

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

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking· **1.1 Product identifier**· **Trade name:** Acetonitrile + 0.1% formic acid· **Article number:** 2645· **CAS Number:** -· **Registration number** This product is a mixture. UK REACH registration numbers see section 3.· **1.2 Relevant identified uses of the substance or mixture and uses advised against**· **Sector of Use**

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

SU9 Manufacture of fine chemicals

SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU24 Scientific research and development

· **Product category**

PC19 Intermediate

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC21 Laboratory chemicals

PC29 Pharmaceuticals

PC39 Cosmetics, personal care 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

PROC5 Mixing or blending in batch processes

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

PROC15 Use as laboratory reagent

· **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

· **Application of the substance / the mixture**

Industrial use

Laboratory chemicals

Reagent for analysis

· **1.3 Details of the supplier of the safety data sheet**· **Manufacturer/Supplier:**

Th. Geyer GmbH & Co. KG

Dornierstr. 4 – 6

D-71272 Renningen

Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417

www.thgeyer.de

sicherheitsdatenblaetter@thgeyer.de

· **Further information obtainable from:** Product management department· **1.4 Emergency telephone number:**

National Poisons Information Service

City Hospital

(Contd. on page 2)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid

(Contd. of page 1)

Dudley Road
 Birmingham B18 7QH
 Tel.:Emergency: (00 44) 87 06 00 62 66
 National Poisons Information Service
 +44 121 507 4123
 Members of the public seeking specific information on poisons should contact:
 In England and Wales: NHS 111 - dial 111
 In Scotland: NHS 24 - dial 111

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 H312 Harmful in contact with skin.
 Acute Tox. 4 H332 Harmful if inhaled.
 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 product is classified and labelled according to the GB CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard statements**

H225 Highly flammable liquid and vapour.
 H312+H332 Harmful in contact with skin or if inhaled.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.

- **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
 P264 Wash thoroughly after handling.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 3)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid







(Contd. of page 2)

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

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
-
- **3.2 Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 75-05-8 EINECS: 200-835-2 Reg.nr.: 01-2119471307-38-XXXX	Acetonitrile -----  Flam. Liq. 2, H225  Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	50-<100%
CAS: 64-18-6 EINECS: 200-579-1 Reg.nr.: 01-2119491174-37-XXXX	Formic acid -----  Flam. Liq. 3, H226  Acute Tox. 3, H331  Skin Corr. 1A, H314  Acute Tox. 4, H302	2%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
First aider needs to protect himself.
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Remove person from danger area.
Supply fresh air.
Seek medical treatment.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Flush contaminated skin with soap and plenty of water.
After prolonged contact or any signs of skin changes (redness or other signs of inflammation) seek medical attention.
take care of a Possibility of inhalation at the same time
- **After eye contact:**
Protect unharmed eye.
Rinse out opened eye for several minutes under running water.
Remove contact lenses
Seek immediate medical advice.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Induce vomiting, if person is conscious. Seek medical help.
Induce vomiting only, if affected person is fully conscious.
Consult a physician.
- **Information for doctor:** Please observe safety data sheet/label.
- **4.2 Most important symptoms and effects, both acute and delayed**
Breathing difficulty
Headache

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid

(Contd. of page 3)

Dazed feeling

Gastric or intestinal disorders

Unconsciousness

Nausea

- **Hazards**

Danger of impaired breathing.

Danger of disturbed cardiac rhythm.

- **4.3 Indication of any immediate medical attention and special treatment needed**

If swallowed, gastric irrigation with added, activated carbon.

Give Glucocorticoid-Aerosol in case of lung irritation.

If necessary oxygen respiration treatment.

In cases of cyanosis, administer vitamin C, oxygen, protect from sunlight.

Medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents:**

Water spray, powder, carbon dioxide or foam. Fight larger fires with water spray or alcohol resistant foam.

- **For safety reasons unsuitable extinguishing agents:** Water with full jet.

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

Combustible.

Vapours are heavier than air and may spread along floors.

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Hydrogen cyanide (HCN)

Nitrogen oxides (NOx)

Carbon monoxide (CO)

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

- **5.3 Advice for firefighters**

- **Protective equipment:**

Wear fully protective suit.

Mouth respiratory protective device.

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

- **Additional information**

Cool endangered receptacles with water spray.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

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

Ensure adequate ventilation.

Keep away from ignition sources.

Particular danger of slipping on leaked/spilled product.

Avoid contact with eyes and skin.

Wear protective equipment. Keep unprotected persons away.

- **6.2 Environmental precautions:**

Prevent from spreading (e.g. by damming-in or oil barriers).

Danger of explosion.

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.

Dispose of the material collected according to regulations.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid

(Contd. of page 4)

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

- Keep receptacles tightly sealed.
- Store in cool, dry place in tightly closed receptacles.
- Keep away from heat and direct sunlight.
- Apply the general protection and hygiene measures for the handling with chemicals.
- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.

Information about fire - and explosion protection:

- Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

- Store in a cool location.
- Store only in the original receptacle.

Information about storage in one common storage facility:

- Store away from oxidising agents.
- Store away from reducing agents.

Further information about storage conditions:

- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.

Storage class: 3

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:

CAS: 75-05-8 Acetonitrile

- | | |
|-----|--|
| WEL | Short-term value: 102 mg/m ³ , 60 ppm |
| | Long-term value: 68 mg/m ³ , 40 ppm |

CAS: 64-18-6 Formic acid

- | | |
|-----|--|
| WEL | Long-term value: 9.6 mg/m ³ , 5 ppm |
|-----|--|

- 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. If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained breathing apparatus with a full face mask must be worn. Respirators and components must be approved to appropriate government standards (for example, NIOSH (US) or CEN (EU)). Translated with www.DeepL.com/Translator

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid

(Contd. of page 5)

(free version)

Protection of hands:


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

Butyl rubber, BR

Material thickness > 0,7 mm

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

level 6 for application > 480 min

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

Body protection:


Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

SECTION 9: Physical and chemical properties

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

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic

pH-value: 2,0 - 4,0 (Solution 10%, potentiometric)

Change in condition

Melting point/freezing point:	-46 °C
Initial boiling point and boiling range:	81 °C (CAS: 75-05-8 Acetonitrile)

Flash point: < 23 °C

Flammability (solid, gas): Not applicable.

Ignition temperature: 525 °C (CAS: 75-05-8 Acetonitrile)

Decomposition temperature: Not determined.

Auto-ignition temperature: Product is not selfigniting.

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

Explosion limits:

Lower:	4.4 Vol %
Upper:	16 Vol %

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid

(Contd. of page 6)

· Vapour pressure at 20 °C:	97 hPa
· Density at 20 °C:	0.78 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.39 mPas
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity

Risk of inflammation

Vapors can form an explosive mixture together with air.

· **10.2 Chemical stability** Stable with proper storage and handling.· **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.

· 10.3 Possibility of hazardous reactions

Forms explosive gas mixture with air.

Violent reaction with air and oxidising agents.

Explosive reaction with oxidising agents such as calcium chlorate and or peroxides.

· 10.4 Conditions to avoid

Heat, flames and sparks

Vapours form explosive mixtures with air.

· **10.5 Incompatible materials:** Avoid contact with other chemicals.· **10.6 Hazardous decomposition products:** On fire: see chapter 5

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity

Harmful in contact with skin or if inhaled.

· LD/LC50 values relevant for classification:

Oral	LD50	2,460 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)

CAS: 75-05-8 Acetonitrile

Oral	LD50	2,730 mg/kg (rat)
Dermal	LD50	1,250 mg/kg (rabbit)
Inhalative	LC50	11 mg/l (ATE)

· Primary irritant effect:

· Skin corrosion/irritation

Causes skin irritation.

· Serious eye damage/irritation

Causes serious eye irritation.

(Contd. on page 8)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid

(Contd. of page 7)

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **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:** No further relevant information available.
- **12.2 Persistence and degradability** Easily biodegradable
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
Toxic for fish
Toxic for water fleas
Toxic for algae
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): 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** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
Observe local (country-specific) regulations and laws
This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Chemicals must be disposed of in compliance with the respective national regulations.

European waste catalogue

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 05 00	gases in pressure containers and discarded chemicals
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals
HP3	Flammable
HP4	Irritant - skin irritation and eye damage
HP6	Acute Toxicity

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

(Contd. on page 9)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5



Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid

(Contd. of page 8)

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN1993
· 14.2 UN proper shipping name · ADR · IMDG, IATA	1993 FLAMMABLE LIQUID, N.O.S. (ACETONITRILE), special provision 640D FLAMMABLE LIQUID, N.O.S. (ACETONITRILE)
· 14.3 Transport hazard class(es) · ADR	
	
· Class · Label	3 (F1) Flammable liquids. 3
· IMDG, IATA	
	
· Class · Label	3 Flammable liquids. 3
· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category	Warning: Flammable liquids. 33 F-E, S-E B
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category · Tunnel restriction code	2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid

(Contd. of page 9)

· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S., SPECIAL PROVISION 640D (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** None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS
--

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

- **National regulations:**

- **Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not 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. Application, use and handling of our products take place out of our control and are solely your responsibility.

- **Relevant phrases**

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

- **Department issuing SDS:** Product management

- **Contact:** Product management

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

(Contd. on page 11)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid

(Contd. of page 10)

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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
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
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

· *** Data compared to the previous version altered.**

E

(Contd. on page 12)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid

(Contd. of page 11)

Annex: Exposure scenario

- **Short title of the exposure scenario** Chemicals for Laboratory and industrial use
- **Sector of Use**
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
 - SU9 Manufacture of fine chemicals
 - SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
 - SU24 Scientific research and development
- **Product category**
 - PC19 Intermediate
 - PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
 - PC21 Laboratory chemicals
 - PC29 Pharmaceuticals
 - PC39 Cosmetics, personal care 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
 - PROC5 Mixing or blending in batch processes
 - PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 - PROC15 Use as laboratory reagent
- **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
- **Description of the activities / processes covered in the Exposure Scenario**
 - See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use**
- **Duration and frequency** 5 workdays/week.
- **Physical parameters**
- **Physical state** Fluid
- **Concentration of the substance in the mixture** Raw material.
- **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.
- **Other operational conditions affecting consumer exposure** No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures**
 - Provide Internal Plant Instruction.
 - Employment restrictions concerning juveniles must be observed.
 - Employment restrictions concerning pregnant and lactating women must be observed.
- **Technical protective measures**
 - Provide explosion-proof electrical equipment.
 - Ensure that suitable extractors are available on processing machines

(Contd. on page 13)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 03.05.2022

Version number 5

Creation Date: 30.11.2016

Trade name: Acetonitrile + 0.1% formic acid

(Contd. of page 12)

- **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. If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained breathing apparatus with a full face mask must be worn. Respirators and components must be approved to appropriate government standards (for example, NIOSH (US) or CEN (EU)). Translated with www.DeepL.com/Translator (free version)

- Protective gloves

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

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

- **Measures for consumer protection**

- Keep out of reach of children.

- Ensure adequate labelling.

- **Environmental protection measures**

- Avoid release to the environment. Obtain special instructions / refer to Safety Data Sheet.

- **Water** Do not allow to reach ground water, water bodies or sewage system.

- **Soil** Prevent contamination of soil.

- **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

- **Exposure estimation**

- **Worker (oral)** Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.

- **Worker (dermal)** Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.

- **Worker (inhalation)**

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

- **Environment**

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

- **Consumer** Not relevant for this Exposure Scenario.

- **Guidance for downstream users** No further relevant information available.