

## 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: 01/12/2016 Revision date: 29/08/2018 Supersedes: 11/10/2016 Version: 4.1 DLM-21

SECTION 1: Identification of the substance/mixture and of the company/undertaking **Product identifier** 1.1. Product form : Substance : ACETONITRILE-D3 (D, 99.8%) Substance name : 608-001-00-3 (Unlabeled) EC Index-No. EC-No. : 218-616-5 CAS-No. : 2206-26-0 **REACH** registration No : 01-2119471307-38 : DLM-21 Product code Formula : CD3CN Synonyms : Methyl cvanide / ACN 1.2. Relevant identified uses of the substance or mixture and uses advised against 1.2.1. **Relevant identified uses** : Professional use Main use category Industrial/Professional use spec : For professional use only 1.2.2. **Uses advised against** No additional information available Details of the supplier of the safety data sheet 1.3. 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 H319 Eye Irrit. 2 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 Xi; R36 Xn; R20/21/22 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.



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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-D3 (D, 99.8%)	(CAS-No.) 2206-26-0 (EC-No.) 218-616-5 (EC Index-No.) 608-001-00-3 (Unlabeled) (REACH-no) 01-2119471307-38	100	F; R11 Xi; R36 Xn; R20/21/22
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ACETONITRILE-D3 (D, 99.8%)	(CAS-No.) 2206-26-0 (EC-No.) 218-616-5 (EC Index-No.) 608-001-00-3 (Unlabeled) (REACH-no) 01-2119471307-38	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-D3 (D, 99.8%) (Main constituent)	(CAS-No.) 2206-26-0	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 measure	es
First-aid measures general	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Wash off with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
First-aid measures after ingestion	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2. Most important symptoms and	effects, both acute and delayed
Symptoms/effects after inhalation	: Harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: Harmful if absorbed through skin. May cause skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Harmful if swallowed.
4.3. Indication of any immediate me	edical attention and special treatment needed
No additional information available	
SECTION 5: Firefighting measur	es
5.1. Extinguishing media	
Suitable extinguishing media	: Use water spray, alcohol-resistant feam, dry chemical, or carbon diovide

Suitabl	e extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
5.2.	.2. Special hazards arising from the substance or mixture	
Reactiv	vity	: Vapors may form explosive mixture with air.
5.3.	Advice for firefighters	
0	nting instructions	: Wear self contained breathing apparatus for fire fighting if necessary.
Protect	tion during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

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<b>SECTION 6: Accidental</b>	release measu	ires	
6.1.1. For non-emergency personnel			
Emergency procedures	-	ventilation. Remove all sources of igni	void breathing vapors, mist or gas. Ensure adequate tion. Evacuate personnel to safe areas. Beware of ve concentrations. Vapours can accumulate in low areas.
6.1.2. For emergency resp No additional information availa			
6.2. Environmental prec	autions		
Prevent further leakage or spilla	age if safe to do so.	Do not let product enter drains.	
6.3. Methods and materi	al for containment	t and cleaning up	
For containment	:	Contain spillage, and then collect with brushing and place in container for dis	an electrically protected vacuum cleaner or by wet- sposal according to local regulations.
6.4. Reference to other s	sections		
No additional information availa	ble		
<b>SECTION 7: Handling a</b>	nd storage		
7.1. Precautions for safe	e handling		
Additional hazards when proces	ssed	Avoid contact with skin and eyes. Avo equipment. Keep away from sources of build up of electrostatic charge.	id inhalation of vapour or mist. Use explosion-proof of ignition - No smoking. Take measures to prevent the
Hygiene measures	:	Handle in accordance with good indus breaks and at the end of workday.	strial hygiene and safety practice. Wash hands before
7.2. Conditions for safe	storage, including	any incompatibilities	
Technical measures	:	Keep container tightly closed in a cool	
Storage conditions	:	Store at room temperature away from	light and moisture.
7.3. Specific end use(s)			
No additional information availa	ble		
<b>SECTION 8: Exposure c</b>	controls/perso	nal protection	
8.1. Control parameters			
ACETONITRILE-D3 (D, 99.8%			
Italy - Portugal - USA ACGIH	ACGIH TWA (pp	m)	20.00000000 ppm USA. ACGIH Threshold Limit Values (TLV) Lower Respiratory Tract irritation. Not classifiable as a human carcinogen. Danger of cutaneous absorption
USA NIOSH	NIOSH REL (TW	'A) (mg/m³)	34 mg/m <sup>3</sup> USA. NIOSH Recommended Exposure Limits. Forms Cyanide in the body.
USA NIOSH	NIOSH REL (TW	'A) (ppm)	20 ppm USA. NIOSH Recommended Exposure Limits.Forms Cyanide in the body.
USA OSHA	OSHA PEL (TW	A) (mg/m³)	70 mg/m <sup>3</sup> USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants. The value in mg/m3 is approximate.
USA OSHA	OSHA PEL (TWA) (ppm)		40 ppm USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants. The value in mg/m3 is approximate.
ACETONITRILE-D3 (D, 99.8%) (2206-26-0)			
DNEL/DMEL (Workers)			
Acute - systemic effects, dermal         32.2 mg/kg bodyweight/day Long-term systemic effects			
· · · · · · · · · · · · · · · · · · ·		68 mg/m <sup>3</sup> Acute local effects, Acute systemic	
Acute - local effects, inhalation         68 mg/m³ Long-term local effects, Long-term systemic effects			
DNEL/DMEL (General population)			
Acute - systemic effects, inhalation		22 mg/m <sup>3</sup> Consumers 220 mg/m <sup>3</sup> Consumers	
Long-term - systemic effects,			
Long-term - systemic effects, inhalation     4.8 mg/m <sup>3</sup> Consumers       PNEC (Water)     4.8 mg/m <sup>3</sup> Consumers			
PNEC agua (freshwater) 10 mg/l			
PNEC aqua (marine water)		1 mg/l	

PNEC (Sediment)

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ACETONITRILE-D3 (D, 99.8%) (2206-26-0)	
PNEC sediment (freshwater)	7.53 mg/kg dwt
PNEC (Soil)	
PNEC soil	2.41 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	32 mg/l
8.2 Exposure controls	

Personal protective equipment

: Gas mask with filter type NO at conc. in air >. Protective clothing. Protective goggles. Selfcontained breathing apparatus. Gloves.



Hand protection	: Wear suitable protective clothing and gloves.
Eye protection	: Wear safety glasses with side shields (or goggles) and a face shield.
Skin and body protection	: Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	: When appropriate, use NIOSH/CEN approved respirator.

## SECTION 9: Physical and chemical properties

9.1. Information on basic physical and	chemical properties
Physical state	: Liquid
Appearance	: Liquid, clear.
Molecular mass	: 44.07 g/mol (Labeled)
Color	: Colorless.
Odor	: ether-like.
Odor threshold	: No data available
рН	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
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
Auto-ignition temperature	: 524 °C (975.2 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 73.18 hPa (54.89 mmHg) at 15°C (59 °F) ,121.44 hPa (91.09 mmHg) at 25 °C (77 °F), 413.23 hPa (309.95 mmHg) at 55 °C (131 °F),98.64 hPa (73.99 mmHg) at 20 °C (68 °F)
Relative vapor density at 20 °C	: 1.42 - (Air = 1.0)
Relative density	: No data available
Specific gravity / density	: 0.786 g/ml at 25 °C (77 °F)
Solubility	: Water: Completely Soluble
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Explosion limits	: 3 - 16 vol %

#### 9.2. **Other information**

No additional information available

### SECTION 10: Stability and reactivity

#### Reactivity 10.1.

Vapors may form explosive mixture with air.

#### 10.2. **Chemical stability**

One year after receipt of order if stored as stated in "Storage" section. Re-QC after one year.

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10.3. Possibility of hazardous reactions	
No additional information available	
10.4. Conditions to avoid	
Extremes of temperature and direct sunlight. Avoi	d Heat, Flames and Sparks.
10.5. Incompatible materials	
Acids, Bases, Oxidizing agents, Reducing agents	, Alkali metals.
10.6. Hazardous decomposition products	
Formed under fire conditions: Carbon oxides, nitro	ogen oxides.
SECTION 11: Toxicological informati	on
11.1. Information on toxicological effects	
Acute toxicity	: Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation: Harmful if inhaled.
ACETONITRILE-D3 (D, 99.8%) (2206-26-0)	
LD50 oral rat	1320 - 6690 mg/kg
LD50 dermal rabbit	> 2000 mg/kg male and female (OECD Test Guideline 402)
LC50 inhalation rat (mg/l)	≥ 26.8 mg/l - 4h
LC50 inhalation rat (ppm)	3587 ppm Mouse - 4h (OECD Test Guideline 403)
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 - OECD Test Guideline 404
Serious eye damage/irritation	: Causes serious eye irritation.
	Eyes - rabbit - Irritating to eyes - OECD Test Guideline 405
Respiratory or skin sensitization	: Did not cause sensitization on laboratory animals.
	Buehler Test - guinea pig - Did not cause sensitisation on laboratory animals. (OECD Test Guideline 406)
Germ cell mutagenicity	: Hamster Ovary Result: negative. Mutation in mammalian somatic cells. Ames test. Not mutagenic in Ames Test. S. typhimurium result: negative. Hamster - Ovary - Sister chromatid exchange. Result: Equivocal evidence. Mutagenicity (micronucleus test) Mouse Result: Positive results were obtained in some in vivo tests.
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	: The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ toxicity – repeated exposure	: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
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. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Symptoms/effects after inhalation	: Harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: Harmful if absorbed through skin. May cause 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-D3 (D, 99.8%) (2206-26-0)	
LC50 fish 1	1640 mg/l Pimephales promelas (fathead minnow) - 96h
EC50 Daphnia 1	3600 mg/I Daphnia magna (Water flea) - 48h (OECD Test Guideline 202)
NOEC (acute)	102 mg/l Oryzias latipes - 21d
NOEC (chronic)	160 mg/l Daphnia magna (Water flea) - 21d
	102 mg/l Oryzias latipes - 21d

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12.2. Persistence and degradability	
ACETONITRILE-D3 (D, 99.8%) (2206-26-0)	
BOD (% of ThOD)	84 % ThOD
Biodegradation	Readily biodegradable. (OECD Test Guideline 301C)
12.3. Bioaccumulative potential	
ACETONITRILE-D3 (D, 99.8%) (2206-26-0)	
Bioaccumulative potential	No bioaccumulation is to be expected (log Pow <= 4).
12.4. Mobility in soil	
ACETONITRILE-D3 (D, 99.8%) (2206-26-0)	
Ecology - soil	Not expected to absorb on soil.
12.5. Results of PBT and vPvB assessme	nt
No additional information available	
12.6. Other adverse effects	
Other adverse effects	: Avoid release to the environment.
SECTION 13: Disposal consideration	15
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.
Product/Packaging disposal recommendations	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Ecology - waste materials	: Dispose of as unused product.
SECTION 14: Transport information	
In accordance with ADR / RID / IMDG / IATA / A	DN
14.1. UN number	
UN-No.(DOT)	: 1648
DOT NA no.	UN1648
14.2. UN proper shipping name	
Proper Shipping Name (DOT)	: Acetonitrile
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)	<ul> <li>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</li></ul>
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
	: 5000 lbs
DOT RQ Marine pollutant	: No

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Other info	ormation	: No supplementary information available.
14.3.	Additional information	

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Overland transport					
	: 11				
Packing group (ADR)					
Class (ADR)	: 3 - Flammable liquid				
Hazard identification number (Kemler No.)	: 33				
Classification code (ADR)	: F1				
Hazard labels (ADR)	: 3 - Flammable liquids				
	3				
Orange plates	33 1648				
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 (49 CFR 173.27)	: 5L				
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L				
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 Anne	x II of MARPOL 73/78 and the IBC Code				
Not applicable					
SECTION 15: Regulatory information					
15.1. US Federal regulations					
ACETONITRILE-D3 (D, 99.8%) (2206-26-0)					
Subject to reporting requirements of United States SARA Section 313					

Listed on the United States SARA Section 313	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard

### 15.2. International regulations

### CANADA

ACETONITRILE-D3 (D, 99.8%) (2206-26-0)
Listed on the Canadian DSL (Domestic Substances List)

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#### 15.2.1. **National regulations**

No additional information available

15.3. US State regulations					
ACETONITRILE-D3 (D, 99.8%)(2206-26-0)	TONITRILE-D3 (D, 99.8%)(2206-26-0)				
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 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.				

## 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:

text of re, rr and Eori philases.				
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 vapour			
H302	Harmful if swallowed			
H312	Harmful in contact with skin			
H319	Causes serious eye irritation			
H332	Harmful if inhaled			
R11	Highly flammable			
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed			
R36	Irritating to eyes			
F	Highly flammable			
Xi	Irritant			
Xn	Harmful			

NFPA fire hazard	
NFPA reactivity	

: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

0 - Material that in themselves are normally stable, even : under fire conditions.



#### **Hazard Rating**

NFPA health hazard

Health	:	2 Moderate Hazard - Temporary or minor injury may occur
Flammability	:	3 Serious Hazard
Physical	:	0 Minimal Hazard

**CIL Substance SDS** 

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