

Acetonitrile**60004-2.5L**

Version 1.6

Issuing date 12/14/2016

Revision Date 05/06/2024

Print Date 05/08/2024

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**Product information**

Trade name : Acetonitrile

Number : 000000020248

Recommended use of the chemical and restrictions on use : Laboratory chemicals

Manufacturer or supplier's details : Honeywell Specialty Chemicals Seelze GmbH
Wunstorfer Straße 40
Seelze, 30926
Germany

For further information, please contact: : 1-800-368-0050
+1-231-726-3171
(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : Medical: 1-800-498-5701 or +1-303-389-1414
: **Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**
In Japan: 0800-300-5842

2. HAZARDS IDENTIFICATION**Classification of the substance or mixture**

Classification of the substance or mixture : Flammable liquids, Category 2
Acute toxicity, Category 4, Oral
Acute toxicity, Category 4, Inhalation
Eye irritation, Category 2A
Specific target organ toxicity - single exposure, Category 1,
Central nervous system

GHS Label elements, including precautionary statements

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Symbol(s)

:



Signal word

: Danger

Hazard statements

: Highly flammable liquid and vapour.
Harmful if swallowed.
Causes serious eye irritation.
Harmful if inhaled.
Causes damage to organs.

Precautionary statements

: **Prevention:**
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ protective clothing/ eye protection/ face protection.**Response:**IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed: Call a POISON CENTER or doctor/ physician.
If eye irritation persists: Get medical advice/ attention.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.**Storage:**

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Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₂H₃N

Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Acetonitrile	75-05-8	100.00 %
Acetonitrile		

4. FIRST AID MEASURES

- Inhalation : Remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Use oxygen as required, provided a qualified operator is present.
Call a physician.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Take off contaminated clothing and shoes immediately.
Wash contaminated clothing before re-use.
Call a physician.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Call a physician.
- Ingestion : Call a physician.
Do not induce vomiting without medical advice.
Immediate medical attention is required.
Never give anything by mouth to an unconscious person.

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Notes to physician : Treat as cyanide poisoning.
Symptoms of poisoning may not appear for several hours.
Keep under medical supervision for at least 48 hours.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Carbon dioxide (CO₂)
Dry chemical
Alcohol-resistant foam
Cool closed containers exposed to fire with water spray.
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during firefighting : Flammable.
Vapours may form explosive mixtures with air.
Vapours are heavier than air and may spread along floors.
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.
In case of fire hazardous decomposition products may be produced such as:
Hydrogen cyanide (hydrocyanic acid)
Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear personal protective equipment.
Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Ensure adequate ventilation.
Remove all sources of ignition.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
Prevent product from entering drains.

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Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Do not allow run-off from fire fighting to enter drains or water courses.

Methods and materials for
containment and cleaning up

: Ventilate the area.
No sparking tools should be used.
Use explosion-proof equipment.
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE**Handling**

Precautions for safe handling

: Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
Do not smoke.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.

Advice on protection against
fire and explosion

: Keep away from fire, sparks and heated surfaces.
Take precautionary measures against static discharges.
Ensure all equipment is electrically grounded before beginning transfer operations.
Use explosion-proof equipment.
Keep product and empty container away from heat and sources of ignition.
No sparking tools should be used.
No smoking.

Storage

Conditions for safe storage,
including any
incompatibilities

: Store in area designed for storage of flammable liquids.
Protect from physical damage.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Containers which are opened must be carefully resealed and

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kept upright to prevent leakage.
Keep away from heat and sources of ignition.
Keep away from direct sunlight.
Store away from incompatible substances.
Container hazardous when empty.
Do not pressurize, cut, weld, braze, solder, drill, grind or
expose containers to heat or sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Appropriate engineering controls

Use with local exhaust ventilation.

Prevent vapour buildup by providing adequate ventilation during and after use.

Individual protection measures, such as personal protective equipment (PPE)

- | | |
|--------------------------|---|
| Respiratory protection | : In case of insufficient ventilation, wear suitable respiratory equipment. |
| Hand protection | : Solvent-resistant gloves
Gloves must be inspected prior to use.
Replace when worn. |
| Eye protection | : Do not wear contact lenses.
Wear as appropriate:
Safety glasses with side-shields
If splashes are likely to occur, wear:
Goggles or face shield, giving complete protection to eyes |
| Skin and body protection | : Wear as appropriate:
Solvent-resistant apron
Flame retardant antistatic protective clothing.
If splashes are likely to occur, wear:
Protective suit |
| Hygiene measures | : When using do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product. |

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Protective measures : Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.

: Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Colour : colourless

Odour : characteristic

Odour Threshold : Note: No data available

pH : Note: Not applicable

Melting point/range : -46 °C

Boiling point/boiling range : 82 °C at 1,013 hPa

Flash point : 55.0 °F (12.8 °C)
Method: closed cup

Evaporation rate : Note: No data available

Lower explosion limit : 3 %(V)

Upper explosion limit : 16 %(V)

Vapour pressure : 97 hPa
at 20 °C(68 °F)

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147 hPa
at 30 °C(86 °F)

Vapour density : 1.42
Note: (Air = 1.0)

Density : 0.7857 g/cm³ at 20 °C

Water solubility : Note: completely miscible

Partition coefficient: n-octanol/water : log Pow: -0.34

Ignition temperature : 524 °C

Viscosity, kinematic : Note: No data available

Molecular weight : 41.05 g/mol

10. STABILITY AND REACTIVITY

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Hazardous polymerisation does not occur.

Conditions to avoid : Heat, flames and sparks.
Keep away from direct sunlight.

Incompatible materials to avoid : Acids
Bases
Oxidizing agents
Reducing agents
Sulfites
Perchlorates
May attack many plastics, rubbers and coatings.

Hazardous decomposition : In case of fire hazardous decomposition products may be

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products

produced such as:
Hydrogen cyanide (hydrocyanic acid)
Carbon dioxide (CO₂), carbon monoxide (CO), oxides of
nitrogen (NO_x), dense black smoke.

11. TOXICOLOGICAL INFORMATION

- Information on likely routes of exposure : Inhalation, Eye contact, Skin contact, Ingestion
- Acute oral toxicity : LD50: 617 mg/kg
Species: Rat
Method: OECD Test Guideline 401
- Acute inhalation toxicity : Note: Classification based on Annex VI of regulation 1272/2008/EC.
: Acute toxicity estimate: 11 mg/l
Method: Calculation method
- Acute dermal toxicity : Note: Classification based on Annex VI of regulation 1272/2008/EC.
: Acute toxicity estimate: 2,500 mg/kg
Method: Calculation method
- Skin corrosion/irritation
Acetonitrile : Species: Rabbit
Result: No skin irritation
Method: OECD Test Guideline 404
Exposure time: 4 h
- Serious eye damage/eye irritation : Species: Rabbit
Result: Irritating to eyes.
- Skin sensitisation
Acetonitrile : Buehler Test
Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.
Method: OECD

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Respiratory sensitisation Acetonitrile	: Note: No data available
Germ cell mutagenicity	: Note: Not classified due to data which are conclusive although insufficient for classification.
Carcinogenicity	: Note: No data available
Reproductive toxicity	: Note: No data available
Specific target organ toxicity - single exposure	: Assessment :The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.
Specific target organ toxicity - repeated exposure	: Note :No data available
Aspiration toxicity	: No data available
Further information Acetonitrile	: STOT - single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 1. May cause convulsions. May cause neurotoxic effects. Based on Human Evidence.

12. ECOLOGICAL INFORMATION**Aquatic and ecotoxicity**

Toxicity to fish	: flow-through test LC50: 1,640 mg/l Exposure time: 96 h Species: Pimephales promelas (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates	: Note: Not classified due to data which are conclusive although insufficient for classification.

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Toxicity to algae**Acetonitrile**

: static test
NOEC: 400 mg/l
Exposure time: 72 h
Species: *Phaeodactylum tricornutum*

static test
ErC50: 9,696 mg/l
Exposure time: 72 h
Species: *Phaeodactylum tricornutum*

Toxicity to bacteria

: static test
NOEC: 320 mg/l
Exposure time: 30 min
Species: activated sludge
Method: OECD 209

Persistence and degradability

Biodegradability : Note: No data available

Bioaccumulative potential

Bioaccumulation : Note: No data available

Mobility in soil

Mobility : Note: No data available

13. DISPOSAL CONSIDERATIONS

WDPCL Waste Disposal and Public Cleansing Law : Specially Controlled Industrial Waste

Disposal methods : In accordance with local and national regulations.

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14. TRANSPORT INFORMATION**ADR**

UN/ID No. : UN 1648
Description of the goods : ACETONITRILE

Class : 3
Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3

IATA

UN/ID No. : UN 1648
Description of the goods : Acetonitrile
Class : 3
Packing group : II
Labels : 3
Packing instruction (cargo aircraft) : 364
Packing instruction (passenger aircraft) : 353
Packing instruction (passenger aircraft) : Y341

IMDG

UN/ID No. : UN 1648
Description of the goods : ACETONITRILE
Class : 3
Packing group : II
Labels : 3
EmS Number 1 : F-E
EmS Number 2 : S-D

Marine pollutant : no

15. REGULATORY INFORMATION**National regulatory information**

Chemical Substance : Listed

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Control Law
DES (JP)

Type II Monitoring Chemical Substance.
Reference: (2)-1508

Substances Subject to be
Notified Names
JP MSDSD

:
Threshold Concentration: 1 % wt 15

Vessel Safety Law
JP VSL

: Flammable liquids (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1)

Aviation Law
JP AVL

: Flammable liquid (Article 194 of The Enforcement Rules of Aviation Law and its Attached Table 1)

Fire Service Law

: Group 4 Flammable liquids
Type 1 petroleums
Hazardous rank II
Water soluble
Keep away from fire

Poisonous and Deleterious
Substances Control Law

: Deleterious substance not for pharmaceutical use
32.3
Acetonitrile 75-05-8

Other international regulations**Notification status**

USA. List of Active
Substances on the Toxic
Substances Control Act
(TSCA) Chemical
Substances Inventory, as
amended

: All substances listed as active on the TSCA inventory

Australian Inventory of
Industrial Chemicals

: All components are listed on the inventory, regulatory obligations/restrictions apply

Canada. Domestic

: All components of this product are on the Canadian DSL

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Substances List (DSL), as amended

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS) : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC) : On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI) : On the inventory, or in compliance with the inventory

Thailand. Existing Chemicals Inventory from FDA (TECI List) : On the inventory, or in compliance with the inventory

16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 2*	2
Flammability	: 3	3
Physical Hazard	: 0	
Instability	:	0

* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

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Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Prepared by Honeywell Energy and Sustainability Solutions Product Stewardship Group Product Stewardship Group