



Taekwang Industrial Co., Ltd.

# ACETONITRILE

Creation Date : 2010-04-29

Revision : 2

Revision Date : 2019-06-10

CAS No.	KE No.	UN No.	EU No.
75-05-8	KE-00067	1648	200-835-2

## I. Chemical Product and Company Identification

1. Product Name Acetonitrile

2. Chemical Formula  $\text{CH}_3\text{CN}$

3. Manufacturer/Supplier Information

Taekwang Industrial Co., Ltd.

**310, Dongho-Ro, Choong-Gu, Seoul, Korea.**

C.P.O BOX : 1173 Seoul

Cable " TAE KWANG " SEOUL

Telex " PIGEON " K28219

Fax. 82-2-2273-9160

Tel. 82-2-3406-0300

4. Emergency Contact Point

Department

Taekwang Industrial Co., Ltd. Petrochemical 3rd Plant

Safety & Environment ( S & E ) Team or

Taekwang Industrial Co., Ltd.

Petrochemical Sales Department

Tel. No.

S & E Team 82-52-259-9691 or

Sales Department 82-2-3406-0334

## II. Hazards Identification

1. HealthHazard Classification

Flammable liquid : Category 2

Acute Toxicity Substance(Combined Oral) : Category 4

Eye Damage/Irritation Substance : Category 2

Specific Target Organ Systemic Toxicity Substance(Single Exposure) : Category 3  
(Respiratory Irritation)

2. Danger/Hazard Symbol

Danger/Hazard Symbol



A Signal Word

Warning Statement

Danger

H225 Highly flammable liquid and vapour

H302 Toxic if swallowed

H319 Causes serious eye irritation

H335 May cause respiratory irritation

### III. Composition and information on ingredient

Chemical Name	Acetonitrile
Synonym	CYANOMETHANE
CAS No.	75-05-8
Composition(%)	100%

### IV. First Aid Measures

1. Eye Contact for Acetonitrile  
Get immediate medical attention.  
Immediately flush with lots of water for at least 15 minutes.
2. Skin Contact for Acetonitrile  
Removing contaminated clothing and shoes.  
Wash skin with lots of water for at least 15 minutes.  
If needed, Get medical attention.  
Completely clean and dry contaminated clothing before reuse.
3. Inhalation for Acetonitrile  
Take the inhaled person to safe area and remove from exposure to fresh air.  
Immediately get medical attention.  
Perform artificial respiration if not breathing.
4. Ingestion for Acetonitrile  
Contact local poison control center or physician immediately.  
If person is unconscious, turn head to side.  
If person is unconscious, never make him vomit or drink anything.  
When vomiting occurs spontaneously, keep head lower than hips to prevent acetonitrile from inhaling the lungs.  
Get medical attention immediately.
5. Delayed and immediate effects  
Inhalation  
Short Term Exposure Not Available  
Long Term Exposure Not Available  
Ingestion  
Short Term Exposure Not Available  
Long Term Exposure Not Available  
Skin Contact Exposure  
Short Term Exposure Not Available  
Long Term Exposure Not Available  
Eye Contact  
Short Term Exposure Not Available  
Long Term Exposure Not Available
6. First Aid and Note to Physician  
If breathing is difficult, give oxygen.  
If swallowed, conduct gastric lavage.  
Amyl nitrite, inhalation; Sodium nitrite, intravenous; Sodium thiosulfate, infusion

## V. Fire Fighting Measures

### 1. Extinguishing Media

Adequate extinguishing media	Alcohol resistant foam. Regular dry chemical powder. Water. Carbon dioxide.
Inadequate extinguishing media	Not Available
Large Fire	Use alcohol resistant foam or flood with fine water spray

### 2. Specific Hazards Arising from the chemical

Pyrolysis product	Not Available
Fire and Explosion Hazards	Severe fire hazard. Vapor/Air Mixtures are explosive. Vapor is heavier than air.

### 3. Fire Fighting

Move containers from fire area if this can be done without risk.  
Use water spray to keep fire-exposed containers cool.  
Stay away from the ends of tanks.

## VI. Accidental Release Measures

### 1. Personal Precautions and Protective equipment

Stop leak if possible without personal risk.  
Do not touch spilled material.  
Do not touch or walk through spilled material.  
Reduce vapors with water spray.

### 2. Environmental precautions

Air	Not Available
Soil	Not Available
Water	Not Available

## VII. Handling & Storage Information

### 1. Safe Handling Information

Not Available

### 2. Safe Storage Information

Store outside or in a detached building.  
Eliminate all ignition sources.  
Separate from oxidizing materials.  
Store in accordance with local regulations.  
Store with flammable liquids.

## VIII. Exposure Control & Personal Protection

### 1. Exposure Limit

Korea Regulation	TWA – 20ppm 33mg/m <sup>3</sup>
ACGIH Regulation	TWA 20 ppm
Biological Exposure limit	Not Available

### 2. Adequate Exposure Control

Provide local exhaust or process enclosure ventilation system.  
Ensure compliance with applicable exposure limit.

### 3. Personnel Protective Equipment

#### Respirator

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

#### Eye Protection

Wear splash resistant safety goggles with a facepiece.

Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

#### Gloves

Wear appropriate chemical resistant gloves.

#### Clothing

Wear appropriate chemical resistant clothing.

## IX. Physical and Chemical Properties

1. Physical State	Colorless liquid
2. Odor	Sweet Odor, Ether Odor
3. Odor Threshold	Not Available
4. pH	Not Available
5. Freezing Point	-46 °C
6. Boiling Point	82 °C
7. Flash point	12.8 °C (c.c.)
8. Evaporation Rate	5.79
9. Flammability(solid, gas)	Not Applicable
10. Upper/lower limit in Flammable or Explosion Range	16 / 3 %
11. Vapor Pressure	9.7 kPa (20°C)
12. Solubility	(soluble)
13. Vapor Density	1.4
14. Specific Gravity	0.8
15. n-Octanol/Water distribution coefficient	-0.3
16. Spontaneous Combustion Temperature	524 °C
17. Dissolution Temperature	Not Available
18. Viscosity	0.35 cP (20°C)
19. Molecular Weight	41.05

## X. Stability and Reactivity

1. Chemical Stability	- Under normal conditions of storage and use, the product is stable.
2. Possibility of hazardous reactions	- Under normal conditions of storage and use, polymerization will not occur.
3. Conditions to Avoid	- Avoid heat, flames, sparks and other sources of ignition.
4. Substance to avoid	- acids, metals, bases, oxidizing agent, combustible materials, reducing agent
5. Hazardous decomposition	- Thermal decomposition products : cyanide compounds, nitrogen oxide

## XI. Toxicological Information

### 1. Information on the likely route of exposure

Inhalation	Not Available
Swallow	Not Available
Skin Contact	Not Available
Eye Contact	Not Available

### 2. Delayed and immediate effects and also chronic effects from short and long term exposure

#### Acute Toxicity

Oral	LD50 2460 mg/kg (rat)
Skin	LD50 390 mg/kg (rabbit)

Respiratory Sensitization Not Available

Skin Sensitization Not Available

#### Carcinogenicity

IARC Not Available

NTP Not Available

OSHA Not Available

WSHA Not Available

ACGIH A4

Reproductive toxic Not Available

## XII. Ecological Information

### 1. Aquatic Terrestrial Ecological Toxicity

Fish	LC50 > 100 mg/l 96 hr
Crustacean	Not Available
Algae	Not Available

### 2. Persistence and Degradability

Persistence Not Available

Degradability Not Available

### 3. Bioaccumulative Potential

Biodegradability Not Available

Accumulation Not Available

4. Mobility in soil Not Available

5. Other adverse effects Not Available

## XIII. Disposal Considerations

1. Disposal Methods Dispose in accordance with all applicable regulations.
2. Disposal Considerations Not Available

## XIV. TRANSPORT INFORMATION

1. UN No. 1648
2. UN Proper Shipping Name ACETONITRILE
3. Transport Hazard Class 3
4. Packing Group, if applicable 2
5. Marine Pollutant Not Available
6. Special Precautions , which a user needs to be aware of, or needs to comply with in connection with transport  
In case of fire, emergency procedures class F-E  
In case of spills, emergency procedures class S-D

## XV. Regulatory Information

1. Regulation for Korea Industrial Safety and Health Act	Work Environment Measurement Required Substance Regulated Substance Specially Controlled Substance
2. Regulation of Korea Chemicals Control Act	Not Available
3. Regulation for Korea Fire Services Act	Category VI Petrochemical Class 1(Water-soluble liquids) 400%
4. Korea Wastes Control Act	Not Available
5. High-Pressure Gas Safety Control Act	Toxic Gas/ Combustible Gas
6. Other Regulation	
1) Other Domestic Regulation	
Persistent Organic Pollutants Administration Law	Not Applicable
Hazardous and Noxious Substances (HNS) Act on Control etc. of Manufacture of Specific Substance for Protection of the Ozone Layer	Applicable Not Applicable
2) Other Country Regulation	
OSHA Regulation	Not Applicable
CERCLA Regulation	2267.995 kg 5000 kg
EPCRA 302 Regulation	Not Applicable
EPCRA 304 Regulation	Not Applicable
EPCRA 313 Regulation	Applicable
Rotterdam Convention substance	Not Applicable
Stockholm Convention substance	Not Applicable
Montreal Protocol substance	Not Applicable

## XVI. References

1. The References are provided as followings

- (1) ICSC (2002)
- (2) HSDB (2005)
- (3) EHC (1993)
- (4) EU-RAR No.18 (2002)
- (5) ACGIH (2006)
- (6) DFGOT vol.19 (2003)
- (7) CERL Hazard Data 96-17 (1997)
- (8) PHYSPROP Database (2005)
- (9) Kosha.net
- (10) Environmental Risk Evaluation vol.2 (2003)
- (11) Environmental Ecology Effect Test (1995)
- (12) Ncis.net
- (13) Kischem.net
- (14) ECHA

2. Creation Date 2010-04-29