Safety Data Sheet

# Toluene-2,6-diisocyanate in acetonitrile

Version：V2.0.0.1
Report No.：BWQ9489-2016-MSDS-US
Creation Date：2025/09/29
Revision Date：-

*Prepared according to American OSHA HCS-2024 (29 CFR 1910.1200)

## 1 Identification

### Product identifier

| | |
|---|---|
| Product Name | Toluene-2,6-diisocyanate in acetonitrile |
| Cat No. | BWQ9489-2016 |
| CAS No. | Not applicable |
| EC No. | Not applicable |
| Molecular Formula | Not applicable |

### Recommended use of the product and restrictions on use

| | |
|---|---|
| Relevant identified uses | Please consult manufacturer. |
| Uses advised against | Please consult manufacturer. |

### Details of the supplier of the Safety Data Sheet

| | |
|---|---|
| Name of the company | Weiyel Inc |
| Address of the company | Hedian Light Industrial Park, Chengguan Town, Shangcheng County, Xinyang City, Henan Province, China |
| Post code | 465350 |
| Telephone number | 010-58103678 |
| Fax number | 010-84840368 |
| E-mail address | info@weiyel.com |

### Emergency phone number

| | |
|---|---|
| Emergency phone number | 010-58103678 |

## 2 Hazard(s) identification

### Hazard classification according to 29 CFR 1910.1200

| | |
|---|---|
| Acute Toxicity - Oral | Category 4 |
| Acute Toxicity - Dermal | Category 4 |
| Sensitization - skin | Category 1 |
| Serious eye damage/irritation | Category 2 |
| Acute Toxicity - Inhalation | Category 3 |
| Sensitization - respiratory | Category 1 |
| Carcinogenicity | Category 2 |

### Label elements

| | |
|---|---|
| Hazard pictograms |  |
| Signal word | Danger |

## Hazard statements

| | |
|---|---|
| H302 | Harmful if swallowed |
| H312 | Harmful in contact with skin |
| H317 | May cause an allergic skin reaction |
| H319 | Causes serious eye irritation |
| H331 | Toxic if inhaled |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled |
| H351 | Suspected of causing cancer |

## Precautionary statements

### Prevention

| | |
|---|---|
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P261 | Avoid breathing gas/mist/vapour/spray. |
| P264 | Wash hands and other parts of the body (if related) thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or with adequate ventilation. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. |
| P284 | In case of inadequate ventilation wear respiratory protection. |

### Response

| | |
|---|---|
| P321 | Specific treatment (see related instructions on the label). |
| P330 | Rinse mouth. |
| P302+P352 | IF ON SKIN: Wash with plenty of water. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |

### Storage

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

### Disposal

| | |
|---|---|
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

## Other hazards

| | |
|---|---|
| | Not applicable. |

## Hazard description

◆ Physical and chemical hazards

| | |
|---|---|
| | No information available |

◆ Health hazards

| | |
|---|---|
| **Inhaled** | Sore throat. Weakness. Abdominal pain. Laboured breathing. Convulsions. Unconsciousness. Vomiting. Symptoms may be delayed. |
| **Ingestion** | (Further see Inhalation). |
| **Skin Contact** | Redness. |
| **Eye** | Redness. Pain. |

◆ Environmental hazards

| | |
|---|---|
| | Please refer to 12th chapter of SDS. |

## 3 Composition/information on ingredients

### Substance/mixture

| | |
|---|---|
| | Mixture |

| Component | CAS No. | EC No. | Concentration (wt, %) |
|---|---|---|---|
| **2-methyl-m-phenylene diisocyanate** | 91-08-7 | 202-039-0 | 0.253 |
| **Acetonitrile** | 75-05-8 | 200-835-2 | 99.747 |

## 4 First-aid measures

### Description of first aid measures

| | |
|---|---|
| **General advice** | Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance. |
| **Eye contact** | First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor. |
| **Skin contact** | Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention. |
| **Ingestion** | Rinse mouth. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Give plenty of water to drink. Refer for medical attention. |
| **Inhalation** | Fresh air, rest. Artificial respiration may be needed. Refer for medical attention. |
| **Protecting of first-aiders** | Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination. |

### Most important symptoms/effects, acute and delayed

| | |
|---|---|
| 1 | Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. |

### Indication of any immediate medical attention and special treatment needed

| | |
|---|---|
| 1 | Treat symptomatically. |
| 2 | Symptoms may be delayed. |

## 5 Fire-fighting measures

### Extinguishing media

| | |
|---|---|
| **Suitable extinguishing media** | Small fire: dry chemical, $CO_2$ or water spray; Large fire: dry chemical, $CO_2$ , alcohol-resistant foam or water spray; Fire involving tanks, rail tank cars or |

| | |
|---|---|
| | highway tanks: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Do not get water inside containers. |
| **Unsuitable extinguishing media** | No information available. |

### Specific hazards arising from the substance or mixture

| | |
|---|---|
| 1 | May emit poisonous fumes on fire. |
| 2 | Development of hazardous combustion gases or vapor possible in the event of fire. |
| 3 | May expansion or decompose explosively when heated or involved in fire. |

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

| | |
|---|---|
| 1 | As in any fire, wear self-contained breathing apparatus ( MSHA/NIOSH approved or equivalent) and full protective gear. |
| 2 | Fight fire from a safe distance, with adequate cover. |
| 3 | Prevent fire extinguishing water from contaminating surface water or the ground water system. |

## 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

| | |
|---|---|
| 1 | Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. |
| 2 | Do not touch or walk through spilled material. |
| 3 | Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. |
| 4 | Use personal protective equipment,do not breathe gas/mist/vapour/spray. |
| 5 | Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges. |
| 6 | Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. |

### Environmental precautions

| | |
|---|---|
| 1 | Prevent further leakage or spillage if safe to do so. |
| 2 | Discharge into the environment must be avoided. |

### Methods and materials for containment and cleaning up

| | |
|---|---|
| 1 | Do not touch or cross spills. |
| 2 | Cover with anti-solvent foam to reduce evaporation. |
| 3 | It is recommended that emergency personnel wear positive pressure self-contained breathing apparatus and wear anti-virus suits. |
| 4 | Spray water disperses the vapor and dilutes the liquid spill. |
| 5 | Do not touch broken containers and spills before putting on appropriate protective clothing. |
| 6 | Cut off the source of the leak as much as possible. |
| 7 | Keep leaks in a ventilated place. |
| 8 | Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding. |
| 9 | Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. |
| 10 | Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container. |

## 7 Handling and storage

### Precautions for safe handling

| | |
|---|---|
| 1 | Handling is performed in a well ventilated place. |
| 2 | Wear suitable protective equipment. |
| 3 | Avoid contact with skin and eyes. |
| 4 | Keep away from heat/sparks/open flames/ hot surfaces. |

### Conditions for safe storage, including any incompatibilities

| | |
|---|---|
| 1 | Keep containers tightly closed. |
| 2 | Keep containers in a dry, cool and well-ventilated place. |
| 3 | Keep away from heat/sparks/open flames/hot surfaces. |

## 8 Exposure controls/personal protection

### Control parameters

◆Occupational exposure limit values

| Component | Country/Region | Limit value - Eight hours | | Limit value - Short term | |
|---|---|---|---|---|---|
| | | ppm | mg/m³ | ppm | mg/m³ |
| **2-methyl-m-phenylene diisocyanate** | Canada - Ontario | 0.005 | - | 0.02 | - |
| | USA - ACGIH | 0.001(inhalable fraction and vapor) | - | 0.005(inhalable fraction and vapor) | - |
| | USA - OSHA | - | - | 0.02 | 0.14 |
| | Austria | 0.005 | 0.035 | 0.02 | 0.17 |
| | Belgium | 0.005 | 0.037 | 0.02 | 0.14 |
| | Denmark | 0.005 | 0.035 | 0.01 | 0.07 |
| **Acetonitrile** | Australia | 40 | 67 | 60 | 101 |
| | Canada - Ontario | 20 | - | - | - |
| | European Union | 40 | 70 | - | - |
| | New Zealand | 40 | 67 | 60 | 101 |
| | USA - ACGIH | 20 | - | - | - |
| | USA - NIOSH | 20 | 34 | - | - |

### Engineering controls

| | |
|---|---|
| 1 | Ensure adequate ventilation, especially in confined areas. |
| 2 | Ensure that eyewash stations and safety showers are close to the workstation location. |
| 3 | Use explosion-proof electrical/ventilating/lighting/equipment. |
| 4 | Set up emergency exit and necessary risk-elimination area. |

### Personal protection equipment

| | |
|---|---|
| General requirement |  |
| Eye protection | Must wear appropriate safety goggles. |
| Hand protection | Must wear appropriate chemical protective gloves. |

| | |
|---|---|
| Respiratory protection | Must wear appropriate personal dust proof gas mask. |
| Skin and body protection | Must wear appropriate chemical protective clothing and chemical resistant shoes. |

## 9 Physical and chemical properties and safety characteristics

### Physical and chemical properties

| | |
|---|---|
| Appearance (physical state, color, etc.) | colorless liquid |
| Odor | No information available |
| Odor threshold | No information available |
| pH | No information available |
| Melting point/freezing point(°C) | No information available |
| Initial boiling point and boiling range(°C) | >35 |
| Flash point(Closed cup,°C) | No information available |
| Evaporation rate | No information available |
| Flammability | No information available |
| Upper/lower explosive limits[%(v/v)] | Upper limit : No information available ; Lower limit : No information available |
| Vapor pressure | No information available |
| Vapor density(Air = 1) | No information available |
| Relative density(Water=1) | No information available |
| Solubility | No information available |
| n-octanol/water partition coefficient | No information available |
| Auto-ignition temperature(°C) | No information available |
| Decomposition temperature(°C) | No information available |
| Kinematic viscosity | No information available |

## 10 Stability and reactivity

### Stability and reactivity

| | |
|---|---|
| Reactivity | Contact with incompatible substances can cause decomposition or other chemical reactions. |
| Chemical stability | Stable under proper operation and storage conditions. |
| Possibility of hazardous reactions | In contact with N-halogen compounds may cause a potensive explosive hazardous. |
| Conditions to avoid | Incompatible materials, heat, flame and spark. |
| Incompatible materials | Water, acids, alkalis, ammonia, tertiary amine, trace amounts of chloride and alcohols. N - halogenated compounds, sulfuric acid and strong oxidants. |
| Hazardous decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

## 11 Toxicological information

### Acute toxicity

| Component | $LD_{50}$(oral) | $LD_{50}$(dermal) | $LC_{50}$(inhalation,4h) |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **Acetonitrile** | 2460mg/kg(Rat) | > 2000mg/kg(Rabbit) | 4.748mg/L(Rabbit) |

### Carcinogenicity

| Component | List of carcinogens by the IARC Monographs | Report on Carcinogens by NTP | OSHA Carcinogen List |
|---|---|---|---|
| **2-methyl-m-phenylene diisocyanate** | Not Listed | Category R | Not Listed |
| **Acetonitrile** | Not Listed | Not Listed | Not Listed |

### Others

| Toluene-2,6-diisocyanate in acetonitrile | |
|---|---|
| **Skin corrosion/irritation** | Based on available data, the classification criteria are not met |
| **Serious eye damage/irritation** | Causes serious eye irritation(Category 2) |
| **Skin sensitization** | May cause an allergic skin reaction(Category 1) |
| **Respiratory sensitization** | May cause allergy or asthma symptoms or breathing difficulties if inhaled(Category 1) |
| **Reproductive toxicity** | Based on available data, the classification criteria are not met |
| **STOT-repeated exposure** | Based on available data, the classification criteria are not met |
| **Aspiration hazard** | Based on available data, the classification criteria are not met |
| **Germ cell mutagenicity** | Based on available data, the classification criteria are not met |

## 12 Ecological information

### Acute aquatic toxicity

| Component | Fish | Crustaceans | Algae or other aquatic plants |
|---|---|---|---|
| **Acetonitrile** | $LC_{50}$ : > 100mg/L (96h)(Fish) | $EC_{50}$ : > 1000mg/L (48h)(Crustaceans) | $ErC_{50}$ : >700mg/L (72h)(Algae) |
| **2-methyl-m-phenylene diisocyanate** | $LC_{50}$ :164mg/L (96h)(Fish) | $EC_{50}$ : 33.383mg/L (48h)(Crustaceans) | $ErC_{50}$ : 37.121mg/L (72h)(Algae) |

### Chronic aquatic toxicity

| Component | Fish | Crustaceans | Algae or other aquatic plants |
|---|---|---|---|
| **Acetonitrile** | NOEC : 102mg/L(Fish) | NOEC : >960mg/L(Crustaceans) | NOEC : 700mg/L(Algae) |

### Persistence and degradability

| Component | Persistence (water/soil) | Persistence (air) |
|---|---|---|
| **2-methyl-m-phenylene diisocyanate** | Low(Half-life = 1 days) | Low(Half-life = 0.13 days) |

### Bioaccumulative potential

| Component | Bioaccumulative potential | Comments |
|---|---|---|
| **2-methyl-m-phenylene diisocyanate** | Low | Log Kow=3.7403 |

### Mobility in soil

| Component | log Koc | Remark |
|---|---|---|
| **2-methyl-m-phenylene diisocyanate** | 3.969 | |
| **Acetonitrile** | 0.653 | |

## 13 Disposal considerations

### Disposal considerations

| | |
|---|---|
| **Waste chemicals** | Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal. |
| **Contaminated packaging** | Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible. |
| **Disposal recommendations** | Refer to section waste chemicals and contaminated packaging. |

## 14 Transport information

### Label and Mark

| | |
|---|---|
| **Transporting Label** |  |



### IMDG-CODE

| | |
|---|---|
| **UN number** | 2810 |
| **UN proper shipping name** | TOXIC LIQUID, ORGANIC, N.O.S. |
| **Transport hazard class** | 6.1 |
| **Transport subsidiary hazard class** | None |
| **Packing group** | Ⅲ |
| **Marine pollutant ( Yes or no )** | No |

### IATA-DGR

| | |
|---|---|
| **UN number** | 2810 |
| **UN proper shipping name** | TOXIC LIQUID, ORGANIC, N.O.S. |
| **Transport hazard class** | 6.1 |
| **Transport subsidiary hazard class** | None |
| **Packing group** | Ⅲ |

### UN-ADR

| | |
|---|---|
| **UN number** | 2810 |
| **UN proper shipping name** | TOXIC LIQUID, ORGANIC, N.O.S. |
| **Transport hazard class** | 6.1 |
| **Transport subsidiary hazard class** | None |
| **Packing group** | Ⅲ |

### Transport in bulk according to IMO instruments

◆Transport in bulk according to Annex II of MARPOL and the IBC code

| | |
|---|---|
| | Not Available |

◆Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

| | |
|---|---|
| | Not Available |

◆Transport in bulk in accordance with the IGC Code

| | |
|---|---|
| | Not Available |

### Others

| | |
|---|---|
| **Precautions for transport** | Transit should be anti-exposure, rain, high temperature. Strictly prohibited shipping or transportation with acids, alkalis, oxidants, food and food additives etc. Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements. |

## 15 Regulatory information

### International chemical inventory

| Component | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2-methyl-m-phenylene diisocyanate** | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| **Acetonitrile** | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |

【A】 China Inventory of Existing Chemical Substances(IECSC)
【B】 European Inventory of Existing Commercial Chemical Substances(EC inventory)
【C】 United States Toxic Substances Control Act Inventory(TSCA)
【D】 Canadian Domestic Substances List(DSL)
【E】 New Zealand Inventory of Chemicals(NZIoC)
【F】 Philippines Inventory of Chemicals and Chemical Substances(PICCS)
【G】 Korea Existing Chemicals Inventory(KECL)
【H】 Australian. Inventory of Industrial Chemical (AIICS)
【I】 Japan Inventory of Existing & New Chemical Substances(ENCS)
【J】 Thailand Existing Chemicals Inventory(TECI)
【K】 Mexico National Inventory of Chemical Substances (INSQ)
【L】 Russia Inventory of Existing Substances (DRAFT)
【M】 Inventory of Existing Chemical Substances in Taiwan, China (TCSI)

### List of Chemical Substances under International Conventions

| Component | A | B | C |
|---|---|---|---|
| **2-methyl-m-phenylene diisocyanate** | × | × | × |
| **Acetonitrile** | × | × | × |

【A】 The Montreal Protocol on Substances that Deplete the Ozone Layer
【B】 Stockholm Convention on Persistent Organic Pollutants (POPs)
【C】 Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade

### US chemical inventory

| Component | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| **2-methyl-m-phenylene diisocyanate** | × | √ | √ | √ | √ | √ | √ | × |
| **Acetonitrile** | √ | × | √ | √ | √ | √ | √ | × |

[A] US Clean Air Act (CAA)- Section 112, Hazardous Air Pollutants
[B] US SARA 302- Extremely Hazardous Substance List
[C] US CERCLA- Hazardous Substances List
[D] US Massachusetts Right-to-Know Substance List
[E] US New Jersey Right to Know Hazardous Substance List
[F] US Pennsylvania Right to Know Hazardous Substance List
[G] US New York City Right-to-Know Hazardous Substance List
[H] US California Proposition 65 List

Note:
"√" Indicates that the substance included in the regulations.
"×" No data or not included in the regulations.

## 16 Other information

### Information on revision

| | |
|---|---|
| Creation Date | 2025/09/29 |
| Revision Date | - |
| Reason for revision | - |

### Reference

[1] IPCS: The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home.
[2] IARC, website: http://www.iarc.fr/.
[3] OECD: The Global Portal to Information on Chemical Substances, website: https://www.echemportal.org/echemportal/.
[4] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple.
[5] NLM: ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp.
[6] EPA: Integrated Risk Information System, website: http://cfpub.epa.gov/iris/.
[7] U.S. Department of Transportation: ERG, website: http://www.phmsa.dot.gov/hazmat/library/erg.
[8] Germany GESTIS-database on hazard substance, website: http://gestis-en.itrust.de/.

### Abbreviations and acronyms

| | | | |
|---|---|---|---|
| CAS | Chemical Abstracts Service | UN | The United Nations |
| PC-STEL | Short term exposure limit | OECD | Organization for Economic Co-operation and Development |
| PC-TWA | Time Weighted Average | IMDG-CODE | International Maritime Dangerous Goods CODE |
| MAC | Maximum Allowable Concentration | IARC | International Agency for Research on Cancer |
| DNEL | Derived No Effect Level | ICAO | International Civil Aviation Organization |
| PNEC | Predicted No Effect Concentration | IATA | International Air Transportation Association |
| NOEC | No Observed Effect Concentration | ACGIH | American Conference of Governmental Industrial Hygienists |
| $LC_{50}$ | Lethal Concentration 50% | NFPA | National Fire Protection Association |
| $LD_{50}$ | Lethal Dose 50% | NTP | National Toxicology Program |
| $EC_{50}$ | Effective Concentration 50% | PBT | Persistent, Bioaccumulative, Toxic |
| $EC_X$ | Effective Concentration X% | vPvB | very Persistent, very Bioaccumulative |
| $P_{OW}$ | Partition coefficient Octanol: Water | CMR | Carcinogens, mutagens or substances toxic to reproduction |
| BCF | Bioconcentration factor | RPE | Respiratory Protective Equipment |
| ED | Endocrine disruptor | HCS | Hazard Communication Standard |

### Disclaimer

This Safety Data Sheet (SDS) was prepared according to OSHA HCS-2024. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of

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