

**Acetonitrile****LP014-204**

Version 2.2

Revision Date 08/10/2018

Print Date 10/17/2019

**SECTION 1. IDENTIFICATION**

Product name : Acetonitrile

Number : 000000011306

Product Use Description : Solvent

Manufacturer or supplier's details : Honeywell International Inc.  
1953 South Harvey Street  
Muskegon, MI 49442

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

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**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**

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:**

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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.

**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 : C<sub>2</sub>H<sub>3</sub>N

Chemical nature : Substance

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

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**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.

**Notes to physician**

- 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 (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/flashing back 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 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.  
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).

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**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 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**

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- 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.  
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

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Acetonitrile	75-05-8	TWA : Time weighted average	(20 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Acetonitrile	75-05-8	SKIN_DE S : Skin designati on:	Can be absorbed through the skin.	2008	ACGIH:US. ACGIH Threshold Limit Values
Acetonitrile	75-05-8	REL : Recomm ended exposure limit (REL):	34 mg/m3 (20 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Acetonitrile	75-05-8	PEL : Permissi ble exposure limit	70 mg/m3 (40 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
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)
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)

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid



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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 : 43 °F (6 °C)  
Method: open 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<sup>3</sup> 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**

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 (CO <sub>2</sub> ), carbon monoxide (CO), oxides of nitrogen (NO <sub>x</sub> ), 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

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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.

**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**

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**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  
 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 : All components of this product are on the Canadian DSL

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Environmental Protection  
Act (CEPA). Domestic  
Substances List (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. The Toxic  
Substances and Hazardous  
and Nuclear Waste Control  
Act : On the inventory, or in compliance with the inventory

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

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

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**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](http://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

**SECTION 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,

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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: 11/30/2015

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group