

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 15.06.2022

Version number 15.0

Revision: 15.06.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** Acetonitrile, 99,7%, anhydrous (max. 0,005% H₂O), with molecular sieves**Article number:** AC0370**CAS Number:**

75-05-8

EC number:

200-835-2

Index number:

608-001-00-3

Registration number 01-2119471307-38-XXXX**1.2 Relevant identified uses of the substance or mixture and uses advised against**

For other specific uses: see attached exposure scenarios.

Application of the substance / the preparation:

Solvents

Laboratory reagent

Intermediate

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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Regional representation:

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Internet Web Site: www.scharlab.com

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**

GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Eye Irrit. 2 H319 Causes serious eye irritation.

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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

GHS02 GHS07

Signal word Danger**Hazard statements**

H225 Highly flammable liquid and vapour.

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H319 Causes serious eye irritation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P403+P235 Store in a well-ventilated place. Keep cool.

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**

75-05-8 acetonitrile

Identification number(s)**EC number:** 200-835-2**Index number:** 608-001-00-3**SECTION 4: First aid measures****4.1 Description of first aid measures****General information:**

Immediately remove any clothing soiled by the product.

Keep quiet and cover.

Position and transport stably in side position.

In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation:

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

After skin contact:

Generally the product does not irritate the skin.

Immediately remove contaminated clothing.

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Wash off immediately with plenty of water for at least 15 minutes.

Seek immediate medical advice.

• **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

In the event that the injured person wears contact lenses, they must be removed as long as they are not stuck to the eyes, otherwise additional damage could occur.

• **After swallowing:**

Drink plenty of water and provide fresh air. Call for a doctor immediately.

Do not induce vomiting; call for medical help immediately.

• **4.2 Most important symptoms and effects, both acute and delayed**

The main symptoms are described for different cases of contact: Skin, eyes, inhalation and ingestion.

• **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:**

Fire-extinguishing powder

Alcohol resistant foam

Carbon dioxide

• **For safety reasons unsuitable extinguishing agents:** Pressurized water jet

• **5.2 Special hazards arising from the substance or mixture**

Vapours may form explosive mixtures with air.

Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:

Hydrogen cyanide (HCN)

Nitrogen oxides

Carbon monoxide (CO)

Highly flammable liquid and vapor.

• **5.3 Advice for firefighters**

• **Protective equipment:**

Wear self-contained respiratory protective device.

Mouth respiratory protective device.

• **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Cool endangered receptacles with water spray.

In the event of a major fire and large quantities, evacuate the area and fight the fire from a distance given the risk of explosion.

SECTION 6: Accidental release measures

• **6.1 Personal precautions, protective equipment and emergency procedures**

Isolate leaks as long as it does not pose an additional risk to the people who perform this function.

Eliminate all sources of ignition.

Evacuate and restrict access.

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

• **6.2 Environmental precautions:**

Do not allow to penetrate the ground/soil.

Dilute with plenty of water.

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.

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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**

Work only in fume cupboard.

Wear an individual protective equipment.

Wear chemically sealed goggles and / or face shield.

Avoid contact with eyes and skin.

Ensure good ventilation/exhaustion at the workplace.

Avoid breathing mist/vapours/spray.

Do not eat, drink or smoke during use.

Wash hands after any manipulation.

Have an eye wash bottle or eye shower available at the workplace.

• **Information about fire - and explosion protection:**

Protect from heat.

Protect against electrostatic charges.

Keep ignition sources away - Do not smoke.

Use explosion-proof apparatus / fittings and spark-proof tools.

• **7.2 Conditions for safe storage, including any incompatibilities**

• **Storage:**

• **Requirements to be met by storerooms and receptacles:**

Store only in unopened original receptacles.

Store in a cool location.

• **Information about storage in one common storage facility:**

Do not store together with oxidizing, self-igniting substances or easily flammable products.

Store away from foodstuffs.

Do not store together with acids.

Do not store together with alkalis (caustic solutions).

Store away from oxidising agents.

• **Further information about storage conditions:**

Protect from humidity and water.

Protect from heat and direct sunlight.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

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

SECTION 8: Exposure controls/personal protection

• **8.1 Control parameters**

• **Additional information about design of technical facilities:** No further data; see item 7.

• **Ingredients with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

WEL Short-term value: 102 mg/m³, 60 ppm

Long-term value: 68 mg/m³, 40 ppm

• **DNELs**

DNEL worker, acute. Local effects: Inhalative - 70 mg/m³

DNEL worker, acute. Systematic effects: Inhalative - 70 mg/m³

DNEL worker, cronic. Acute local and systematic effects: Inhalative - 102 mg/m³

DNEL worker, cronic. Systematic effects: Dermic - 20 mg/kg body weight

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DNEL consumer, acute. Local effects: Inhalative - 22 mg/m³DNEL consumer, acute. Systematic effects: Inhalative - 22 mg/m³

Consumer DNEL, acute. Systemic Effects: Oral - 0.6 mg/kg

DNEL consumer, prolonged. Systematic effects:

- Inhalative: 2.4 mg/m³

- Dermic: 1.2 mg/kg body weight

- Oral: 0.4 mg/kg body weight

• PNECs

PNEC (Fresh water): 10 mg/L

PNEC (Sea water): 1 mg/L

PNEC (Freshwater sediments): 40.5 mg/kg

PNEC (Seawater sediments): 4.5 mg/kg

PNEC (Soil): 2.23 mg/kg

PNEC (Residual water depuration system): 32 mg/kg

• 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.

Ensure adequate ventilation. Local extraction and general ventilation are essential to avoid the accumulation of flammable vapor mixtures.

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

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SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance:****Form:**

Fluid

Colour:

Colourless

Odour:

Ether-like

Odour threshold:

170 ppm

pH-value:

Not determined.

Change in condition**Melting point/freezing point:**

-46 °C

Initial boiling point and boiling range:

81 °C

Flash point:

2 °C

Flammability (solid, gas):

Not applicable.

Ignition temperature:

525 °C

Decomposition temperature:

Not determined.

Auto-ignition temperature:

Not determined.

Explosive properties:

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Explosion limits:**Lower:**

4.4 Vol %

Upper:

16 Vol %

Vapour pressure at 20 °C:

97 hPa

Density at 20 °C:0.79 g/cm³**Relative density**

Not determined.

Vapour density

1.42 (20°C, 1 atm)

Evaporation rate

Not determined.

Solubility in / Miscibility with water:

Fully miscible.

Partition coefficient: n-octanol/water:

Not determined.

Viscosity:**Dynamic at 20 °C:**

0.35 mPas

Kinematic:

Not determined.

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity**10.1 Reactivity**

Highly flammable liquid and vapor.

Stable under normal conditions. If used according to the regulation no decomposition occurs.

10.2 Chemical stability**Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

To avoid thermal decomposition do not overheat.

10.3 Possibility of hazardous reactions No dangerous reactions known.**10.4 Conditions to avoid** Heat, open flames and sparks

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10.5 Incompatible materials:

Strong acids
Strong alkalis
Strong oxidizing agents.
Perchlorates

10.6 Hazardous decomposition products:

Nitrogen oxides (NO_x)
Carbon monoxide
Carbon dioxide
Hydrogen cyanide (HCN)

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Harmful if swallowed, in contact with skin or if inhaled.

LD/LC50 values relevant for classification:

Oral	LD50	617 mg/kg (mouse)
		1.68-8.53 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
Inhalative	LC50/4 h	6.022 mg/l (mouse)
		26.8 mg/l (rat)

Primary irritant effect:**Skin corrosion/irritation**

Skin - Rabbit
Result: No irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Buehler test - Guinea pig
Result: negative (ECHA)

Additional toxicological information:**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Germ cell mutagenicity**

In vitro mammalian cell gene mutation test.
Result: negative
Germ cells mutagenicity
Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by (IARC) International Agency of Research of Carcinogens.

Reproductive toxicity Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:**

Toxicity to fish

LC50 - Pimephales promelas (Fathead piscardo) - 1640 mg/L - 96 h

CL50 - Oryzias latipes (Carp) - >1000 mg/L (48h)

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- NOEC - Oryzias latipes (Carpa) - >102 mg/L (21h)
Toxicity to daphnia and other aquatic invertebrates
LC50 - Daphnia magna (large sea flea) - 3600 mg/L - 48 h
NOEC - Daphnia magna (large sea flea) - 160 - 960 mg/L - 21h
Toxicity to algae
CE50 - Pseudokirchneriella subcapitata (Green algae) - >1000 mg/L (48h)
ErC50 - Phaeodactylum tricornutum - 400 mg/L (72h)
• **12.2 Persistence and degradability** Easily biodegradable
• **12.3 Bioaccumulative potential**
Log Pow: -0,35
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
• **12.4 Mobility in soil**
Ground: 0.3 - 16
No absorption in soils or sediments.
• **Additional ecological information:**
• **General notes:**
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even 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**
Additional ecological information
Hazard for drinking water supplies.
Discharge into the environment must be avoided.

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:** Non contaminated packagings may be recycled.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA**
- **14.2 UN proper shipping name**
- **ADR**
- **IMDG, IATA**
- **14.3 Transport hazard class(es)**
- **ADR, IMDG, IATA**



- **Class**
- **Label**

UN1648

1648 ACETONITRILE
ACETONITRILE3 Flammable liquids.
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- **14.4 Packing group**
 - **ADR, IMDG, IATA** II
 - **14.5 Environmental hazards:**
 - **Marine pollutant:** No
 - **14.6 Special precautions for user** Warning: Flammable liquids.
 - **Hazard identification number (Kemler code):** 33
 - **EMS Number:** F-E,S-D
 - **Stowage Category** B
 - **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)** 1L
 - **Transport category** 2
 - **Tunnel restriction code** D/E
 - **UN "Model Regulation":** UN 1648 ACETONITRILE, 3, II

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 -**
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
- **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.
- **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 relatif au transport international 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)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)

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LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

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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
 - SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
 - SU9 Manufacture of fine chemicals
- **Product category**
 - PC19 Intermediate
 - PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
 - PC35 Washing and cleaning products (including solvent based products)
 - PC40 Extraction agents
- **Process category**
 - PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
 - PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 - PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 - PROC4 Chemical production where opportunity for exposure arises
 - 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**
 - ERC1 Manufacture of the substance
 - ERC2 Formulation into mixture
 - ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
 - ERC6a Use of intermediate
 - ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
 - ERC7 Use of functional fluid at industrial site
- **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** 5 workdays/week.
 - **Worker** Regular use with exposure up to 8 hrs. per workday.
 - **Physical parameters**
The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the preparation.
 - **Physical state** Fluid
 - **Concentration of the substance in the mixture** Raw material.
 - **Used amount per time or activity** >1000 tons per year
 - **Other operational conditions**
 - **Other operational conditions affecting environmental exposure** No special measures required.
 - **Other operational conditions affecting worker exposure**
 - Gloves required during a shift
 - Avoid contact with eyes.
 - Avoid contact with the skin.
 - Do not breathe gas/vapour/aerosol.
 - Take precautionary measures against static discharge.
 - Keep away from sources of ignition - No smoking.
 - **Other operational conditions affecting consumer exposure during the use of the product**
The consumer has to be advised of the maximum permissible frequency and duration of use in the instructions for use.
The directions for use must indicate the limits for proper use.

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- **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**

Provide explosion-proof electrical equipment.

Ensure that suitable extractors are available on processing machines

- **Personal protective measures**

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes.

Tightly sealed goggles

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.

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.

- **Environmental protection measures** No special measures required.

- **Air** No special measures required.

- **Water** No special measures required.

- **Soil** No special measures required.

- **Notes** In case of unintended release of the product: See section 6 of the Safety Data Sheet.

- **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)**

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

PROC 1: 0.343 (mg/kg/d)

PROC 2: 1.37 (mg/kg/d)

PROC 3: 0.343 (mg/Kg/d)

PROC 4: 6.86 (mg/kg/d)

PROC 8a: 13.71 (mg/kg/d)

PROC 8b: 6.86 (mg/kg/d)

PROC 9: 0.686 (mg/kg/d)

- **Worker (inhalation)**

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

PROC 1: 0.012 (mg/m³)

PROC 2: 12.0 (mg/m³)

PROC 3: 29.9 (mg/m³)

PROC 4: 24.0 (mg/m³)

PROC 8a: 60.0 (mg/m³)

PROC 8b: 60.0 (mg/m³)

PROC 9: 0.855 (mg/m³)

- **Environment**

Water: No exposure

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Soil: No exposure

Purification plant: No exposure

Humans via environment: No exposure

4 - Guidance for downstream users

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

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.

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** SU24 Scientific research and development
- **Product category**
 - PC21 Laboratory chemicals
 - PC40 Extraction agents
- **Process category**
 - PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 - PROC15 Use as laboratory reagent
- **Environmental release category**
 - ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
 - ERC6a Use of intermediate
 - ERC7 Use of functional fluid at industrial site
- **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** 5 workdays/week.
- **Worker** Regular use with exposure up to 8 hrs. per workday.
- **Physical parameters**
- **Physical state** Fluid
- **Concentration of the substance in the mixture** Raw material.
- **Used amount per time or activity** >1000 tons per year
- **Other operational conditions** Observe the general safety regulations when handling chemicals.
- **Other operational conditions affecting environmental exposure**

Observe section 6 of the Safety Data Sheet (Accidental release measures).
- **Other operational conditions affecting worker exposure**
 - Avoid contact with eyes.
 - Avoid contact with the skin.
 - Do not breathe gas/vapour/aerosol.
 - Take precautionary measures against static discharge.
 - Keep away from sources of ignition - No smoking.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures**
 - Persons, who tend to skin diseases or other hypersensitivity reactions of the skin, should not handle the product.
 - Ensure that activities are executed by specialists or authorised personnel only.
- **Technical protective measures**
 - Provide explosion-proof electrical equipment.
 - Ensure that suitable extractors are available on processing machines
- **Personal protective measures**
 - Do not inhale gases / fumes / aerosols.
 - Avoid contact with the skin.
 - Avoid contact with the eyes.
 - Tightly sealed goggles
 - 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.
 - 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

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.06.2022

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- **Measures for consumer protection** Ensure adequate labelling.
- **Environmental protection measures** No special measures required.
- **Air** No special measures required.
- **Water** No special measures required.
- **Soil** No special measures required.
- **Notes** In case of unintended release of the product: See section 6 of the Safety Data Sheet.
- **Disposal measures** 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 (oral)** No significant oral exposure
- **Worker (dermal)**
Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.
PROC 3: 0.343 (mg/kg/d)
PROC 15: 0.034 (mg/kg/d)
- **Worker (inhalation)**
Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.
PROC 3: 8.55 (mg/m³)
PROC 15: 3.42 (mg/m³)
- **Environment**
Water: No exposure
Purification plant: No exposure
Soil: No exposure
Humans via environment: No exposure
- **4 - Guidance for downstream users**
Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.
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.
For the risk assessment, the tools recommended by ECHA can be used.