

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 28/08/2014 Revision date: 23/02/2021 Supersedes: 28/06/2018 Version: 3.2

NLM-175

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

1.1. Product identifier

Product form : Substance

Substance name : ACETONITRILE (15N, 98%+)

 EC Index-No.
 : 608-001-00-3

 EC-No.
 : 200-835-2

 CAS-No.
 : 14149-39-4

 Product code
 : NLM-175

 Formula
 : CH3C*N

Synonyms : Methyl cyanide. ACN.

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

1.2.1. Relevant identified uses

Main use category : Professional use

Industrial/Professional use spec : For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.

50 Frontage Road Andover, MA 01810

USA

USA: 1-800-322-1174 Int: 1-978-749-8000 cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours) International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225 Acute Tox. 4 (Oral) H302 Acute Tox. 4 (Dermal) H312 Acute Tox. 4 (Inhalation) H332 Eye Irrit. 2 H319

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F; R11 Xn; R20/21/22 Xi; R41

Full text of R-phrases: see section 16

GHS-US classification

Flam. Liq. 2 H225 Acute Tox. 4 (Oral) H302 Acute Tox. 4 (Dermal) H312 Acute Tox. 4 (Inhalation) H332 Eye Irrit. 2A H319

Full text of H statements : see section 16

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Adverse physicochemical, human health and environmental effects

Lungs, Blood, Kidney, Liver, Central nervous system.

Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)





Signal word (CLP) : Danger

Hazard statements (CLP) : H225 - Highly flammable liquid and vapor

H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled

H319 - Causes serious eye irritation

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No Precautionary statements (CLP)

P233 - Keep container tightly closed.

P240 - Ground/bond container and receiving equipment.

P271 - Use only outdoors or in a well-ventilated area.

P241 - Use explosion-proof electrical, lighting, ventilating equipment P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.

P264 - Wash Both hands thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.

GHS-US labeling

Hazard pictograms (GHS-US)





Signal word (GHS-US) : Danger

Hazard statements (GHS-US) H225 - Highly flammable liquid and vapor

H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled

H319 - Causes serious eye irritation

Precautionary statements (GHS-US) P210 - Keep away from sparks, open flames, hot surfaces, heat. - No smoking.

P233 - Keep container tightly closed.

P240 - Ground/Bond container and receiving equipment

P241 - Use explosion-proof electrical, lighting, ventilating equipment

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge.

P261 - Avoid breathing fume, gas, mist, spray, vapors.

P264 - Wash Both hands thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear eye protection, face protection, protective clothing, protective gloves.

P301+P312 - If swallowed: Call a doctor if you feel unwell

P302+P352 - If on skin: Wash with plenty of water

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse

skin with water/shower

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

P312 - Call a doctor if you feel unwell

P321 - Specific treatment (see First aid measures on this label)

P330 - Rinse mouth.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P370+P378 - In case of fire: Use Alcohol resistant foam, Carbon dioxide, Dry chemical, Water spray to extinguish.

P403+P235 - Store in a well-ventilated place. Keep cool.

P501 - Dispose of contents/container to Comply with applicable regulations

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2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
ACETONITRILE (15N, 98%+)	(CAS-No.) 14149-39-4 (EC-No.) 200-835-2 (EC Index-No.) 608-001-00-3	100	F; R11 Xn; R20/21/22 Xi; R41
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ACETONITRILE (15N, 98%+)	(CAS-No.) 14149-39-4 (EC-No.) 200-835-2 (EC Index-No.) 608-001-00-3	100	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319

Full text of R- and H- phrases: see section 16

Name	Product identifier	%	GHS-US classification
ACETONITRILE (15N, 98%+) (Main constituent)	(CAS-No.) 14149-39-4	100	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319

Full text of H-phrases: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.

First-aid measures after inhalation

: When symptoms occur: go into open air and ventilate suspected area. If not breathing give artificial respiration. Get medical advice/attention.

artificial respiration. Get medical advice/attention

First-aid measures after skin contact

: Wash with plenty of soap and water. and soap. Get immediate medical advice/attention.

First-aid measures after eye contact

: Rinse cautiously with water for several minutes.

First-aid measures after ingestion

: Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get

medical advice/attention.

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

Symptoms/effects after inhalation

: Harmful if inhaled.

Symptoms/effects after skin contact

: Harmful if absorbed through skin. Causes skin irritation.

Symptoms/effects after eye contact

: Causes serious eye irritation.

Symptoms/effects after ingestion

: Harmful if swallowed.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

5.2. Special hazards arising from the substance or mixture

Reactivity : Vapors may form explosive mixture with air.

5.3. Advice for firefighters

Firefighting instructions

: Fight fire with normal precautions from a reasonable distance. Wear a self contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting

Do not enter fire area without proper protective equipment, including respiratory protection. Wear recommended personal protective equipment.

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SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Avoid breathing vapors, mist, gas. Avoid dust formation.

6.1.2. For emergency responders

Protective equipment Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

Methods and material for containment and cleaning up

For containment : Clean up any spills as soon as possible, using an absorbent material to collect it. Small

> quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. For large spills, confine the spill in a dike and charge it with wet sand or

earth for subsequent safe disposal.

Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation.

Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling : Provide adequate ventilation to minimize dust and/or vapor concentrations.

Hygiene measures Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Handle in accordance with good industrial hygiene and safety

Conditions for safe storage, including any incompatibilities

Technical measures : Store in a well-ventilated place. Keep container tightly closed. : Store at room temperature away from light and moisture. Storage conditions

Specific end use(s) 7.3.

No additional information available

SECTION 8: Exposure controls/personal protection

Control parameters

ACETONITRILE (15N, 98%+) (14149-39-4)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20.00000000 ppm Lower Respiratory Tract irritation. Not classifiable as a human carcinogen.
USA OSHA	OSHA PEL (TWA) (ppm)	40 ppm
USA OSHA	OSHA PEL (STEL) (ppm)	60 ppm

Exposure controls

Appropriate engineering controls : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work.

: Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus. Personal protective equipment









Materials for protective clothing : Wear suitable protective clothing and gloves. Hand protection Wear suitable protective clothing and gloves.

Eve protection Wear eye protection. Chemical goggles or face shield with safety glasses.

Skin and body protection Wear suitable protective clothing, gloves and eye/face protection.

Respiratory protection : In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state : Liquid Appearance : Liquid, clear

: 42.04 g/mol (Labeled) Molecular mass

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Color : Colorless Odor Ether-like Odor threshold : No data available

pН : No data available : No data available Relative evaporation rate (butyl acetate=1) Melting point : -48 °C (-54°F) Freezing point : No data available Boiling point : 81 - 82 °C (178 - 180 °F) Flash point : 2 °C (35.6 °F) - closed cup

: 524 °C (975.2 °F) Auto-ignition temperature Decomposition temperature : No data available Flammability (solid, gas) : No data available

73.18 hPa (54.89 mmHg) at 15°C (59 °F) Vapor pressure

119.81 hPa (89.86 mmHg) at 25°C(77 °F)

Relative vapor density at 20 °C : 1.42 - (Air = 1.0) Relative density : No data available : Water: 100 % Solubility Log Pow : -0.54 at 25 °C (77 °F) No data available Log Kow

Viscosity, kinematic No data available Viscosity, dynamic : No data available : No data available Explosive properties : No data available Oxidizing properties **Explosion limits** : 3 - 16 % (V)

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity

Vapors may form explosive mixture with air.

Chemical stability

Stable if stored under recommended conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. **Conditions to avoid**

Extremes of temperature and direct sunlight. Avoid Heat, Flames and Sparks.

Incompatible materials

Acids, Bases, Oxidizing agents, Reducing agents, Alkali metals.

Hazardous decomposition products

Formed under fire conditions: Carbon oxides, Nitrogen oxides.

SECTION 11: Toxicological information

Information on toxicological effects

: Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation: Harmful if inhaled. Acute toxicity

ACETONITRILE (15N, 98%+) (14149-39-4)	
LD50 dermal rabbit	2000 mg/kg
LC50 inhalation rat (mg/l)	≥ 26.8 mg/l
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	2000.000 mg/kg body weight
ATE CLP (gases)	4500.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation : Not classified

Skin - Rabbit - No skin irritation

: Causes serious eye irritation. Serious eye damage/irritation Eyes - Rabbit - Irritating to eyes

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ACETONITRILE (15N, 98%+) NLM-17.

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Respiratory or skin sensitization : Did not cause sensitization on laboratory animals.

Buehler Test - Guinea pig - Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity : Not classified

Carcinogenicity : No evidence of carcinogenicity in animal studies (when indicated).

Reproductive toxicity : Animal testing did not show any effects on fertility.

Specific target organ toxicity – single exposure : Not classified

The substance or mixture is not classified as specific target organ toxicant.

Specific target organ toxicity - repeated

exposure

: Not classified

The substance or mixture is not classified as specific target organ toxicant.

Aspiration hazard : Not classified

Potential Adverse human health effects and

symptoms

Treat as cyanide poisoning. Always have on hand a cyanide first-aid kit, together with proper instructions. The onset of symptoms is generally delayed pending conversion to cyanide. Nausea, Vomiting, Diarrhea, Headache, Dizziness, Rash, Cyanosis, Excitement, Depression, Drowsiness, Impaired judgment, Lack of coordination, Stupor, Death. Lungs - Lung edema - Based on human evidence. This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Symptoms/effects after inhalation : Harmful if inhaled.

Symptoms/effects after skin contact : Harmful if absorbed through skin. Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms/effects after ingestion : Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

ACETONITRILE (15N, 98%+) (14149-39-4)	
LC50 fish 1	1640 mg/l Pimephales promelas (fathead minnow) - 96h
EC50 Daphnia 1	3600 mg/l Daphnia magna (Water flea) - 48 h
NOEC (chronic)	160 mg/l Daphnia magna (Water flea) - 21 d

12.2. Persistence and degradability

ACETONITRILE (15N, 98%+) (14149-39-4)		
Persistence and degradability	Biodegradability	Result: - Readily biodegradable.

12.3. Bioaccumulative potential

ACETONITRILE (15N, 98%+) (14149-39-4)	
Log Pow	-0.54 at 25 °C (77 °F)
Bioaccumulative potential	No bioaccumulation is to be expected (log Pow <= 4).

12.4. Mobility in soil

ACETONITRILE (15N, 98%+) (14149-39-4)	
Ecology - soil	Not expected to absorb on soil.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No.(DOT) : 1648 DOT NA no. UN1648

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Acetonitrile

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Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : II - Medium Danger

DOT Special Provisions (49 CFR 172.102)

: IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110

kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

T7 - 4 178.274(d)(2) Normal...... 178.275(d)(3)

TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C

(59 F) and 50 C (122 F), respectively.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT RQ : 5000 lbs
Marine pollutant : No

14.3. Additional information

Other information : No supplementary information available.

Overland transport

Packing group (ADR) : II

Class (ADR) : 3 - Flammable liquid

Hazard identification number (Kemler No.) : 33 Classification code (ADR) : F1

Hazard labels (ADR) : 3 - Flammable liquids



Orange plates



Tunnel restriction code (ADR) : D/E
Limited quantities (ADR) : 11
EAC : •2YE
Excepted quantities (ADR) : E2

Transport by sea

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a

passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this

section is exceeded.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

MFAG-No : 127

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 5L

(49 CFR 173.27)

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DOT Quantity Limitations Cargo aircraft only (49 : 60 L

CFR 175.75)

Civil Aeronautics Law : Flammable liquids

14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

ACETONITRILE (15N, 98%+) (14149-39-4)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Subject to reporting requirements of United States SARA Section 302
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Subject to reporting requirements of United States SARA Section 313

15.2. International regulations

CANADA

ACETONITRILE (15N, 98%+) (14149-39-4)

Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

ACETONITRILE (15N, 98%+)(14149-39-4)	
U.S California - Proposition 65 - Carcinogens List	No
U.S California - Proposition 65 - Developmental Toxicity	No
U.S California - Proposition 65 - Reproductive Toxicity - Female	No
U.S California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S Massachusetts - Right To Know List U.S Pennsylvania - RTK (Right to Know) List U.S New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Other information

: This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of R-, H- and EUH-phrases:

ont of it it is an a zor i prince of		
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4	
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4	
Eye Irrit. 2	Serious eye damage/eye irritation Category 2	
Flam. Liq. 2	Flammable liquids Category 2	
H225	Highly flammable liquid and vapor	
H302	Harmful if swallowed	
H312	Harmful in contact with skin	
H319	Causes serious eye irritation	

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H332	Harmful if inhaled
R11	Highly flammable
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R41	Risk of serious damage to eyes
F	Highly flammable
Xi	Irritant
Xn	Harmful

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause

temporary incapacitation or residual injury.

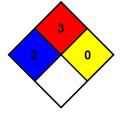
NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended

solids) that can be ignited under almost all ambient

temperature conditions.

NFPA reactivity 0 - Material that in themselves are normally stable, even

under fire conditions.



Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 3 Serious Hazard : 0 Minimal Hazard Physical

CIL Substance SDS

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