



SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: 2-Methyl-2-butenenitrile
Product code: M0839
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Revision number: 1

2. HAZARDS IDENTIFICATION

Classification of the GHS

PHYSICAL HAZARDS

Flammable liquids Category 2

HEALTH HAZARDS

Acute toxicity (Oral) Category 3

Acute toxicity (Dermal) Category 3

Acute toxicity (Inhalation) Category 3

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2A

ENVIRONMENTAL HAZARDS

Not classified

GHS label elements

Pictograms or hazard symbols



Signal word

Danger

Hazard statement

Highly flammable liquid and vapour
 Toxic by inhalation, in contact with skin and if swallowed
 Causes skin irritation
 Causes serious eye irritation

Precautionary statements

[Prevention]

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 Keep container tightly closed.
 Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against ignition by the static discharge and the spark.
 Avoid breathing.
 Use only outdoors or in a well-ventilated area.
 Do not eat, drink or smoke when using this product.
 Wash hands thoroughly after handling.
 Wear protective gloves and eye/face protection.

2. HAZARDS IDENTIFICATION**[Response]**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

IF IN EYES: 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.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation occurs: Get medical advice/attention.

Remove/Take off immediately all contaminated clothing.

Wash contaminated clothing before reuse.

Call a POISON CENTER or doctor/physician if you feel unwell.

[Storage]

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

[Disposal]

Dispose of contents/container through a waste management company authorized by the local government

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Component(s):	2-Methyl-2-butenenitrile
Percent:	>70.0%(GC)
CAS Number:	4403-61-6
Synonyms:	2-Cyano-2-butene , 1-Methyl-1-propenyl Cyanide
Chemical Formula:	C ₅ H ₇ N

4. FIRST AID MEASURES**Inhalation:**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.

Skin contact:

Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Call a POISON CENTER or doctor/physician.

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.

Ingestion:

Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

Protection of first-aiders:

A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, foam, carbon dioxide.

Extinguishing media not to be used: Water (It may scatter and spread fire.)

Specific hazards: Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.

Specific methods: Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.

Special protective equipment for firefighters: When extinguishing fire, be sure to wear personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

6. ACCIDENTAL RELEASE MEASURES

- Environmental precautions:** Prevent product from entering drains.
- Methods and materials for containment and cleaning up:** Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
- Prevention of secondary hazards:** Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Handling

- Technical measures:** Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapor or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapor or aerosol will be generated.
- Advice on safe handling:** Avoid contact with skin, eyes and clothing.

Storage

- Storage conditions:** Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up. Store away from incompatible materials such as oxidizing agents.
- Packaging material:** Law is followed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering controls:** Install a closed system or local exhaust. Also install safety shower and eye bath.
- Personal protective equipment**
- Respiratory protection:** Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.
- Hand protection:** Impervious gloves.
- Eye protection:** Safety goggles. A face-shield, if the situation requires.
- Skin and body protection:** Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state (20°C):** Liquid
- Form:** clear
- Color:** Colorless - Slightly pale yellow
- Odor:** No data available
- pH:** No data available
- Melting point/freezing point:** No data available
- Boiling Point/Range:** 50 °C/0.9kPa
- Flash Point:** -17°C
- Explosive limits**
- Lower:** No data available
- Upper:** No data available
- Density:** 0.82
- Solubility:** Slightly soluble in: Water

10. STABILITY AND REACTIVITY

- Stability:** Stable under proper conditions.
- Reactivity:** No special reactivity has been reported.
- Incompatible materials:** oxidizing agents
- Hazardous Decomposition Products:** Carbon monoxide, Carbon dioxide, Nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	skn-rbt LDLo:200 mg/kg
Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Germ cell mutagenicity:	No data available
Carcinogenicity:	
IARC =	No data available
NTP =	No data available
Reproductive toxicity:	No data available
RTECS Number:	EM8312500

12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Fish:	No data available
Crustacea:	No data available
Algae:	No data available
Persistence / degradability:	No data available
Bioaccumulative potential(BCF):	No data available
Mobility in soil	
log Pow:	No data available
Soil adsorption (Koc):	No data available
Henry's Law constant(PaM³/mol):	No data available

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local regulations when disposing of the substance

14. TRANSPORT INFORMATION

Hazards Class:	3: Flammable liquid.
Subsidiary risk:	6.1: Toxic substance.
UN-No:	3273
Proper shipping name:	Nitriles, flammable, toxic, n.o.s.
Packing group:	II

15. REGULATORY INFORMATION

Safe management ordinance of dangerous chemical product (State Council announces on January 26, 2002): Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

16. OTHER INFORMATION

The reference company name of written contents

Company:	TCI (Shanghai) DEVELOPMENT CO., LTD.
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