Acetonitrile

66214-2.5L

Version 1.4 Revision Date 03.04.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	:	Acetonitrile
SDS-number	:	000000020248
Type of product	:	Substance
Remarks	:	SDS according to Art. 31 of Regulation (EC) 1907/2006.
Chemical name	:	acetonitrile
Index-No.	:	608-001-00-3
REACH Registration Number	:	01-2119471307-38

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

Use of the Substance/Mixture	:	Laboratory chemicals
Uses advised against	:	none

1.3. Details of the supplier of the safety data sheet

Company	:	Honeywell Specialty Chemicals Seelze GmbH Wunstorfer Straße 40 30926 Seelze Germany	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
Telephone	:	(49) 5137-999 0	
Telefax	:	(49) 5137-999 123	
For further information, please contact:	:	PMTEU Product Stewardship: SafetyDataSheet@Honeywell.com	

1.4. Emergency telephone number

Emergency telephone number	:	+1-703-527-3887 (ChemTrec-Transport) +1-303-389-1414 (Medical)
Country based Poison Control Center	:	see chapter 15.1

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Flammable liquids Category 2
H225 Highly flammable liquid and vapour.
Acute toxicity Category 4 - Oral
H302 Harmful if swallowed.
Acute toxicity Category 4 - Dermal
H312 Harmful in contact with skin.
Eye irritation Category 2
H319 Causes serious eye irritation.
Acute toxicity Category 4 - Inhalation
H332 Harmful if inhaled.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms	:		
Signal word	:	Danger	
Hazard statements	:	H225	Highly flammable liquid and vapour.
		H302 + H312 + H332	Harmful if swallowed, in contact with skin or if inhaled.
		H319	Causes serious eye irritation.
Precautionary statements	:	P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P284	In case of inadequate ventilation wear respiratory protection.
		P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
		P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P308 + P313	IF exposed or concerned: Get medical advice/ attention.

2.3. Other hazards

Vapours may form explosive mixtures with air.

SECTION 3: Composition/information on ingredients

3.1. Substance

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
acetonitrile	75-05-8 608-001-00-3 01-2119471307-38 200-835-2	Flam. Liq. 2; H225 Acute Tox. 4; H332 Acute Tox. 4; H312 Acute Tox. 4; H302 Eye Irrit. 2; H319	100 %	1*

1* - For specific concentration limits see Annexes of 1272/2008

3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:
First aider needs to protect himself. Move out of dangerous area. Immediately take off contaminated clothing and rinse body with plenty of water. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Inhalation:
Remove to fresh air. Keep patient warm and at rest. Call a physician immediately.

Skin contact:
After contact with skin, wash immediately with plenty of soap and water. Call a physician immediately.

Eye contact:
Protect unharmed eye. Irrigate eyes for at least 15 minutes with copious quantities of water, keeping eyelids apart and away from eyeballs during irrigation. Call a physician immediately.

Ingestion:

A person suspected to have swallowed the substance who is conscious should be given water to drink. Take to a doctor immediately together with this card

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

no data available

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

no data available

See Section 11 for more detailed information on health effects and symptoms. :

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water spray
Carbon dioxide (CO2)
Dry powder
Alcohol-resistant foam

Extinguishing media which shall not be used for safety reasons:
High volume water jet

5.2. Special hazards arising from the substance or mixture

Fire may cause evolution of:
Hydrogen cyanide (hydrocyanic acid)
nitrogen oxides (NOx)
Heating will cause pressure rise with risk of bursting and subsequent explosion
Exposure to decomposition products may be a hazard to health.
Cool closed containers exposed to fire with water spray.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.
No unprotected exposed skin areas.
In the event of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep people away from and upwind of spill/leak. Wear personal protective equipment. Unprotected persons must be kept away. Pay attention to flashback.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material.
Pick for disposal in tightly closed containers
Suppress (knock down) gases/vapours/mists with a water spray jet.

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:
Exhaust ventilation at the object is necessary. Keep limited supplies at workplace. Perform filling operations only at stations with exhaust ventilation facilities. Plan first aid action before beginning work with this product. Always have on hand a first-aid kit, together with proper instructions.

Advice on protection against fire and explosion:
The heavy vapours can overcome a considerable distance up to the source of ignition. Use only in explosion-proof areas. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Hygiene measures:
Keep working clothes separately. Separate rooms are required for washing, showering and changing clothes. Wash hands and face before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:
Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not leave vessels/containers open Containers should be protected against falling down. Avoid product residues in/on containers.

7.3. Specific end use(s)

no additional data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
acetonitrile	EH40 WEL STEL	102 mg/m3 60 ppm		
acetonitrile	EH40 WEL TWA	68 mg/m3 40 ppm		
acetonitrile	EH40 WEL			Listed
acetonitrile	EU ELV SKIN_DES			Can be absorbed through the skin.
acetonitrile	EU ELV TWA	70 mg/m3 40 ppm		Indicative

STEL - Short term exposure limit
TWA - Time weighted average
SKIN_DES - Skin designation:

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
acetonitrile	Workers / Acute local effects		68 mg/m3 40,6 ppm	Inhalation	
acetonitrile	Workers / Acute systemic effects		68 mg/m3 40,6 ppm	Inhalation	
acetonitrile	Workers / Long-term systemic effects		32,2mg/kg bw/d	Skin contact	
acetonitrile	Consumers / Acute systemic effects		220 mg/m3 131,3 ppm	Inhalation	
acetonitrile	Consumers / Acute systemic effects		0,6mg/kg bw/d	Ingestion	

acetonitrile	Consumers / Acute local effects		22 mg/m3 13,1 ppm	Inhalation	
acetonitrile	Consumers / Long-term local effects		4,8 mg/m3 2,9 ppm	Inhalation	
acetonitrile	Consumers / Long-term systemic effects		4,8 mg/m3 2,9 ppm	Inhalation	
acetonitrile	Workers / Long-term systemic effects		68 mg/m3 40,6 ppm	Inhalation	
acetonitrile	Workers / Long-term local effects		68 mg/m3 40,6 ppm	Inhalation	

Component	Environmental compartment / Value	Remarks
acetonitrile	Fresh water: 10 mg/l	
acetonitrile	Marine water: 1 mg/l	
acetonitrile	Sewage treatment plant: 10 mg/l	
acetonitrile	Fresh water sediment: 7,54 mg/kg dw	
acetonitrile	Soil: 2,41 mg/kg dw	
acetonitrile	Sewage treatment plant: 32 mg/l	

8.2. Exposure controls

Occupational exposure controls

Take off all contaminated clothing immediately.
The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.
Recommended preventive skin protection

Personal protective equipment
Respiratory protection:
In the case of dust or aerosol formation use respirator with an approved filter.
In case of insufficient ventilation wear suitable respiratory equipment.

Hand protection:
Glove material: butyl-rubber
Break through time: > 480 min
Glove thickness: 0,7 mm
Butoject® 898
Gloves must be inspected prior to use.
Replace when worn.
Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.
Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer reccomends to use the chemical protective glove in practice not longer than 50% of the recomended permeation time.
Manufacturer´s directions for use should be observed because of great diversity of types .
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:
Safety goggles

Skin and body protection:
Flame retardant antistatic protective clothing.
Working clothes must not consist of textiles, which show a dangerous melting behaviour in case of fire.

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	:	liquid
Colour	:	colourless
Odour	:	characteristic
molecular weight	:	41,05 g/mol
Melting point/range	:	-45,7 °C
Boiling point/boiling range	:	81,6 °C
Flash point	:	12,8 °C Method: closed cup

Ignition temperature	:	524 °C
Lower explosion limit	:	3 %(V)
Upper explosion limit	:	16 %(V)
Vapour pressure	:	98 hPa at 20 °C
Vapour pressure	:	121 hPa at 25 °C
Density	:	0,79 g/cm3 at 20 °C
Viscosity, dynamic	:	0,35 mPa.s at 20 °C
Viscosity, kinematic	:	no data available
pH	:	Not applicable
Water solubility	:	1.000 g/l at 25 °C
Partition coefficient: n-octanol/water	:	log Pow -0,54 at: 25 °C
Evaporation rate	:	no data available

9.2 Other Information

no additional data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

At normal pressure may be distilled without decomposition.
Fire or intense heat may cause violent rupture of packages.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Heat, flames and sparks.
Keep away from direct sunlight.

10.5. Incompatible materials

Plastic materials can be attacked.
Evolution of inflammable gases/vapours easily.
Formation of explosive gas/air mixtures.
Uncleaned empty vessels may contain product gases which can form explosive mixtures with air.
Incompatible with strong acids and oxidizing agents.

10.6. Hazardous decomposition products

Hydrogen cyanide (hydrocyanic acid)
Possible in traces
Nitrous gases

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:
LD50
Species: Rat
Value: 617 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity:
Classification based on Annex VI of regulation 1272/2008/EC.

Acute inhalation toxicity:
LC50
Species: Mouse
Value: 6,02 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403

Skin irritation:
Species: Rabbit
Result: No skin irritation
Method: OECD Test Guideline 404

Eye irritation:

Species: Rabbit
Result: irritating
Method: OECD Test Guideline 405

Respiratory or skin sensitisation:
Buehler Test
Species: Guinea pig
Result: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

Germ cell mutagenicity:
Note: Not classified due to data which are conclusive although insufficient for classification.

Aspiration hazard:
no data available

Other information:
Poisoning affects the central nervous system.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:
LC50
flow-through test
Species: Pimephales promelas (fathead minnow)
Value: 1.640 mg/l
Exposure time: 96 h

NOEC
flow-through test
Species: Orycias Latipes
Value: 102 mg/l
Exposure time: 21 d
Method: OECD 204

Toxicity to aquatic plants:
ErC50
Growth rate
Species: Phaeodactylum tricornutum
Value: 9.696 mg/l
Exposure time: 72 h
Method: ISO 10253

Toxicity to Microorganisms:

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

Toxicity to aquatic invertebrates:
Not classified due to data which are conclusive although insufficient for classification.

12.2. Persistence and degradability

Biodegradability:
CO2 formation in % of theoretical value
Biodegradation: 70 %
Exposure time: 21 d
Result: rapidly biodegradable
Method: OECD Test Guideline 310

12.3. Bioaccumulative potential

no data available

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:
Dispose according to legal requirements.

Packaging:
Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:
Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC

Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

ADR/RID

UN Number	:	1648
Description of the goods	:	ACETONITRILE
Class	:	3
Packaging group	:	II
Classification Code	:	F1
Hazard Identification Number	:	33
ADR/RID-Labels	:	3
Environmentally hazardous	:	no

IATA

UN Number	:	1648
Description of the goods	:	Acetonitrile
Class	:	3
Packaging group	:	II
Hazard Labels	:	3

IMDG

UN Number	:	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

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

Basis	Value	Remarks
Directive 2012/18/EC Listed in Regulation : P5c: FLAMMABLE LIQUIDS Number in Regulation: 1.2.5.3	Amount 1: 5.000.000 kg Amount 2: 50.000.000 kg	

Basis	Value	Remarks

Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of ≥ 0.1 % (w/w).

Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
	Munich : 089/19240
Latvia	+37167042473

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	808250143
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

Other inventory information

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. 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 (IECSC)
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

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

acetonitrile	:	H225	Highly flammable liquid and vapour.
		H332	Harmful if inhaled.
		H312	Harmful in contact with skin.
		H302	Harmful if swallowed.
		H319	Causes serious eye irritation.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:
EC European Community
CAS Chemical Abstracts Service

DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very biaccumulative substance
PBT Persistent, bioaccmulative und toxic substance

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