



8210 N. Austin Avenue, Morton Grove, IL 60053-3205, U.S.A.
 847-967-6000 800-323-8144
 (Monday - Friday: 7:30 a.m. - 4:00 p.m. CST)

Emergency Contact:
 INFOTRAC 800-535-5053 [U.S.A.]

Name: Acetonitrile
 Code: 1-270010-200, 1-270010-500

..... **SAFETY DATA SHEET**

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

- 1.1 Product Identifier
 - Name Acetonitrile
 - Code 1-270010-200, 1-270010-500
- 1.2 Use of Substance/Mixture
 - Use Analytical Reagent—GC Derivatization; Silylation Reagent
- 1.3 Details of Manufacturer/Supplier
 - Company Regis Technologies, Inc.
 8210 N. Austin Avenue
 Morton Grove, IL 60053
 847-967-6000; 800-323-8144 (toll free)
 Email: cservice@registech.com
 www.registech.com
- 1.4 Emergency Telephone
 - INFOTRAC 800-535-5053 [U.S.A.]

SECTION 2 HAZARDS IDENTIFICATION

- 2.1 Classification of the Substance or Mixture
 - GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
 - Physical Hazards
 - Flammable Liquid Category 2 H225
 - Health Hazards
 - Acute Toxicity, Oral Category 4 H302
 - Acute Toxicity, Dermal Category 4 H312
 - Acute Toxicity, Inhalation Category 4 H332
 - Serious Eye Damage / Irritation Category 2A H319
 - Environmental Hazards - Not classified

GHS Label Elements
 Pictograms or hazard symbols



Signal Word Danger

Hazard Statement
 H225 – Highly flammable liquid and vapor.
 H315+H312+H332 – Harmful if swallowed, in contact with skin, or inhaled.
 H319 – Causes severe eye irritation.

Precautionary Statements
 [Prevention] P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P264 – Wash thoroughly after handling.
 P280 – Wear protective gloves/protective clothing/eye protection/face protection.
 [Response] 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 ON INHALED: Removed victim to fresh air and keep at rest in a position comfortable for breathing.

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P305+P351+P338 – IF IN EYES: Rinse cautiously with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing.
 P314 – Get medical advice/attention if you feel unwell.
 P403+P235 – Store in a well-ventilated place. Keep cool.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Name Acetonitrile
 Synonyms Methyl Cyanide; Ethyl Nitrile; Cyanomethane; ACN

Hazardous components

Component	Classification	Concentration
Acetonitrile		
CAS No. 75-05-8	Flam. Liq. 2; Acute Tox. 4; Eye Irr. 2; H225, H302+H312+H332, H319	≤ 100%
EC No. 200-835-2		
Formula CH ₃ CN		
Molecular Mass 41.05		

For full test of the H-Statements mentioned in this Section, see Section 16.

SECTION 4 FIRST AID MEASURES

- 4.1 Description of first aid measures
 - Eye contact: Rinse eyes with plenty of water for at least 15 minutes; lift eyelids occasionally. If irritation persists, consult physician.
 - Skin contact: Immediately remove contaminated clothing and shoes, then wash skin with soap and plenty of water. If irritation persists, consult physician.
 - Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and keep person warm and at rest. Consult physician.
 - Ingestion: Give large amounts of water or milk (two glasses at most). Avoid vomiting. Consult physician immediately.
 - Physician note: Symptomatic and supportive care. There is no specific antidote.
- 4.2 Most important symptoms and effects, both acute and delayed.

Eyes-can cause severe irritation, dryness, lacrimation (excessive tearing). Extremely irritating to mucous membranes or eye and upper respiratory tract. Other symptoms may be headache, nausea, vomiting, diarrhea, drowsiness, dizziness, rashes, cyanosis (with a bluing of the skin or lips).
- 4.3 Indication of immediate medical attention and special treatment needed.

Treat as cyanide poisoning. Utilize a cyanide kit, if available. Delayed effects are possible due to conversion to cyanide. Overexposure may cause eye, skin, and/or respiratory irritation, flushing of face, chest tightness. may include; central nervous system disorders such as mental excitement, depression, drowsiness, impaired perception, incoordination, stupor, coma, and death.

SECTION 5 FIRE-FIGHTING MEASURES

- 5.1 Suitable Extinguishing Media
 - Carbon dioxide, dry chemical powder, dry sand, foam.
 - Water may be effective for cooling, but may not effect extinguishment for large fires.
- 5.2 Specific hazards arising from the chemical.
 - Highly flammable liquid and vapor.
 - Contact with strong oxidizers may cause fire.
 - Sensitive to static discharge.
 - Vapors are heavier than air and may travel a considerable distance to ignition sources and flash back.
 - Vapor-air mixtures are explosive above flash point, within above stated limits.
 - Containers may build pressure or rupture when heated. Container explosion may occur under fire conditions

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Exposure to oxidizers or acids could start or accelerate fire conditions.
 Emits toxic fumes under fire conditions: carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen cyanide

5.3 Advice for fire-fighters
 Wear personal protective equipment for flammable organic/acid vapor conditions.

SECTION 6 ACCIDENTAL RELEASE MEASURES.....

6.1 Personal precautions, protective equipment, and emergency procedures
 For non-emergency personnel - Avoid material contact or inhalation of mists. Evacuate unnecessary personnel from area.
 For emergency responders – Wear protective clothing to prevent contact with skin and eyes. Avoid breathing mists. Wear NIOSH/MSHA approved respirator for organic/acid gas, dust, and mists to prevent inhalation. See Section 8.3.

6.2 Environmental precautions
 Prevent material from entering drains.

6.3 Methods of clean up
 Evacuate unnecessary people from area. Isolate spilled material.
 Ventilate area. Eliminate all ignition sources. Use spark proof tools.
 Contain and recover material when possible.
 If neat or in solution, mix with sand or similar inert adsorbent material or spill pillow.
 Sweep up, if not absorbed in pillow, seal in appropriate hazardous waste container, and hold for proper waste disposal.
 Keep out of water supplies and sewers. Wash spill site after material pickup is complete.

6.4 Special Note
 Spills can be reacted in alkaline hypochlorite solution to produce cyanate and then neutralized.

SECTION 7 HANDLING AND STORAGE.....

7.1 Precautions for Safe Handling
Observe precautions in Section 2.
 Avoid inhalation contact with vapor, mist or contact with liquid.
 Wear suitable protective equipment to avoid contact with skin, eyes, or inhalation of organic/acid vapors or mists.
 Immediately remove contaminated clothing and wash thoroughly as material is readily adsorbed through skin.
 Ground and bond containers or use inert gas purge when transferring or handling material.
 Use spark proof tools and explosion proof equipment.
 Empty containers retain product residue, (liquid/vapor), and can be dangerous. Do Not attempt to clean empty containers as residue is difficult to remove.

7.2 Conditions for safe storage, including any incompatibilities
 Store in tightly closed vessel in area suitable for flammable liquids, away from ignition and heat sources.
 Store in a cool, dry place with adequate ventilation.
 Store away from incompatible materials (See Section 10.).

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION.....

8.1 Control parameters
 Exposure limits: Acetonitrile (75-05-8) –
 OSHA: PEL – 40 ppm (70 mg/m³) - 8hr TWA; STEL – 60 ppm (105 mg/m³)
 ACGIH: TLV – 40 ppm (70 mg/m³) - 8hr TWA
 NIOSH: Air REL – 20 ppm (34 mg/m³) - 10hr TWA;
 Immediately Dangerous To Life or Health Concentration (IDLH): 500 ppm
 Environmental Do not empty into drains.

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- 8.2 Appropriate engineering controls
 Handle in accordance with good industrial hygiene and safety practice.
 Local exhaust and mechanical ventilation required. Hood recommended. Fume scrubber. Safety shower and eye wash.
- 8.3 Personal protection
- Eye/Face Tightly fitting safety goggles or safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US).
 - Hand Use compatible chemical-resistant gloves.
 - Respiratory If exposure to mist or vapors likely: NIOSH/MSHA (US) approved respirator for organic/acid vapor and mists.
 - Dermal (not hand) Protective Clothing (e.g., lab coat)
 - Hygiene Avoid inhalation, ingestion; contact with eyes, skin, and clothing; Avoid prolonged or repeated exposure. Remove contaminated clothing and discard contaminated footwear. Wash thoroughly after handling.

SECTION 9 **PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Information on physical and chemical data

Form	liquid	
Appearance	clear, colorless	
Odor	sweetish, aromatic or ether odor	
Odor threshold	41.69 ppm (70 mg/m ³) (Lit.)	
pH	Not available	
Melting/freezing point	-48°C (54°F)	
Boiling point:	81-82°C (180-181°F) at 1.013 hPa	
Flammability (liquid)		
Flash Point	2°C (36°F)	Method: cc
Flammable limits (%v/v)	UEL (upper explosive limit)	16%
	LEL (lower explosive limit)	4.4%
Autoignition temperature	524°C (975°F)	
Decomposition temperature	Distillable in an undecomposed state at normal pressure.	
OSHA Flammability Class	IB	
Evaporation Rate (BuAc = 1.0)	5.79	
Vapor pressure (mmHg)	97 hPa (20°C)	
Vapor density (air=1):	1.41	
Relative density (g/cm ³)	0.786 at (20°C)	
Water Solubility/Reactive	soluble at (20°C)	
Solubility (other)	Not available	
Partition coefficient: N-octanol/water	Kow (Pow) = -0.34 (Bioaccumulation not expected (IUCLID))	
Viscosity, dynamic	0.316 mPa.s at (25°C)	
Explosive	Not classified as an explosive.	

SECTION 10 **STABILITY AND REACTIVITY**

- 10.1 Reactivity
 Vapors may form explosive mixture with air.
- 10.2 Chemical Stability
 Heat sensitive. Distillable in an undecomposed state at normal pressure.
- 10.3 Possibility of hazardous reactions
 Violent reactions possible with: strong bases, strong reducing agents
 Risk of explosion with: nitrates, perchlorates, perchloric acid, or conc. sulfuric acid with heat
 Risk of ignition or formation of flammable gases or vapors with: oxidizing agents, nitric acid
 Generates dangerous gases or fumes in contact with: Acids.
 Flammable liquid and vapor—protect from heat and ignition sources.

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- 10.4 Conditions to avoid
 Avoid incompatibilities.
 Protect from static, heat, flames, sparks, and ignition sources.
 Keep out of water supplies and sewers.
- 10.5 Incompatible materials
 rubber, various plastics
 Water, moisture, or humid air—hygroscopic.
- 10.6 Hazardous decomposition products
 Combustion carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen cyanide

SECTION 11 **TOXICOLOGICAL INFORMATION**

11.1 Toxicological Information

Acute toxicity	
Oral	oral mouse LD50 617 mg/kg (OECD Test Guideline 401)
Inhalation (vapor)	ihl mouse LC50 6.026 mg/m ³ (4 h), vapor ; absorption nausea, vomiting (OECD Test Guideline 403)
Dermal	skn rbt LD50 >2000 mg/kg (OECD Test Guideline 402) ; absorption Other acute toxicity No data available
Skin corrosion/irritation	rabbit: no skin irritation (OECD Test Guideline 404)
Serious eye damage/irritation	rabbit: serious eye irritation (OECD Test Guideline 405)
Respiratory irritation	No data available
Respiratory or skin sensitization	Skin: Beuhler Test: guinea pig; negative (OECD Test Guideline 406)
Germ cell mutagenicity	No data available
Carcinogenicity	
IARC	No data available
NTP	No data available
OSHA	No data available
Reproductive toxicity (Including teratogenicity)	No data available
Specific target organ toxicity (STOT)	
STOT-single exposure	No data available
STOT-repeated exposure	No data available
Aspiration hazard	No data available
RTECS Number	AL7700000

11.2 Further Information

Potential health effects	
Eye	Can cause serious irritation to eyes and mucous membranes. Lachrymator.
Skin	Can cause irritation, dryness, and local short-term, reversible damage to skin.
Inhalation	May cause respiratory irritation. Extremely destructive to mucous membranes of the upper respiratory tract. Symptoms: coughing, shortness of breath, difficulty breathing, headache.
Ingestion	May be harmful if in contact with mucous membranes of the GI system.
Symptoms	See above route. Pre-existing conditions that may be aggravated: not determined.
Miscellaneous	No data available.

SECTION 12 **ECOLOGICAL INFORMATION**

12.1 Ecotoxicity

Toxicity to fish	Pimephales promelas (fathead minnow) LC50 > 100 mg/L – 96h.
Toxicity to daphnia and other aquatic invertebrates	Daphnia magna (water flea) EC50 3,600 mg/L – 48h. (OECD Test Guideline 202)

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12.2 Persistence and degradability No data available for this product.
 12.3 Bioaccumulative potential BCF = 3.0 (calc., Lit).
 Partition coefficient: N-octanol/water log Pow = -0.34; Bioaccumulation not expected. (IUCLID)
 12.4 Motility in soil Log Koc = 1.21; Mobile in soils (Lit.)
 12.5 Other adverse effects No data available

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Disposal methods
 U . S. EPA Waste Codes U003, D001
 Waste Characterization RCRA Hazard Class (40CFR 261): Ignitable (I), Toxic (T)
 (per U. S. regulations) Generator is responsible for proper waste characterization. NOTE: U. S. Federal and state hazardous waste regulations may differ considerably.

Special note: Material can be reacted in alkaline hypochlorite solution to produce cyanate and then neutralized.

Waste Disposal That which cannot be recovered or recycled, should be disposed of in accordance with all applicable international, national, regional, state, and local laws. Do NOT dump into any sewer, on ground, or into any body of water.

SECTION 14 TRANSPORT INFORMATION

14.1 DOT (US)
 UN Number: 2924 Class: 3 Packing Group: II
 Proper shipping name: Acetonitrile
 Reportable Quantity (RQ): 5000 lbs Marine pollutant: No

14.2 IATA
 UN Number: 2924 Class: 3 Packing Group: II
 Proper shipping name: Acetonitrile

14.3 IMDG
 UN Number: 2924 Class: 3 Packing Group: II EMS-No: F-E, S-D
 Proper shipping name: ACETONITRILE
 Marine pollutant: No

SECTION 15 REGULATORY INFORMATION

15.1 Safety, health and Environmental regulations specific for the product in question.

NFPA: H2 F3 R0 HMIS: H2 F3 R0

15.2 Chemical Inventory Lists

.....Acetonitrile
 CAS Number..... 75-05-8
 TSCA: Y
 EINECS:..... Y
 Number..... 200-835-2
 CERCLA [Section 103 (40 CFR 302.4)]:..... Y
 RQ (lbs) 5,000
 RCRA Waste Code..... U003
 OSHA Process Safety [29 CFR 1910.119]: NL
 TQ (lbs)..... NA
 State Lists:
 States..... Listed on MA, NJ, PA
 On CA 65 Significant Risk Level..... NL

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15.2 Chemical Inventory Lists

.....	Acetonitrile
CAS Number.....	75-05-8
Clean Air Act	
[Section 112r (40 CFR 68)]:.....	NL
TQ (lbs).....	NA
Contains Ozone Depleters (Class I or Class II)	N
[Section 103 (40 CFR 302.4)]:	NL
SARA Title III Notification [40 CFR 302.4]:	
Section 302/304 (EHS) Ingredient [40 CFR 355.3].....	NL
TPQ (lbs).....	NA
RQ (lbs)	NA
Section 313 Ingredient [40 CFR 372.65]	Y
SARA Hazards Acute.....Y Chronic.....Y Fire.....Y Pressure.....N	ReactivityN

SECTION 16**OTHER INFORMATION**.....

16.1 Full test of H-Statements referred to under Section 2 and 3.

Acute Tox.	Acute Toxicity
Eye Irr.	Eye Irritant
Flam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapor.
H312	Harmful in contact with skin
H315	Harmful if swallowed
H319	Causes severe eye irritation
H332	Harmful if inhaled

The above information is believed to be correct to the best of our present state knowledge, but does not purport to be all-inclusive and shall be used only as a guide. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

Prepared by: Regis Technologies

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