

Printing date 30.07.2018 Revision: 30.07.2018

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

- · 1.1 Product identifier
- *Trade name:* Chloroform, 99,9%, anhydrous (max. 0,003% H2O), with molecular sieves, stabilized with 150 ppm of am
- · Article number: CL0219
- · CAS Number:

67-66-3

• EC number:

200-663-8

· Index number:

602-006-00-4

- · Registration number 01-2119486657-20-XXXX
- 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the preparation: Laboratory reagent
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Scharlab, S.L.

C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa 08181 Sentmenat (Barcelona) SPAIN

Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65

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- · Further information obtainable from: technical department
- · 1.4 Emergency telephone number:

Please contact the regional Scharlab distributor/dealer in your country During normal opening times: Scharlab, S.L. (+34) 93 715 18 11

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS06 skull and crossbones

Acute Tox. 2 H310 Fatal in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

Carc. 2 H351 Suspected of causing cancer.

Repr. 2 H361d Suspected of damaging the unborn child.

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.

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Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

· Hazard pictograms





GHS06 GHS08

- Signal word Danger
- · Hazard statements
- H302 Harmful if swallowed.
- H310 Fatal in contact with skin.
- 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.

· Precautionary statements

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

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

P310 Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

P330 Rinse mouth.

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/

international regulations.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- *PBT:* Not applicable.*vPvB:* Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.1 Chemical characterisation: Substances
- CAS No. Description
- 67-66-3 trichloromethane
- · Identification number(s)
- · EC number: 200-663-8
- · Index number: 602-006-00-4



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SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- · After swallowing: Call for a doctor immediately.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**No further relevant information available.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture

- No further relevant information available. 5.3 Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.
- · Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep container tightly sealed.

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· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters
- · Ingredients with limit values that require monitoring at the workplace:

67-66-3 trichloromethane

WEL Long-term value: 9.9 mg/m³, 2 ppm

Sk

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Colour: Fluid Colourless

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Odour: Sweetish
Odour threshold: Not determined.
pH-value: Not determined.

· Change in condition

Melting point/freezing point: -63 °C Initial boiling point and boiling range: 62 °C

Flash point: Not applicable.Flammability (solid, gas): Not applicable.

· Ignition temperature: 982 °C

Decomposition temperature: Not determined.
 Auto-ignition temperature: Not determined.

• Explosive properties: Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined. Upper: Not determined.

Vapour pressure at 20 °C:
Density at 20 °C:
Relative density
Vapour density
Evaporation rate

210 hPa

1.4799 g/cm³

Not determined.

Not determined.

Not determined.

· Solubility in / Miscibility with

water at 20 °C: 8 g/l

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic at 20 °C: 0.56 mPas
Kinematic: Not determined.

• **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability
- · Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- · 10.3 Possibility of hazardous reactions No dangerous reactions known.
- · 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- Acute toxicity

Harmful if swallowed.

Fatal in contact with skin.

Toxic if inhaled.

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· LD/LC50 values relevant for classification:

Oral LD50 908 mg/kg (rat)

Dermal LD50 75 mg/kg (rat)

- · Primary irritant effect:
- · Skin corrosion/irritation

Causes skin irritation.

· Serious eye damage/irritation

Causes serious eye irritation.

- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity

Suspected of causing cancer.

· Reproductive toxicity

Suspected of damaging the unborn child.

- · STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure.

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

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

- · 14.1 UN-Number
- · ADR, IMDG, IATA

UN1888

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1888 CHLOROFORM

CHLOROFORM

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· 14.2 UN proper shipping name

· ADR · IMDG, IATA

· 14.3 Transport hazard class(es)

· ADR, IMDG, IATA



Class 6.1 Toxic substances.

Label 6.

· 14.4 Packing group

· ADR, IMDG, IATA

· 14.5 Environmental hazards:

· Marine pollutant:

14.6 Special precautions for user Warning: Toxic substances.

Danger code (Kemler):EMS Number:F-A,S-A

Segregation groups
 Liquid halogenated hydrocarbons

· Stowage Category A

Stowage Code SW2 Clear of living quarters.

· 14.7 Transport in bulk according to Annex II

of Marpol and the IBC Code Not applicable.

· Transport/Additional information:

· ADR

Limited quantities (LQ)
 Transport category
 Tunnel restriction code

· UN "Model Regulation": UN 1888 CHLOROFORM, 6.1, III

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I Substance is not listed.
- · Seveso category H2 ACUTE TOXIC
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 32
- · Regulation (EU) No 649/2012 Annex I Part 1
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Classification according to Regulation (EC) No 1272/2008

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

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- · Department issuing SDS: product safety department
- · Contact: msds@scharlab.com
- Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the

International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity - Category 4

Acute Tox. 2: Acute toxicity - Category 2 Acute Tox. 3: Acute toxicity - Category 3

Skin Irrit. 2: Skin corrosion/irritation - Category 2

Eye Irrit. 2: Serious eye damage/eye irritation - Category 2

Carc. 2: Carcinogenicity – Category 2 Repr. 2: Reproductive toxicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) - Category 1

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Annex: Exposure scenario 1

- · 1 Short title of the exposure scenario Industrial use
- · Sector of Use

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

· Process category

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

· Environmental release category

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

- Description of the activities / processes covered in the Exposure Scenario
 See section 1 of the annex to the Safety Data Sheet.
- · 2 Conditions of use
- · Duration and frequency Emission days (days/year): 87
- · Physical parameters
- · Physical state Fluid
- · Concentration of the substance in the mixture Raw material.
- · Used amount per time or activity 3480 tons per year
- Other operational conditions
- · Other operational conditions affecting environmental exposure No special measures required.
- · Other operational conditions affecting worker exposure

Keep locked up.

Ensure adequate ventilation, especially in closed rooms.

Avoid contact with the skin.

- · Other operational conditions affecting consumer exposure Keep out of the reach of children.
- Other operational conditions affecting consumer exposure during the use of the product Not applicable.
- · Risk management measures
- · Worker protection
- · Organisational protective measures

Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.

Technical protective measures

Ensure that suitable extractors are available on processing machines

· Personal protective measures

Use suitable respiratory protective device in case of insufficient ventilation.

Take care of good cleanliness and tidiness.

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Measures for consumer protection

Ensure adequate labelling.

Keep locked up and out of the reach of children.

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· Environmental protection measures

Use appropriate container to avoid environmental contamination.

. Air

Exhaust air is introduced into the incinerator.

Exhaust air is introduced into the adsorption tower.

· Water

The product should not be released into water without pretreatment. An on-site wastewater treatment is recommended. The typical site treatment technology of wastewater achieves removal efficiency (%): (85.6)

· Soil No special measures required.

· Disposal measures

Disposal must be made according to official regulations.

Ensure that waste is collected and contained.

Disposal procedures

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- Waste type Partially emptied and uncleaned packaging
- · 3 Exposure estimation

· Worker (dermal)

The exposure estimation was carried out in accordance with ECETOC TRA.

Detailed information on the exposure estimation can be found at http://www.ecetoc.org/tra.

PROC 3: 0.1 - 0.5 (mg/kg/d) PROC 8a: 0.1 - 0.5 (mg/kg/d) PROC 8b: 0.1 - 0.5 (mg/Kg/d) PROC 9: 0.1 - 0.5 (mg/kg/d)

· Worker (inhalation)

The exposure estimation was carried out in accordance with ECETOC TRA.

Detailed information on the exposure estimation can be found at http://www.ecetoc.org/tra.

PROC 3: 0.1 - 0.5 (mg/m3) PROC 8a: 0.1 - 0.5 (mg/m3) PROC 8b: 0.75 - 1 (mg/m3) PROC 9: 0.1 - 0.5 (mg/m3)

- Environment

The estimation of environmental exposure was carried out in accordance with EUSES.

Detailed information on the estimation of the environmental exposure can be found at http://ecb.jrc.ec.europa.eu/euses/.

Concentration / maximum emission: Seawater 0.015 mg/l Concentration / maximum emission: Freshwater 0.146 mg/l

· Consumer Not relevant for this Exposure Scenario.

· 4 - Guidance for downstream users

Whether the downstream user uses the substance / the mixture within the scope of the Exposure Scenario can be determined by means of a technical assessment.

Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.

For the risk assessment, the tools recommended by ECHA can be used.

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Annex: Exposure scenario 2

- · 1 Short title of the exposure scenario Laboratory use
- · Sector of Use

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

SU24 Scientific research and development

- · Product category PC21 Laboratory chemicals
- · Process category PROC15 Use as laboratory reagent
- · Environmental release category

ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor)

• Description of the activities / processes covered in the Exposure Scenario See section 1 of the annex to the Safety Data Sheet.

- · 2 Conditions of use
- · Duration and frequency

8hrs (full working shift).

Emission days (days/year): 365

- · Physical parameters
- · Physical state Fluid
- · Concentration of the substance in the mixture Raw material.
- · Other operational conditions
- Other operational conditions affecting environmental exposure No special measures required.
- · Other operational conditions affecting worker exposure

Keep locked up.

Ensure adequate ventilation, especially in closed rooms.

Avoid contact with the skin.

- · Risk management measures
- · Worker protection
- · Organisational protective measures

Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.

· Technical protective measures

Ensure that suitable extractors are available on processing machines

· Personal protective measures

Use suitable respiratory protective device in case of insufficient ventilation.

Take care of good cleanliness and tidiness.

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Measures for consumer protection

Ensure adequate labelling.

Keep locked up and out of the reach of children.

· Environmental protection measures

Use appropriate container to avoid environmental contamination.

- · Air No special measures required.
- · Water No special measures required.
- Soil No special measures required.

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· Disposal measures

Disposal must be made according to official regulations.

Ensure that waste is collected and contained.

· Disposal procedures

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Waste type Partially emptied and uncleaned packaging
- · 3 Exposure estimation
- Worker (dermal)

The exposure estimation was carried out in accordance with ECETOC TRA.

Detailed information on the exposure estimation can be found at http://www.ecetoc.org/tra.

PROC 15: 0.1 - 0.5 (mg/kg/d)

Worker (inhalation)

The exposure estimation was carried out in accordance with ECETOC TRA.

Detailed information on the exposure estimation can be found at http://www.ecetoc.org/tra.

PROC 15: 0.1 - 0.5 (mg/m3)

· Consumer Not relevant for this Exposure Scenario.

· 4 - Guidance for downstream users

Whether the downstream user uses the substance / the mixture within the scope of the Exposure Scenario can be determined by means of a technical assessment.

Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.

For the risk assessment, the tools recommended by ECHA can be used.