

## 1. Product and company identification

### 1.1. Product Name

Product form	: Substance
Trade name	: Acetonitrile
Chemical name	: acetonitrile; cyanomethane
EC-No.	: 200-835-2
CAS-No.	: 75-05-8
Type of product	: Feed materials, Intermediates
KECI-No.	: KE-00067
Serial number	: 2021-1-1056
Product group	: Trade product
Formula	: C <sub>2</sub> H <sub>3</sub> N

### 1.2. Recommended use of the chemical and restrictions on use

#### 1.2.1. Recommended use

Use Categories : 01 - Feed materials, Intermediates. Solvent and extraction agents. Laboratory chemicals.

Recommended use : Feed materials, Intermediates. Solvent and extraction agents. Laboratory chemicals.

#### 1.2.2. Restrictions on use

### 1.3. Supplier information

- Manufacturer	
Company	: Tongsuh Petrochemical Corp.,LTD.
Address	: 108-70 Sapyung-ro, Nam-gu, Ulsan
Tel.	: 052-259-7691, 052-260-0178
Emergency telephone number	: 052-259-7691

## 2. Hazards identification

### 2.1. Hazard Classification

Flammable liquids, Category 2	H225
Acute toxicity (oral), Category 4	H302
Acute toxicity (dermal), Category 3	H311
Acute toxicity (inhalation), Category 3	H331
Acute toxicity (inhalation:dust,mist), Not classified	
Serious eye damage/eye irritation, Category 2	H319
Hazardous to the aquatic environment – Acute Hazard Not classified	
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412

### 2.2. Label elements including precautionary statements

#### 2.2.1. Hazard pictograms (GHS KR)



#### 2.2.2. Signal word (GHS KR)

Danger.

#### 2.2.3. Hazard statements (GHS KR)

H225 - Highly flammable liquid and vapour

H302 - Harmful if swallowed

H311+H331 - Toxic in contact with skin or if inhaled

H319 - Causes serious eye irritation

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H412 - Harmful to aquatic life with long lasting effects

### 2.2.4. Precautionary statements (GHS KR)

#### Precaution:

- P210 - Keep away from heat/hot surfaces/sparks/open flames/other ignition sources. No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground container and receiving equipment.
- P241 - Use explosion-proof electrical/ventilating/lighting/... equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 - Wash hands, forearms and face thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

#### Treatment:

- P301+P312 - IF SWALLOWED: Call a POISON CENTER/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.
- 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.
- P311 - Call a POISON CENTER/doctor/...
- P312 - Call a POISON CENTER/doctor/... if you feel unwell.
- P321 - Take ... treatment.
- P330 - Rinse mouth.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P361+P364 - Take off all contaminated clothing immediately and wash it before reuse.
- P370+P378 - In case of fire: Use ... to extinguish.

#### Storage:

- P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 - Store in a well-ventilated place. Keep cool.
- P405 - Store locked up.

#### Disposal:

- P501 - Dispose of contents/container according to waste related regulations.

### 2.3. Other Hazard which are not included in the classification criteria

Not applicable

## 3. Composition/information on ingredients

Product form : Substance

Substance name	Other Names	CAS-No. and Identifier number	Concentration (%)
Acetonitrile	No data available	CAS-No.: 75-05-8 KECI-No.: KE-00067	99

## 4. First-aid measures

### 4.1. Eye contact

- Rinse cautiously with water for several minutes.
- Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.

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### 4.2. Skin contact

Rinse skin with water/shower.  
Take off immediately all contaminated clothing.

### 4.3. Inhalation

Remove person to fresh air and keep comfortable for breathing.  
Call a doctor.

### 4.4. Ingestion

Rinse mouth.  
Call a poison center or a doctor if you feel unwell.

### 4.5. Indication of immediate medical attention and notes for physician

Self protection of the first-aider	: First-aiders should pay attention to their own protection and use the recommended personal protective equipment (see section 8).
Other medical advice or treatment	: Treat symptomatically.

## 5. Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour.
Explosion hazard	: No direct explosion hazard.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Wear recommended personal protective equipment.  
Ventilate spillage area.  
No open flames, no sparks, and no smoking.  
Avoid contact with skin, eyes and clothing.  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
Do not attempt to take action without suitable protective equipment.  
For further information refer to section 8: "Exposure controls/personal protection".  
Evacuate unnecessary personnel.  
Stop leak if safe to do so.

### 6.2. Environmental precautions and protective procedures

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Absorb spilled material with sand or earth.

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Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.  
Stop leak without risks if possible.  
Take up liquid spill into absorbent material.  
Notify authorities if product enters sewers or public waters.  
Dispose of materials or solid residues at an authorized site.

## 7. Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Ground/bond container and receiving equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Flammable vapours may accumulate in the container.  
Use explosion-proof equipment.  
Wear personal protective equipment.  
Do not get in eyes, on skin, or on clothing.  
Use only outdoors or in a well-ventilated area.  
Avoid breathing dust/fume/gas/mist/vapours/spray.

Hygiene measures : Wash contaminated clothing before reuse.  
Do not eat, drink or smoke when using this product.  
Always wash hands after handling the product.

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

### 7.2. Conditions for safe storage

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place.  
Keep cool.  
Keep container tightly closed.  
Store locked up.

Packaging materials : Always store product in container of same material as original container.

## 8. Exposure controls & personal protection

### 8.1. Control parameters (e.g. occupational exposure limit values, biological limit values)

Acetonitrile (75-05-8)	
Korea - Occupational Exposure Limits	
Local name	아세토니트릴 # Acetonitrile
ISHA OEL TWA	20 ppm
Remark (KR)	Skin
Regulatory reference	고용노동부고시 제2020-48호 # MOEL Public Notice. No. 2020-48

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

### 8.3. Personal protection equipment

#### Personal protective equipment

Wear recommended personal protective equipment.

#### Respiratory protection

[In case of inadequate ventilation] wear respiratory protection.

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### Eye protection

Safety glasses

### Hand protection

Protective gloves

### Skin and body protection

Wear suitable protective clothing

### Personal protective equipment symbol(s):



## 9. Physical and chemical properties

a) Appearance	: Liquid.
Physical state	: Liquid
Colour	: clear. Colourless.
b) Odour	: Aromatic (ether) smell.
c) Odour threshold	: 70 – 70 mg/m <sup>3</sup>
d) pH	: 7
e) Melting / freezing point	: -45.7 °C / -45.7
f) Initial boiling point and boiling range	: 81.6 °C (at 1013 hPa)
g) Flash point	:
h) Evaporation rate	: 579 Butyl acetate = 100
i) Flammability (solid, gas)	: No data.
j) Upper / lower flammability or explosive limits	: 3 – 16 Vol-%
k) Vapour pressure	: 74 mm Hg (at 20°C)
l) Solubility	: Solubility in water: 681000 mg/l
m) Vapour density	: 1.42
n) Relative density	: 0.783
o) Partition coefficient n-octanol/water (Log Kow)	: No data available
p) Auto-ignition temperature	: 524 °C
q) Decomposition temperature	:
r) Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.036 mPa·s
s) Molecular mass	: 41.05 g/mol

## 10. Stability and reactivity

### 10.1. Chemical stability and Possibility of hazardous reactions

Highly flammable liquid and vapour.  
Stable under normal conditions.  
No dangerous reactions known under normal conditions of use.

### 10.2. Conditions to avoid

Avoid contact with hot surfaces.  
Heat.  
No flames, no sparks. Eliminate all sources of ignition.

### 10.3. Incompatible materials

No data available

### 10.4. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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### 11. Toxicological information

#### 11.1. Information on the likely routes of exposure

Oral	: Harmful if swallowed.
Skin and eyes contact	: Acute toxicity (dermal) - Toxic in contact with skin. Serious eye damage/eye irritation - Causes serious eye irritation.
Inhalation	: Acute toxicity (inhalation) - Toxic if inhaled.

#### 11.2. Health hazards information

##### Acute toxicity (oral):

Harmful if swallowed.

##### Acute toxicity (dermal):

Toxic in contact with skin.

##### Acute toxicity (inhalation):

Toxic if inhaled.

#### Acetonitrile (75-05-8)

LD50 oral rat	617 mg/kg
LD50 dermal rabbit	395 mg/kg
LD50 dermal	296 mg/kg
LC50 Inhalation - Rat	6.022 mg/l
LC50 Inhalation - Rat (Vapours)	17.93 mg/l/4h
ATE KR (dust,mist)	0.5 mg/l/4h

##### Skin corrosion/irritation:

Not classified

##### Serious eye damage/irritation:

Causes serious eye irritation.

##### Respiratory sensitization:

Not classified

##### Skin sensitization:

Not classified

##### Carcinogenicity:

Not classified

##### Mutagenicity:

Not classified

##### Reproductive toxicity:

Not classified

##### STOT-single exposure:

Not classified

##### STOT-repeated exposure:

Not classified

##### Aspiration hazard:

Not classified

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### 12. Ecological information

#### 12.1. Aquatic and terrestrial ecotoxicity

- Ecology - general : Harmful to aquatic life with long lasting effects.
- Hazardous to the aquatic environment, short-term (acute) : Not classified.
- Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

#### Acetonitrile (75-05-8)

LC50 - Fish [1]	100 mg/l
EC50 - Crustacea [1]	100 mg/l
ErC50 algae	700 mg/l
NOEC chronic crustacea	960 mg/l
NOEC chronic algae	700 mg/l

#### 12.2. Persistence and degradability

#### Acetonitrile (75-05-8)

Persistence and degradability	Not rapidly degradable
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#### 12.3. Bioaccumulative potential

No data available

#### 12.4. Mobility in soil

No data available

#### 12.5. Other adverse effects

- Ozone : Not classified
- Other adverse effects : No data available

### 13. Disposal considerations

#### 13.1. Disposal method

- Regional waste regulation : Disposal must be done according to official regulations.
- Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- Ecological waste information : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way.  
Consider the handling and disposal of the waste as defined by the product itself.

#### 13.2. Disposal precaution

- Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
- Sewage disposal recommendations : Disposal must be done according to official regulations.
- Additional information : Flammable vapours may accumulate in the container.  
Do not re-use empty containers.




### 14. Transport information

In accordance with UN RTDG / IMDG / IATA

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UN RTDG	IMDG	IATA
<b>14.1. UN number</b>		
1648	1648	1648
<b>14.2. UN proper shipping name</b>		
ACETONITRILE	ACETONITRILE	Acetonitrile
<b>Transport document description</b>		
UN 1648 ACETONITRILE, 3, II	UN 1648 ACETONITRILE, 3, II (2°C c.c.)	UN 1648 Acetonitrile, 3, II
<b>14.3. Transport hazard class(es)</b>		
3	3	3
		
<b>14.4. Packing group</b>		
II	II	II
<b>14.5. Marine pollutant</b>		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No data available		

### 14.6. Special precaution which a user to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises

No data available

## 15. Regulatory information

### 15.1. Occupational Safety and Health Act

Hazardous Substances Prohibited for Manufacturing	Not applicable	
Hazardous Substances Requiring Permission	Not applicable	
Threshold Limit Values Chemicals	Applicable	75-05-8: Acetonitrile
Hazardous Substances Below Permissible Level	Not applicable	
Hazardous Substances Subject to Working Environment Measurement	Applicable	75-05-8: Acetonitrile (Measurement Cycle: 6 months) (contains above 1%)
Hazardous Substances Subject to Workers Requiring Health Examination	Applicable	75-05-8: Acetonitrile (Examination Cycle: 12 months) (contains above 1%)
Hazardous Substances Subject to Control	Applicable	75-05-8: Acetonitrile (contains above 1%)
Substance Subject to Submission of PSM	Applicable	75-05-8: Acetonitrile (Flammable liquids) (Manufacture • Handling: 5,000kg (Storage: 200,000kg))

### 15.2. Chemical Substances Control Act

Substance acutely hazardous to human health	Applicable	75-05-8: Acetonitrile; Methyl cyanide (Serial number: 2021-1-1056 (contains above 25%))
Substance chronically hazardous to human health	Not applicable	
Substance hazardous to the environment	Not applicable	
Restricted Substances	Not applicable	
Prohibited Substances	Not applicable	
Substances Requiring Preparation for Accident	Not applicable	

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### 15.3. Act on Registration and Evaluation of Chemicals (K-REACH)

Korea Existing Chemicals Inventory (KECI)	Applicable	75-05-8: Acetonitrile (KECI-No. : KE-00067)
Substances Subject to Intensive Control	Not applicable	
Priority Existing Chemicals (PEC)	Applicable	75-05-8: Acetonitrile ; Methyl cyanide ; Cyanomethane (PEC-No. : 27)
CMR Substances	Not applicable	

### 15.4. Safety Control of Dangerous Substances Act

Safety Control of Dangerous Substances Act	Applicable	75-05-8: Acetonitrile (Class 4 Flammable liquid - category 2 First class Petroleum Water-soluble (Designated quantity: 400 liter))
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### 15.5. Wastes Control Act

Hazardous Substances in Designated wastes	Applicable	75-05-8: Cyanide (Contained in an effluent; Threshold condition to verify (contains above 1mg/l))
Types of wastes	No data available	

### 15.6. Other Domestic and International Regulatory Information

#### Other Domestic Regulations

Persistent Organic Pollutants(POPs) Control Act	Not applicable
Ozone Depleting Substances(ODS)	Not applicable
PRTR Substances	Not applicable

#### EU Regulatory Information

EU Candidate list (SVHC)	Not listed on the REACH Candidate List
EU authorization list (REACH Annex XIV)	Not listed on REACH Annex XIV (Authorisation List)
EU restriction list (REACH Annex XVII)	Applicable

#### US Regulatory Information

CERCLA Section 103 (40CFR302.4)	Applicable
EPCRA Section 302 (40CFR355.30)	Not applicable
EPCRA Section 304 (40CFR355.40)	Not applicable
EPCRA Section 313 (40CFR372.65)	Applicable

## 16. Other information

### 16.1. Information source and references

This MSDS is prepared based on KOSHA, NITE, ESIS, NLM, SIDS, IPCS, NCIS, etc.

### 16.2. Issue date

9/30/2011

### 16.3. Revision number and Revision date

Version	: 14.1
Revision date	: 3/31/2026

### 16.4. Others

No data available

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.