substances as such or in preparations at industrial sites
Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
E-mail: info@analytichem.de
Contact person: Abteilung Produktsicherheit
E-mail: produktsicherheit@analytichem.de
Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit
Telefax: 0203/5194-290
Telephone: 0203/5194-107/117

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

No data available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Carc. 2; H351
Muta. 2; H341
Repr. 2; H361d
Acute Tox. 3; H331
Acute Tox. 4; H302
Skin Irrit. 2; H315
Eye Irrit. 2; H319
STOT SE 3; H336
STOT RE 1; H372

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Danger

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Pictograms:



Hazard statements

H331	Toxic if inhaled.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H336	May cause drowsiness or dizziness.
H372	Causes damage to organs (kidneys, liver, central nervous system) through prolonged or repeated exposure.

Precautionary statements

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Special labelling of certain mixtures

For use in industrial installations only.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula:	CHCl ₃
Molecular weight:	119,38 g/mol

Hazardous components

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
67-66-3	trichloromethane	100 %
	200-663-8	602-006-00-4
		01-2119486657-20-XXXX
	Carc. 2, Muta. 2, Repr. 2, Acute Tox. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 1; H351 H341 H361d H331 H302 H315 H319 H336 H372	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
67-66-3	200-663-8	trichloromethane	100 %
	inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); oral: LD50 = 908 mg/kg		

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Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection!

After inhalation

Provide fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Call a physician immediately.

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

After contact with eyes

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.

Remove contact lenses, if present and easy to do. Continue rinsing.

Protect uninjured eye.

After ingestion

Observe risk of aspiration if vomiting occurs.

Give sodium sulfate as laxative (1 tablespoon in 1 glass of water) with plenty of activated coal.

Call a physician immediately.

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

Irritant

Cough

Dyspnoea

Respiratory complaints

Dizziness

Anaesthetic state

Agitation

Spasms

Inebriation

Gastrointestinal complaints

Vomiting

Headache

Has degreasing effect on the skin.

Circulatory collapse

Cardiac arrhythmias

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

Give sodium sulfate as laxative (1 tablespoon in 1 glass of water).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

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5.2. Special hazards arising from the substance or mixture

Non-combustible liquids
Hazardous combustion products
In case of fire may be liberated:
Hydrogen chloride (HCl)
Phosgene

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.
In case of fire and/or explosion do not breathe fumes.
Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Move undamaged containers from immediate hazard area if it can be done safely.
Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Collect in closed and suitable containers for disposal.
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Read label before use. Handle and open container with care.
When using do not eat, drink, smoke, sniff. Use personal protection equipment.
Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

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Do not breathe vapour/aerosol. Use extractor hood (laboratory).

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

Further information on handling

Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary.
Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Protect against: Light
Store in a well-ventilated place. Keep container tightly closed.
Store in a place accessible by authorized persons only.

Further information on storage conditions

storage temperature +2°C - +25°C

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
67-66-3	Chloroform	2	9.8		TWA (8 h)	

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
67-66-3	trichloromethane			
	Worker DNEL, long-term	inhalation	systemic	2,5 mg/m ³
	Worker DNEL, acute	inhalation	systemic	333 mg/m ³
	Worker DNEL, long-term	inhalation	local	2,5 mg/m ³
	Worker DNEL, long-term	dermal	systemic	0,94 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	0,18 mg/m ³

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PNEC values

CAS No	Substance	Value
Environmental compartment		
67-66-3	trichloromethane	
Freshwater		0,146 mg/l
Freshwater (intermittent releases)		0,133 mg/l
Marine water		0,015 mg/l
Freshwater sediment		0,45 mg/kg
Marine sediment		0,09 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,048 mg/l
Soil		0,56 mg/kg

8.2. Exposure 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.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 890 Vitoject®

Recommended material: FKM (fluoro rubber) 0,7 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 890 Vitoject®

Recommended material: FKM (fluoro rubber) 0,7 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

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Respiratory protection

Respiratory protection necessary at: aerosol or mist formation
Filtering device with filter or ventilator filtering device of type: AX

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	characteristic
Odour threshold:	No data available
Melting point/freezing point:	-63 °C
Boiling point or initial boiling point and boiling range:	61 - 62 °C
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	No data available
Viscosity / kinematic:	No data available
Water solubility: (at 23 °C)	8,7 g/L
Solubility in other solvents	No data available
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure: (at 20 °C)	211 hPa
Vapour pressure:	No data available
Density:	1,49 g/cm ³
Relative density:	No data available
Bulk density:	No data available
Relative vapour density:	No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties	No data available
Sustaining combustion:	No data available
Self-ignition temperature	No data available
Solid:	No data available
Gas:	No data available

Other safety characteristics

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	No data available
Sublimation point:	No data available

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Softening point: No data available
 Pour point: No data available
 No data available:
 Viscosity / dynamic: 0,57 mPa·s
 (at 20 °C)
 Flow time: No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

Protect against:
 Light
 Heat

10.3. Possibility of hazardous reactions

Ammonia (NH₃), Amines, Nitrogen oxides (NO_x), Alkali (lye), Fluorine, Alkali metals Alkaline earth metal, metals, Powdered metals, Methanol, Light metal, Ketone, Oxidising agent, strong

10.4. Conditions to avoid

Protect against:
 Light
 Heat

10.5. Incompatible materials

Rubber articles
 plastics

10.6. Hazardous decomposition products

In case of fire may be liberated:
 SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

Avoid exposure - obtain special instructions before use.

Acute toxicity

Toxic if inhaled.
 Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
67-66-3	trichloromethane				
	oral	LD50 mg/kg	908	Rat	Toxicology and Applied Pharmacology 52, OECD Guideline 401
	inhalation vapour	ATE	3 mg/l		
	inhalation dust/mist	ATE	0,5 mg/l		

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Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing genetic defects. (trichloromethane)
Suspected of causing cancer. (trichloromethane)
Suspected of damaging the unborn child. (trichloromethane)

STOT-single exposure

May cause drowsiness or dizziness. (trichloromethane)

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure. (trichloromethane)

Aspiration hazard

Based on available data, the classification criteria are not met.
Observe risk of aspiration if vomiting occurs. (Pulmonary oedema Pneumonia)

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

No data available

Further information

Irritant
Cough
Dyspnoea
Respiratory complaints
Dizziness
Anaesthetic state
Agitation
Spasms
Inebriation
Gastrointestinal complaints
Vomiting
Headache
Has degreasing effect on the skin.
Circulatory collapse
Cardiac arrhythmias

SECTION 12: Ecological information

12.1. Toxicity

Based on available data, the classification criteria are not met.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
67-66-3	trichloromethane					
	Acute fish toxicity	LC50 103 - 171 mg/l	96 h	Pimephales promelas	Bulletin of Environmental Contamination	Method after: Procedures recommended by
	Acute algae toxicity	ErC50 13,3 mg/l	72 h	Chlamydomonas reinhardtii	Environmental Science and Pollution Rese	A modified cell multiplication inhibito
	Acute crustacea toxicity	EC50 152,5 mg/l	48 h	other aquatic mollusc: Crassostrea gigas	Study report (2002)	other: ASTM Method E724-94
	Crustacea toxicity	NOEC 13 mg/l	21 d	Daphnia magna	Water Research 23(4), 501-510 (1989)	other: Recommendation of the
	Acute bacteria toxicity	(EC50 840 mg/l)	0,5 h	activated sludge of a predominantly domestic sewage	Toxicity Assessment: An International Jo	OECD Guideline 209

12.2. Persistence and degradability

0 %; 14 d
OECD / 301C
Not readily biodegradable (according to OECD criteria)

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
67-66-3	trichloromethane	1,97

BCF

CAS No	Chemical name	BCF	Species	Source
67-66-3	trichloromethane	690	Selenastrum capricornutum	Environmental Scienc

12.4. Mobility in soil

log Koc: 1,72
Mobility in soil

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not empty into drains.

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Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Dispose of waste according to "Kreislaufwirtschafts- und Abfallgesetz (KrW-/AbfG)".

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	UN 1888
14.2. UN proper shipping name:	CHLOROFORM
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	III
Hazard label:	6.1
Classification code:	T1
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	2
Hazard No:	60
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1888
14.2. UN proper shipping name:	CHLOROFORM
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	III
Hazard label:	6.1
Classification code:	T1
Special Provisions:	802
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1888
14.2. UN proper shipping name:	CHLOROFORM
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	III
Hazard label:	6.1
Special Provisions:	-
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-A

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1888
14.2. UN proper shipping name:	CHLOROFORM
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	III
Hazard label:	6.1
Limited quantity Passenger:	2 L
Passenger LQ:	Y680
Excepted quantity:	E1
IATA-packing instructions - Passenger:	680
IATA-max. quantity - Passenger:	60 L
IATA-packing instructions - Cargo:	680
IATA-max. quantity - Cargo:	220 L

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14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 32

Information according to 2012/18/EU (SEVESO III): H2 ACUTE TOXIC

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water hazard class (D): 3 - highly hazardous to water

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 11,12.

Abbreviations and acronyms

Acute Tox: Acute toxicity

Skin Irrit: Skin irritation

Eye Irrit: Eye irritation

Muta: Germ cell mutagenicity

Carc: Carcinogenicity

Repr: Reproductive toxicity

STOT SE: Specific target organ toxicity - single exposure

STOT RE: Specific target organ toxicity - repeated exposure

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs (kidneys, liver, central nervous system) through prolonged or repeated exposure.
H372	Causes damage to organs through prolonged or repeated exposure.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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