

**Acetonitrile****34967-1L**

Version 1.4

Issuing date 12/14/2016

Revision Date 11/03/2017

Print Date 06/28/2019

**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

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: +(81)-345209637**  
: (24 hours/day, 7 days/week)

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

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

**GHS Label elements, including precautionary statements**

Symbol(s)



Signal word

: Danger

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

**3. COMPOSITION/INFORMATION ON INGREDIENTS**Formula : C<sub>2</sub>H<sub>3</sub>N

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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.
- 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 (CO<sub>2</sub>)  
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.

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Vapors may travel to areas away from work site before igniting/flashback to vapor source.  
In case of fire hazardous decomposition products may be produced such as:  
Hydrogen cyanide (hydrocyanic acid)  
Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.

Special protective equipment : Wear self-contained breathing apparatus and protective suit.  
for firefighters

**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.  
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.

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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 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**

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

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|                          |   |
|--------------------------|---|
|                          | If splashes are likely to occur, wear:<br>Goggles or face shield, giving complete protection to eyes  |
| Skin and body protection | : Wear as appropriate:<br>Solvent-resistant apron<br>Flame retardant antistatic protective clothing.<br>If splashes are likely to occur, wear:<br>Protective suit   |
| Hygiene measures         | : When using do not eat, drink or smoke.<br>Wash hands before breaks and immediately after handling the product.<br>Keep working clothes separately.<br>Remove and wash contaminated clothing before re-use.<br>Do not swallow.<br>Avoid breathing vapours, mist or gas.<br>Avoid contact with skin, eyes and clothing. |
| Protective measures      | : Ensure that eyewash stations and safety showers are close to the workstation location.<br>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       |
| pH                          | : Note: Not applicable |
| Melting point/range         | : -46 °C               |
| Boiling point/boiling range | : 82 °C at 1,013 hPa   |
| Flash point                 | : 43 °F (6 °C)         |
| Lower explosion limit       | : 3 %(V)               |
| Upper explosion limit       | : 16 %(V)              |

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|  |   |
|--|---|
| Vapour pressure                        | : 97 hPa<br>at 20 °C(68 °F)<br><br>147 hPa<br>at 30 °C(86 °F) |
| Vapour density                         | : 1.42<br>Note: (Air = 1.0)                                   |
| Density                                | : 0.7857 g/cm <sup>3</sup> at 20 °C                           |
| Water solubility                       | : Note: completely miscible                                   |
| Partition coefficient: n-octanol/water | : log Pow: -0.34  |
| Ignition temperature                   | : 524 °C  |
| Molecular weight                       | : 41.05 g/mol   |

**10. STABILITY AND REACTIVITY**

|                                    |   |
|------------------------------------|---|
| Chemical stability                 | : Stable under normal conditions.   |
| Possibility of hazardous reactions | : Hazardous polymerization does not occur.  |
| Conditions to avoid                | : Heat, flames and sparks.<br>Keep away from direct sunlight.   |
| Incompatible materials to avoid    | : Acids<br>Bases<br>Oxidizing agents<br>Reducing agents<br>Sulfites<br>Perchlorates<br>May attack many plastics, rubbers and coatings.<br><br>Oxidizing solids<br>Oxidizing liquids |
| 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 (CO<sub>2</sub>), carbon monoxide (CO), oxides of  
nitrogen (NO<sub>x</sub>), dense black smoke.**11. TOXICOLOGICAL INFORMATION**

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 irritation

Acetonitrile

: Species: Rabbit

Result: No skin irritation

Method: OECD Test Guideline 404

Exposure time: 4 h

Eye irritation

: Species: Rabbit

Result: Irritating to eyes.

Sensitisation

Acetonitrile

: Buehler Test

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

Method: OECD

Further information



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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****Toxicity**

Toxicity to fish : flow-through test  
LC50: 1,640 mg/l  
Exposure time: 96 h  
Species: Pimephales promelas (fathead minnow)

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

**Persistence and degradability****Bioaccumulative potential**

Bioaccumulation : Note: no data available

**13. DISPOSAL CONSIDERATIONS**

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

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  
Control Law : Type II Monitoring Chemical Substance.  
DES (JP) : Reference: (2)-1508

Substances Subject to be :  
Notified Names : Threshold Concentration: 1 % wt 15  
JP MSDSD

Vessel Safety Law : Flammable liquids (Article 2 and 3 of rules on shipping and

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|   |   |
|---|---|
| JP VSL  | storage of dangerous goods and its Attached Table 1)  |
| Aviation Law<br>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<br>Type 1 petroleums<br>Hazardous rank II<br>Water soluble<br>Keep away from fire |
| Poisonous and Deleterious<br>Substances Control Law | : Deleterious substance not for pharmaceutical use<br>32.3<br>Acetonitrile 75-05-8                            |

**Other international regulations****Notification status**

|   |  |
|---|--|
| US. Toxic Substances<br>Control Act   | : On TSCA Inventory                                      |
| Australia. Industrial Chemical<br>(Notification and<br>Assessment) Act                        | : On the inventory, or in compliance with the inventory  |
| Canada. Canadian<br>Environmental Protection Act<br>(CEPA). Domestic<br>Substances List (DSL) | : All components of this product are on the Canadian DSL |
| Japan. Kashin-Hou Law List  | : On the inventory, or in compliance with the inventory  |
| Korea. Existing Chemicals<br>Inventory (KECI)   | : On the inventory, or in compliance with the inventory  |
| Philippines. The Toxic<br>Substances and Hazardous<br>and Nuclear Waste Control<br>Act        | : On the inventory, or in compliance with the inventory  |
| China. Inventory of Existing<br>Chemical Substances   | : On the inventory, or in compliance with the inventory  |

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New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

**16. OTHER INFORMATION**

|                 | <b>HMIS III</b> | <b>NFPA</b> |
|-----------------|-----------------|-------------|
| 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**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

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

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Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group