

Acetonitrile**016-4**

Version 2.3

Revision Date 01/07/2021

Print Date 05/29/2023

SECTION 1. IDENTIFICATION

Product name : Acetonitrile

Number : 000000011306

Product Use Description : Solvent

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

For more information call : 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**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid

Color : colourless

Odor : sweet ether-like

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

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GHS Label elements, including precautionary statements

Symbol(s)

:



Signal word

: Danger

Hazard statements

: Highly flammable liquid and vapour.
Harmful if swallowed or if inhaled.
Causes serious eye irritation.
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/ eye protection/ face protection.

Response:

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
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. Rinse mouth.
If eye irritation persists: Get medical advice/ attention.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

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Storage:

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

Disposal:

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

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₂H₃N

Chemical nature : Substance

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

SECTION 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 : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

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Notes to physician

Most important symptoms/effects, acute and delayed : No information available.

Indication of immediate medical attention and special treatment needed, if necessary : Treat as cyanide poisoning. Symptoms of poisoning may not appear for several hours. Keep under medical supervision for at least 48 hours.

SECTION 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.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 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.

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- Remove all sources of ignition.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
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).

SECTION 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 breathe vapours or spray mist.
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

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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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- | | | |
|--------------------------|---|---|
| Protective measures | : | Ensure that eyewash stations and safety showers are close to the workstation location. |
| Engineering measures | : | Use with local exhaust ventilation.
Prevent vapour buildup by providing adequate ventilation during and after use. |
| 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 |
| Hand protection | : | Solvent-resistant gloves
Gloves must be inspected prior to use.
Replace when worn. |
| Skin and body protection | : | Wear as appropriate:
Solvent-resistant apron
Flame retardant antistatic protective clothing.
If splashes are likely to occur, wear:
Protective suit |
| Respiratory protection | : | In case of insufficient ventilation, wear suitable respiratory equipment.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
Use NIOSH approved respiratory protection. |
| Hygiene measures | : | When using do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product. |

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Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Acetonitrile	75-05-8	SKIN_DES : Skin designation:	Danger of cutaneous absorption	01 2020	ACGIH:US. ACGIH Threshold Limit Values, as amended
Acetonitrile	75-05-8	TWA : Time weighted average	(20 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values, as amended
Acetonitrile	75-05-8	REL : Recommended exposure limit (REL):	34 mg/m3 (20 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Acetonitrile	75-05-8	PEL : Permissible exposure limit	70 mg/m3 (40 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
Acetonitrile	75-05-8	STEL : Short term exposure limit	105 mg/m3 (60 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Acetonitrile	75-05-8	TWA : Time weighted average	70 mg/m3 (40 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Color	: colourless
Odor	: sweet ether-like
Odor 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	: 5 Method: Compared to Butyl acetate.
Lower explosion limit	: 3 %(V)
Upper explosion limit	: 16 %(V)
Vapor pressure	: 97.3 hPa at 20 °C(68 °F)
Vapor density	: 1.42 Note: (Air = 1.0)
Density	: 0.7822 g/cm ³ at 20 °C
Water solubility	: Note: completely soluble

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Partition coefficient:
n-octanol/water : Note: No data available

Ignition temperature : 524 °C

Viscosity, dynamic : Note: No data available

Viscosity, kinematic : Note: No data available

Molecular weight : 41 g/mol

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

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

Hazardous decomposition
products : 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.

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SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50: 617 mg/kg Species: Mouse, male and female Method: OECD Test Guideline 401
Acute inhalation toxicity	: LC50: 3587 ppm, vapour Exposure time: 4 h Species: Mouse, male and female Method: OECD Test Guideline 403
Acute dermal toxicity	: LD50: > 2,000 mg/kg Species: Rabbit
Skin irritation	: Species: Rabbit Result: No skin irritation Method: OECD Test Guideline 404 Exposure time: 4 h
Eye irritation	: Species: Rabbit Result: Irritating to eyes. Method: OECD Test Guideline 405
Sensitisation	: Buehler Test Species: Guinea pig Result: Did not cause sensitisation on laboratory animals. Method: OECD Test Guideline 406
Further information	: 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.

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SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

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

Further information on ecology**SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT UN/ID No. : UN 1648
Proper shipping name : ACETONITRILE
Class 3
Packing group II
Hazard Labels 3

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

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Class : 3
Packaging group : II
Hazard 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
Packaging group : II
Hazard Labels : 3
EmS Number : F-E, S-D
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic 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 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 : On the inventory, or in compliance with the inventory

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(IECSC)

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

National regulatory information

US. EPA CERCLA Hazardous Substances (40 CFR 302) : The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

Reportable quantity: 5000 lbs
: Acetonitrile 75-05-8

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : The following components are subject to reporting levels established by SARA Title III, Section 313:
: Acetonitrile 75-05-8

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

CERCLA Reportable Quantity : 5000 lbs

California Prop. 65 :  **WARNING:** This product can expose you to chemicals, listed below, known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Acrylonitrile 107-13-1

Massachusetts RTK : Acetonitrile 75-05-8

New Jersey RTK : Acetonitrile 75-05-8

Pennsylvania RTK : Acetonitrile 75-05-8

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SECTION 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

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.

Previous Issue Date: 08/10/2018

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group