# Safety Data Sheet

## according to Regulations REACh 1907/2006/EC



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

### 1.1 Product identifier

REF 814301
Product name Cholesterol solution for comp. 8mL

REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.

1 x 8 mL Cholesterol reference solution UFI: EV2V-83WE-720M-VQH5

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

**Relevant identified uses**
Product for analytical use.
Exposure Scenario Classification according REACh, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
The exposure scenario is integrated into sections 1-16.
**Uses advised against**
not described

### 1.3 Details of the supplier of the safety data sheet

**Manufactured by:**
MACHEREY-NAGEL GmbH & Co. KG
Valencienner Str. 11, 52355 Düren, Germany
Phone: +49 2421 969 0 E-mail: sds@mn-net.com (msds@mn-net.com)

### 1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.
DE: Gemeinsames Giftinformationszentrum (GGIZ)
99089 Erfurt tel. +49 361 730 730, **<https://www.ggiz-erfurt.de>**

You find our current versions of SDS in Internet: **<http://www.mn-net.com/SDS>**

## SECTION 2: Hazard identification

### 2.0 Classification of the complete product according to Regulation (EC) 1272/2008



GHS02 GHS07

Signal word DANGER

| Hazard identification | Hazard classes/categories |
|---|---|
| H225 | Flam. Liq. 2 |
| H319 | Eye Irrit. 2 |
| H336 | STOT SE 3 |
| EUH066 | Skin Irrit. 2 |

### 2.1 Classification of the substance or mixture according to Regulation (EC) 1272/2008

**8 mL Cholesterol reference solution**



GHS02 GHS07

Signal word DANGER

| Hazard identification | Hazard classes/categories |
|---|---|
| EUH066 | Skin Irrit. 2 |
| H225 | Flam. Liq. 2 |
| H319 | Eye Irrit. 2 |
| H336 | STOT SE 3 |

List of H phrases: see section 16.2

### 2.2 Label elements according regulation (EC) 1272/2008

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identificator(s) (EU 1272/2008 Annex I - 1.5.1.2). Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2).

**8 mL Cholesterol reference solution**



GHS02 GHS07

Signal word: DANGER

**Label elements of the complete product**



GHS02 GHS07

Signal word: DANGER

### 2.3 Other hazards

**Possible hazards from physicochemical properties**
In the case of pH values are less than 5 or higher than 9 then it is irritant. Flammable properties.

**Information pertaining to particular risks to human and possible symptoms**

**Information pertaining to particular risks to the environment**

**Possible endocrine disrupting effects**
no data available

## SECTION 3: Composition / information on ingredients

### 3.1 Substances or 3.2 Mixtures

**8 mL Cholesterol reference solution**

| | | | |
|---|---|---|---|
| Substance name: | *acetone* | | |
| CAS No.: | 67-64-1 | | |
| Substance rating: | H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3, EUH066, Skin Irrit. 2 | | |
| Formula: | $C_3H_6O$; $(CH_3)_2$-CO | | |
| Pseudonym (de): | 2-Propanon | | |
| REACH Reg. No.: | 01-2119471330-49-xxxx | | |
| EC No.: | 200-662-2 | Indice No.: | 606-001-00-8 |
| Concentration: | 80 - <100 % | | |
| acc. CLP (GHS): | H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3, EUH066, Skin Irrit. 2 | | |

| | |
|---|---|
| Substance name: | *test chemical(s) (ppm)* |
| CAS No.: | - |
| Substance rating: | No criteria for classification or naming of chemical not required. |
| Concentration: | 0,1 - <1 % |
| acc. CLP (GHS): | The criteria for classification are not fulfilled. |

### 3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%.List of H and P phrases: see section 16.2.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice.

**4.1.1 After SKIN Contact**

Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

**4.1.2 After EYE Contact**

After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

**4.1.3 After INHALATION of vapours**

After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. ---

**4.1.4 After ORAL Intake**

After oral intake lots of water should be drunk after it has been ingested.

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

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

No additionally recommendations. ---

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**5.1.1 Suitable extinguishing media**

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

**5.1.2 Unsuitable extinguishing media**

no data available

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

DANGER: Highly flammable (GHS regulation). Forms explosive vapour-air mixtures. Formation of hazardous and caustic vapour-air mixtures possible.

### 5.3 Advice for firefighters

No, for listed product.Product package burns like paper or plastic.

### 5.4 Additional information

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Regular staff training is necessary.

### 6.2 Environmental precautions

not necessary

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

Bind any escaping liquid with inert absorbent.
Collect small amounts of leaked liquid and flush with water into drains.

### 6.4 Reference to other sections

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product.

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

Safe storage is guaranteed in the original packaging . Storage class (German chemical industry): see chapter 12.1

**Storage class (VCI):** 3
**Water hazard class (DE):** 1

#### 7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage.

### 7.3 Specific end use(s)

Product for analytical use.

## SECTION 8: Exposure controls /personal protection

### 8.1 Control parameters

**8 mL Cholesterol reference solution**

Chemical: *acetone* CAS No.: 67-64-1

DNEL: [inh] (1210) mg/m³
DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water) : 10.6 mg/L
PNEC = Predicted No Effected Concentration

EU value: 500 ppm / 1200 mg/m³

TRGS 900 (DE): 500 mL/m³ / 1200 mg/m³
A/a aveoles passing, E/e respirable, G total

Short-term exposure factor: 2 (I), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 500 ppm/ 1200 mg/m³

SUVA(CH) BAT value: [U/b] 80 mg/L

TRGS 903 (DE): [U/b] 80 mg/L
B blood, U urine, a no limitation, b end of exposition or shift

NIOSH: [TWA] 250 ppm / [STEL] 590 mg/m³
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: [TWA] 1000 ppm / [STEL] 2400 mg/m³

Chemical: *test chemical(s) (ppm)* CAS No.: -

### 8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

#### 8.2.1 Respiratory protection

No additional recommendations.

#### 8.2.2 Skin protection / Hand protection

Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC (f.ex. from Ansell or KCL). Use for short times chemical resistant latex or nitril gloves with code EN 374-3 level 1.

**8.2.3** **Eye / Face Protection**
Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection.

**8.2.4** **Skin protection**
Not necessary.

**8.2.5** **Personal hygiene**
Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

**8.2.6** **Thermal hazards**
no data available

### 8.3 Limitation and monitoring of environmental exposure

Do not release product into environment.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**8 mL Cholesterol reference solution**

| | |
|---|---|
| a) State of aggregation: | liquid |
| b) Colour: | colourless |
| c) Odor: | like acetone |
| d) Melting point: | -95 °C |
| e) Boiling point: | 56 °C |
| f) Flammability: | no data available |
| g) Explosive limits (lower / upper): | 2.5-13 Vol% |
| h) Flash point: | -20 °C |
| i) Flashing temperature: | 540 °C |
| j) Decomposition temperature: | no data available |
| k) pH value: | 5-6 |
| l) Kinematic viscosity: | no data available |
| m) Solubility in water: | 0-100 % |
| n) Dispersion coefficient $_{(o/w)}$ : | no data available |
| o) Vapour pressure (20°C): | 233 hPa |
| p) Specific gravity: | 0,79 g/cm³ |
| q) Relative vapour density $_{(air=1)}$ : | 2,01 |
| r) Particle size: | no data available |

### 9.2 Other information

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.
**Properties relevant to substance groups**
Substances are highly volatile and form flammable gas-air mixtures.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no further data available.

### 10.2 Chemical stability

no known instability.

### 10.3 Possibility of hazardous reactions

No further data available.

### 10.4 Conditions to avoid

### 10.5 Incompatible materials

no additional data available

### 10.6 Hazardous decomposition products

In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

## SECTION 11: Toxicological information

### 11.1 Information on the hazard classes according regulation (EC) 1272/2008

**Following information is valid for pure substances.** Quantitative data on the toxicity of this product are not available.

**8 mL Cholesterol reference solution**

Chemical: *acetone* CAS No.: 67-64-1
TSCA Inventory: listed California Proposition 65 List: not listed
ACGIH: 750 ppm
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, central nervous system
Symptoms: irritation eyes, nose, throat; headache, dizziness, central nervous system depression; dermatitis
Australia NICNAS: not listed Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: [PAC] Yes, Japan PDSCL: not listed
Japan ISHL: listed ≥1,0%/≥0,1%, Article 57-1+2 (Labelling&SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-29367
LD50 $_{orl\ rat}$ : 5800 mg/kg
LC50 $_{ihl\ rat}$ : 50,1 mg/L/8H

Chemical: *test chemical(s) (ppm)* CAS No.: -
TSCA Inventory: all <0.1%

### 11.2 Other hazards

**Possible endocrine disrupting effects**
no data available

**Other information**
no additional data available

## SECTION 12: Ecological information

### 12.1 Toxicity

**Following information is valid for pure substances.**

**8 mL Cholesterol reference solution**

Chemical: *acetone* CAS No.: 67-64-1
PNEC $_{(fresh\ water)}$ : 10.6 mg/L
PNEC = Predicted No Effected Concentration
LC50 $_{daphnia\ magna/48h}$ : [48h] 8.8 g/L
LC50 $_{fish/96h}$ : [4d] 5540 mg/L
EC50 $_{daphnia/48h}$ : 2212 mg/L
IC50 $_{scenedesmus\ quadricauda/72h}$ : IC5: 7500 mg/L
EC10 $_{pseudomonas\ putita/16h}$ : [30 min] 61,15 g/L
Water hazard class (DE): 1 WGK No.: 0006
Dispersion coefficient $_{(o/w)}$ : -0,24
Storage class (VCI): 3

Chemical: *test chemical(s) (ppm)* CAS No.: -
Storage class (VCI): 12

### 12.2 Persistence and degradability

not necessary

### 12.3 Bioaccumulative potential

not necessary

### 12.4 Mobility in soil

not necessary

### 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 Endocrine disrupting properties

no data available

### 12.7 Other adverse effects

no additional data available

## SECTION 13: Disposal considerations

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

### 13.1 Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains.

## SECTION 14: Transport information

**14.1. UN number: 3316**
**14.2. UN proper shipping name: Chemical Kit**
**14.3. Class: 9** **14.4. Packing group: II**

*Road transport ADR*

| | | | |
|---|---|---|---|
| Classification code: | M11 | Tunnel restriction code: | E |
| Limited Quantity: | acc. ADR 3.3.1/251: see LQ in Alternative declaration for transportation | | |

*Air transport ICAO*

| | | | |
|---|---|---|---|
| PAX: | 960 | max. weight PAX: | 10 KG |
| CAO: | 960 | max. weight CAO: | 10 KG |

*Maritime transport IMDG*

| | | | |
|---|---|---|---|
| EmS: | F-A, S-P | Storage category: | A |

Or use **Alternative declaration for transportation:**
UN 1993 class 3 II, **Excepted Quantities** (≤30 mL/∑≤500 mL) = ADR/ IATA E2
or
**14.1 UN number: 1993** **14.2 UN proper shipping name: Flammable liquid, n.o.s. (acetone mixture)**
**14.3 Class: 3** **14.4 Packing group: II**

*Road transport ADR*

| | | | |
|---|---|---|---|
| Classification code: | F1 | | |
| Limited Quantity: | 1 L | Tunnel restriction code: | E |
| Excepted Quantity: | E 2 | Special instructions: | 640C |

*Air transport ICAO*

| | | | |
|---|---|---|---|
| Limited Quantity: | LQ 4 | | |
| Excepted Quantity: | E 2 | | |
| PAX: | 353 | max. weight PAX: | 5 L |
| CAO: | 364 | max. weight CAO: | 60 L |

*Maritime transport IMDG*

| | | | |
|---|---|---|---|
| EmS: | F-E, S-E | Storage category: | B |

### 14.5 Environmental hazards

none, contains only small quantities of hazardous substances

### 14.6 Special precautions for user

not necessary

### 14.7 Carriage in bulk by sea in accordance with IMO instruments

Not applicable.

## SECTION 15: Regulatory information

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

Dangerous Substances Protection Act (DE: Chemikaliengesetz - ChemG), Aug 2013, Stand: Okt 2020
Ordinance on protection against dangerous substances (E: Gefahrstoffverordnung - GefStoffV), Nov 2010, Stand: Mrz 2017
TRGS 201, Classification and labeling of activities involving hazardous substances, Feb 2017
TRGS 220, National aspects when preparing safety data sheets, Jan 2017
TRGS 400, Risk assessment for activities involving hazardous substances, Jul 2017
BekGS 408, Application of the GefStoffV and the TRGS with the entry into force of the CLP regulation, December 2009, status: Jan 2012
MN leaflet/instructions for use, also at www.mn-net.com
If necessary, observe other country-specific regulations.

### 15.2 Chemical safety assessment

**not necessary for these small amounts**

## SECTION 16: Other information

### 16.1 Changes compared to the last version

in preparation

### 16.2 List of H and P phrases

#### 16.2.1 List of relevant H phrases

| | |
|---|---|
| H225 | Highly flammable liquid and vapour. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |

#### 16.2.2 List of relevant P phrases

### 16.3 Recommended restriction on use

Only for professional user.
An individual package of this product or test kit has a moderate hazardous potential.

### 16.4 Sources of key data

KÜHN, BIRETT, Leaflets on hazardous materials, 2021
Directive 1999/92/EG Minimum requirements to improve the safety and health protection of workers at risk from potentially explosive atmospheres
SUVA .CH, limit values in the air at work 2009, revised on 01/2009
Regulation 790/2009/EU, adaptation of Regulation 1272/2008/EU to technical and scientific progress (1st ATP)
Regulation 453/2010/EU, adaptation of the REACH regulation 1907/2006/EG
Regulation 487/2013/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (4th ATP)
Regulation 1221/2015/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (7th ATP)
Regulation 776/2017/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (10th ATP)

Regulation 669/2018/EU, adaptation of Regulation 1272/2008/EC to technical and scientific progressText (11th ATP)
Regulation 1480/2018/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (13th ATP)
Regulation 521/2019/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (12th ATP)
TRGS 900, German rules of technology on limit values in the air at work, as of 03/2019
Regulation 217/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (14th ATP)
Regulation 878/2020/EU, adaptation of Annex II of the REACH regulation 1907/2006/EG
Regulation 1182/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (15th ATP)
Regulation 643/2021/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (16th ATP)
Regulation 849/2021/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (17th ATP)

**revisions/updates**

*Reason for revision:* *2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary*
*2014-04 adjustment according Regulation 487/2013/EU*
*2016-03 adjustment according Regulation 1221/2015/EU*

*2017-11 adjustment according the ECHA registration dossier*
*2022-11 adjustment according Regulation 878/2020/EU*

### 16.5 Further information

MACHEREY-NAGEL GmbH & Co. KG provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.
MACHEREY-NAGEL GmbH & Co. KG makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly MACHEREY-NAGEL GmbH & Co. KG will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

### 16.6 Legend / Abbreviations

| | |
|---|---|
| acc: | according |
| ADR: | Convention concerning the International Carriage of Dangerous Goods by Road |
| Act: | acute |
| BAT: | biological workplace tolerance value |
| CAO: | Cargo Aircraft Only |
| Carc: | carcinogen |
| CAS: | Chemical Abstracts Service |
| CLP: | Classification, Labelling and Packaging regulation |
| CMR: | carcinogen, mutagen, reproduction toxic |
| Corr: | corrosive |
| COD: | chemical oxigen demand |
| CSCL: | Chemical Substance Control Law (Jp) |
| Dam: | damage |
| DNEL: | Derived No-Effect Level (for workers) |
| derm: | dermal |
| dog: | dog |
| EC10: | Concentration causing a toxic effect in 10% of the test organisms |
| EC: | European Community |
| EC-Nr: | Substance number of the EC substance inventory |
| EmS: | Guide to accident management measures on ships |
| EU: | European Union |
| fish: | fish (not spezified) |
| GHS: | Global Harmonized System of Classification and Labeling of Chemicals |
| gpg: | guinea pig |
| ICAO: | International Civil Aviation Organization |
| ihl: | inhaled |
| IMDG: | International Maritime Dangerous Goods Code |
| intrav: | intravenous |
| ipt: | intraperitonaeal |
| ISHL: | Industrial Safety and Health Law (Jp) |
| LC50: | letale concentration 50% |
| LD50: | letale dosis 50% |
| leuciscus idus: | fisch, ide, orfe |
| MAK: | maximum workplace concentration |
| Met: | Metall |
| mus: | mouse |
| Muta: | mutagen |
| NIOSH: | National Institute for Occupational Safety and Health (US) |
| NRD: | Non-rapidly degradable |
| onchorhynchus mykiss: | fish, rainbow trout |
| orl: | oral |
| OSHA: | Occupational Safety and Health Administration |
| PAX: | transport on passenger planes allowed |
| PBT: | persistent, bioaccumulating, toxic substance |
| pH: | pH value |
| pimephales promelas: | fish, fathead minnow |
| PNEC: | Predicted No Effected Concentration |
| PROC 15: | Process category 'for laboratory use' |
| PRTR: | Law for PRTR and Promotion of Chemical Management (Jp) |
| PVC: | polyvinyl chloride |
| quail: | bird, quail |
| rat: | rat |
| rbt: | rabbit |
| RD: | rapidly degradable |
| RE: | repeated |
| REACh: | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| REF: | item number, reference number |
| Reg.No.: | rRegistration number |

| | |
|---|---|
| Repr: | harmful to reproduction |
| Resp: | respiratory |
| RIP: | REACH Implementations Projects |
| scu: | sub cutan |
| SDS: | safety data sheet |
| Sens: | sensitisation |
| STEL: | short term exposure limit |
| STOT: | Specific Target Organ Toxicity |
| SVHC: | Substance of Very High Concern |
| t/a: | tons per year |
| TCCA: | Toxic Chemicals Control Act (S. Korea) |
| Tox: | toxic |
| TSCA: | The Toxic Substances Control Act (US) |
| TWA: | time weighted average |
| TRGS: | technical regulations (DE) |
| vPvB: | very persistent, very bioaccumulating substance |

### 16.7 Training advice

Regular safety training. Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.