

Creation Date 24-Nov-2009

Revision Date 18-Oct-2023

Revision Number 12

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: Acetonitrile with 0.1% (v/v) Formic acid for HPLC Gradient analysis
Cat No. : FE/1100/15; FE/1100/17; FE/1100/99V

Unique Formula Identifier (UFI) 9HUN-P2V4-QX02-VUSY

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

| | |
|---------------------------------------|---|
| Recommended Use | Laboratory chemicals. |
| Sector of use | SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Product category | PC21 - Laboratory chemicals |
| Process categories | PROC15 - Use as a laboratory reagent |
| Environmental release category | ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) |
| Uses advised against | No Information available |

1.3. Details of the supplier of the safety data sheet

Company

UK entity/business name
Fisher Scientific UK
Bishop Meadow Road, Loughborough,
Leicestershire LE11 5RG, United Kingdom

EU entity/business name
Thermo Fisher Scientific
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

Tel: 01509 231166
Chemtrec US: (800) 424-9300
Chemtrec EU: 001-703-527-3887

Poison Centre - Emergency information services

Ireland : National Poisons Information Centre (NPIC) -
01 809 2166 (8am-10pm, 7 days a week)
Malta : +356 2395 2000
Cyprus : +357 2240 5611

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

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Physical hazards

Flammable liquids

Category 2 (H225)

Health hazards

Acute oral toxicity

Category 4 (H302)

Acute dermal toxicity

Category 4 (H312)

Acute Inhalation Toxicity - Vapors

Category 4 (H332)

Serious Eye Damage/Eye Irritation

Category 2 (H319)

Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

2.2. Label elements



Signal Word

Danger

Hazard Statements

H225 - Highly flammable liquid and vapor

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

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

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

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

Toxicity to Soil Dwelling Organisms

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

| Component | CAS No | EC No | Weight % | CLP Classification - According to |
|-----------|--------|-------|----------|-----------------------------------|
|-----------|--------|-------|----------|-----------------------------------|

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| | | | | GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567 |
|--------------|---------|-----------|-------|---|
| Acetonitrile | 75-05-8 | 200-835-2 | >99.9 | Flam. Liq. 2 (H225) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Eye Irrit. 2 (H319) Acute Tox. 4 (H332) |
| Formic acid | 64-18-6 | 200-579-1 | 0.1 | Flam. Liq. 3 (H226) Skin Corr. 1A (H314) Eye Dam. 1 (H318) |

| Component | Specific concentration limits (SCL's) | M-Factor | Component notes |
|-------------|---|----------|-----------------|
| Formic acid | Skin Corr. 1A :: C>=90% Skin Corr. 1B :: 10%<=C<90% Eye Irrit. 2 :: 2%<=C<10% Skin Irrit. 2 :: 2%<=C<10% | - | - |

| Component | ECHA (RAC) ATE (Oral) | ECHA (RAC) ATE (Dermal) | ECHA (RAC) ATE (Inhalation) |
|--------------|-----------------------|-------------------------|-----------------------------|
| Acetonitrile | ATE = 617 mg/kg | - | - |

| Components | Reach Registration Number | |
|--------------|---------------------------|--|
| Acetonitrile | 01-2119471307-38-0019 | |
| Formic acid | 01-2119491174-37 | |

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

| | |
|---|--|
| General Advice | Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. If symptoms persist, call a physician. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required. |
| Ingestion | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| Inhalation | Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration. |
| Self-Protection of the First Aider | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |

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

Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

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

| | |
|---------------------------|---|
| Notes to Physician | Treat symptomatically. Symptoms may be delayed. |
|---------------------------|---|

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SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated.

Hazardous Combustion Products

Hydrogen cyanide (hydrocyanic acid), Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Use personal protective equipment as required. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing.

6.2. Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Remove all sources of ignition. Soak up with inert absorbent material. Take precautionary measures against static discharges. Keep in suitable, closed containers for disposal. Use spark-proof tools and explosion-proof equipment.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Use only under a chemical fume hood. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Use spark-proof tools and explosion-proof equipment. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before

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re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area.

Technical Rules for Hazardous Substances (TRGS) 510 Class 3
Storage Class (LGK) (Germany)

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

| Component | The United Kingdom | European Union | Ireland |
|--------------|--|--|--|
| Acetonitrile | STEL: 60 ppm 15 min STEL: 102 mg/m ³ 15 min TWA: 40 ppm 8 hr TWA: 68 mg/m ³ 8 hr | TWA: 40 ppm (8hr) TWA: 70 mg/m ³ (8hr) Skin | TWA: 40 ppm 8 hr. TWA: 70 mg/m ³ 8 hr. STEL: 120 ppm 15 min STEL: 310 mg/m ³ 15 min Skin |
| Formic acid | STEL: 15 ppm 15 min STEL: 28.8 mg/m ³ 15 min TWA: 5 ppm 8 hr TWA: 9.6 mg/m ³ 8 hr | TWA: 5 ppm (8hr) TWA: 9 mg/m ³ (8hr) | TWA: 5 ppm 8 hr. TWA: 9 mg/m ³ 8 hr. STEL: 15 ppm 15 min STEL: 27 mg/m ³ 15 min |

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

| Component | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|-----------------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| Acetonitrile 75-05-8 (>99.9) | | | | DNEL = 32.2mg/kg bw/day |

| Component | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|-----------------------------------|--|--|--|--|
| Acetonitrile 75-05-8 (>99.9) | DNEL = 40.6 ppm (68 mg/m ³) | DNEL = 40.6 ppm (68 mg/m ³) | DNEL = 40.6 ppm (68 mg/m ³) | DNEL = 40.6 ppm (68 mg/m ³) |
| Formic acid 64-18-6 (0.1) | | | DNEL = 9.5mg/m ³ | |

Predicted No Effect Concentration (PNEC)

See values below.

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| Component | Fresh water | Fresh water sediment | Water Intermittent | Microorganisms in sewage treatment | Soil (Agriculture) |
|-----------------------------------|---------------|---------------------------------|--------------------|------------------------------------|-----------------------------|
| Acetonitrile 75-05-8 (>99.9) | PNEC = 10mg/L | PNEC = 7.53mg/kg sediment dw | PNEC = 10mg/L | PNEC = 32mg/L | PNEC = 2.41mg/kg soil dw |
| Formic acid 64-18-6 (0.1) | PNEC = 2mg/L | PNEC = 13.4mg/kg sediment dw | PNEC = 1mg/L | PNEC = 7.2mg/L | PNEC = 1.5mg/kg soil dw |

| Component | Marine water | Marine water sediment | Marine water intermittent | Food chain | Air |
|-----------------------------------|----------------|---------------------------------|---------------------------|------------|-----|
| Acetonitrile 75-05-8 (>99.9) | PNEC = 1mg/L | | | | |
| Formic acid 64-18-6 (0.1) | PNEC = 0.2mg/L | PNEC = 1.34mg/kg sediment dw | | | |

8.2. Exposure controls

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Goggles (European standard - EN 166)

Hand Protection

Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments |
|-----------------|-------------------|-----------------|-------------------|--|
| Butyl rubber | > 480 minutes | 0.35 mm | EN 374 Level 6 | As tested under EN374-3 Determination of Resistance to Permeation by Chemicals |
| Neoprene gloves | < 60 minutes | 0.45 mm | | |

Skin and body protection

Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Recommended Filter type: low boiling organic solvent Type AX Brown conforming to EN371

Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

Environmental exposure controls

No information available.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | | |
|---|--|--|
| Physical State | Liquid | |
| Appearance | Clear | |
| Odor | aromatic | |
| Odor Threshold | No data available | |
| Melting Point/Range | No data available | |
| Softening Point | No data available | |
| Boiling Point/Range | No information available | |
| Flammability (liquid) | Highly flammable | On basis of test data |
| Flammability (solid,gas) | Not applicable | Liquid |
| Explosion Limits | Lower 4.4 vol % Upper 16.00 vol % | |
| Flash Point | 6 °C / 42.8 °F | Method - No information available |
| Autoignition Temperature | 524 °C / 975.2 °F | |
| Decomposition Temperature | No data available | |
| pH | No information available | |
| Viscosity | No data available | |
| Water Solubility | Miscible | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Component | log Pow | |
| Acetonitrile | -0.34 | |
| Formic acid | -1.9 | |
| Vapor Pressure | No data available | |
| Density / Specific Gravity | 0.7810 | |
| Bulk Density | Not applicable | Liquid |
| Vapor Density | No data available | (Air = 1.0) |
| Particle characteristics | Not applicable (liquid) | |

9.2. Other information

| | |
|----------------------|---|
| Explosive Properties | Vapors may form explosive mixtures with air |
|----------------------|---|

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

| | |
|--------------------------|---------------------------|
| Hazardous Polymerization | No information available. |
| Hazardous Reactions | No information available. |

10.4. Conditions to avoid

Incompatible products. Heat, flames and sparks. Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Reducing Agent.

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10.6. Hazardous decomposition products

Hydrogen cyanide (hydrocyanic acid). Nitrogen oxides (NOx). Carbon monoxide (CO).
Carbon dioxide (CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information

(a) acute toxicity;

| | |
|------------|------------|
| Oral | Category 4 |
| Dermal | Category 4 |
| Inhalation | Category 4 |

Toxicology data for the components

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------|---|-------------------------|---|
| Acetonitrile | 450-787 mg/kg (Rat) 2460 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | LC50 = 3587 ppm (6.022 mg/l) (Mouse) 4h LC50 = 16,000 ppm (26.8 mg/l) (Rat) 4h |
| Formic acid | LD50 = 1100 mg/kg (Rat) | - | LC50 = 7.85 mg/L (Rat) 4 h |

| Component | ECHA (RAC) ATE (Oral) | ECHA (RAC) ATE (Dermal) | ECHA (RAC) ATE (Inhalation) |
|--------------|-----------------------|-------------------------|-----------------------------|
| Acetonitrile | ATE = 617 mg/kg | - | - |

(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

| | |
|-------------|--|
| Respiratory | Based on available data, the classification criteria are not met |
| Skin | Based on available data, the classification criteria are not met |

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

(f) carcinogenicity; Based on available data, the classification criteria are not met
There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Based on available data, the classification criteria are not met

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

| | |
|---------------|-------------|
| Target Organs | None known. |
|---------------|-------------|

(j) aspiration hazard; Based on available data, the classification criteria are not met

Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Inhalation of high vapor concentrations may cause symptoms like headache, dizziness,

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tiredness, nausea and vomiting.

11.2. Information on other hazards

Endocrine Disrupting Properties

Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects

| Component | Freshwater Fish | Water Flea | Freshwater Algae |
|--------------|---|--------------------|--------------------|
| Acetonitrile | LC50: = 1850 mg/L, 96h static (Lepomis macrochirus) LC50: = 1000 mg/L, 96h static (Pimephales promelas) LC50: 1600 - 1690 mg/L, 96h flow-through (Pimephales promelas) LC50: = 1650 mg/L, 96h static (Poecilia reticulata) | | |
| Formic acid | Leuciscus idus: LC50 = 46-100 mg/L/96h | EC50 = 34 mg/L/48h | EC50 = 25 mg/L/96h |

| Component | Microtox | M-Factor |
|--------------|--|----------|
| Acetonitrile | EC50 = 28000 mg/L 48 h EC50 = 73 mg/L 24 h EC50 = 7500 mg/L 15 h | |
| Formic acid | EC50 = 46.7 mg/L/17h | |

12.2. Persistence and degradability

Persistence

Persistence is unlikely.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

| Component | log Pow | Bioconcentration factor (BCF) |
|--------------|---------|-------------------------------|
| Acetonitrile | -0.34 | No data available |
| Formic acid | -1.9 | 0.22 dimensionless |

12.4. Mobility in soil

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB assessment

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

12.6. Endocrine disrupting properties

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant

Ozone Depletion Potential

This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

European Waste Catalogue (EWC)

According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

| | |
|----------------------------------|-----------------------|
| 14.1. UN number | UN1648 |
| 14.2. UN proper shipping name | ACETONITRILE SOLUTION |
| 14.3. Transport hazard class(es) | 3 |
| 14.4. Packing group | II |

ADR

| | |
|----------------------------------|-----------------------|
| 14.1. UN number | UN1648 |
| 14.2. UN proper shipping name | ACETONITRILE SOLUTION |
| 14.3. Transport hazard class(es) | 3 |
| 14.4. Packing group | II |

IATA

| | |
|----------------------------------|-----------------------|
| 14.1. UN number | UN1648 |
| 14.2. UN proper shipping name | ACETONITRILE SOLUTION |
| 14.3. Transport hazard class(es) | 3 |
| 14.4. Packing group | II |

| | |
|---|----------------------------------|
| 14.5. Environmental hazards | No hazards identified |
| 14.6. Special precautions for user | No special precautions required. |
| 14.7. Maritime transport in bulk according to IMO instruments | Not applicable, packaged goods |

SECTION 15: REGULATORY INFORMATION

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

International Inventories

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Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component | CAS No | EINECS | ELINCS | NLP | IECSC | TCSI | KECL | ENCS | ISHL |
|--------------|---------|-----------|--------|-----|-------|------|----------|------|------|
| Acetonitrile | 75-05-8 | 200-835-2 | - | - | X | X | KE-00067 | X | X |
| Formic acid | 64-18-6 | 200-579-1 | - | - | X | X | KE-17233 | X | X |

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|--------------|---------|------|---|-----|------|------|-------|-------|
| Acetonitrile | 75-05-8 | X | ACTIVE | X | - | X | X | X |
| Formic acid | 64-18-6 | X | ACTIVE | X | - | X | X | X |

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

Authorisation/Restrictions according to EU REACH

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--------------|---------|---|---|---|
| Acetonitrile | 75-05-8 | - | Use restricted. See item 75. (see link for restriction details) | - |
| Formic acid | 64-18-6 | - | Use restricted. See item 75. (see link for restriction details) | - |

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

Seveso III Directive (2012/18/EC)

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|--------------|---------|---|--|
| Acetonitrile | 75-05-8 | Not applicable | Not applicable |
| Formic acid | 64-18-6 | Not applicable | Not applicable |

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification

Water endangering class = 2 (self classification)

| Component | Germany - Water Classification (AwSV) | Germany - TA-Luft Class |
|-----------|---------------------------------------|-------------------------|
|-----------|---------------------------------------|-------------------------|

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| | | |
|--------------|------|--|
| Acetonitrile | WGK2 | |
| Formic acid | WGK1 | Class I : 20 mg/m ³ (Massenkonzentration) |

| | |
|------------------|--|
| Component | France - INRS (Tables of occupational diseases) |
| Acetonitrile | Tableaux des maladies professionnelles (TMP) - RG 84 |

| Component | Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81) | Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC) | Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure |
|--------------------------------|--|---|---|
| Formic acid 64-18-6 (0.1) | Prohibited and Restricted Substances | | |

15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H225 - Highly flammable liquid and vapor
H226 - Flammable liquid and vapor
H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H332 - Harmful if inhaled

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer
Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadviser - LOLI, Merck index, RTECS

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

SAFETY DATA SHEET

Acetonitrile with 0.1% (v/v) Formic acid for HPLC Gradient analysis

Revision Date 18-Oct-2023

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

| | |
|------------------------------|-----------------------|
| Physical hazards | On basis of test data |
| Health Hazards | Calculation method |
| Environmental hazards | Calculation method |

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

| | |
|-------------------------|-----------------|
| Creation Date | 24-Nov-2009 |
| Revision Date | 18-Oct-2023 |
| Revision Summary | Not applicable. |

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

Disclaimer

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End of Safety Data Sheet