

ALADDIN SCIENTIFIC CORPORATION
14078 Meridian Parkway, Riverside, CA. 92518

SAFETY DATA SHEET

Version: v1
Revision Date: 2024-05-23
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Tolyene Diisocyanate (2,4, 2,6)
Product Number : T135411
Brand : aladdin
CAS-No. : 26471-62-5

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION
Address : 14078 Meridian Parkway,
Riverside, CA. 92518
Telephone : +1 (833) 552-7181
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300
CHEMTREC®, Outside the USA :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity, Inhalation (Category 1), H330
Skin irritation (Category 2), H315
Eye irritation (Category 2), H319
Respiratory sensitization (Category 1), H334
Skin sensitization (Sub-category 1A), H317
Carcinogenicity (Category 2), H351
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
Long-term (chronic) aquatic hazard (Category 3), H412

2.2 GHS Label elements, including precautionary statements

Pictogram



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Signal word	Danger
Hazard statement(s)	
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H412	Harmful to aquatic life with long lasting effects
Precautionary statement(s)	
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and ...] thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] Wear respiratory protection.
P302+P352	IF ON SKIN: wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P337+P313	IF eye irritation persists: Get medical advice/attention.
P402+P404	Store in a dry place. Store in a closed container.
P403+P235	Store in a well-ventilated place. Keep cool.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P501	Dispose of contents/container to an approved waste disposal plant.
P304+P340+P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: Toluene Diisocyanate
Formula	: C ₉ H ₆ N ₂ O ₂
Molecular weight	: 174.16
CAS No.	: 26471-62-5
EC-NO.	: no data available

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Component	Classification	Concentration
Tolylene Diisocyanate (2,4,2,6)	no data available	≥98.0%(GC)

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media

Foam Water

5.2 Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NOx) Combustible. Caution! in contact with water product releases: corrosive vapours Fire may cause evolution of: nitrogen oxides, Hydrogen cyanide (hydrocyanic acid) Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

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Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep the container tightly closed and store in a dry and ventilated place. Sensitive to heat; Sensitive to light; Sensitive to humidity, 2-8°C, protected from light, and stored under argon.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate

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government standards such as NIOSH (US) or EN166(EU).

Skin protection

Gloves must be checked before use. Please use proper methods to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Please clean and blow dry the protective gloves selected for your hands must meet the specifications given in regulation (EU) 2016 / 425 and the en 374 standard derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	no data available
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	12-14 °C
f) Initial boiling point and boiling range	247 °C/1013 hPa
g) Flash point	132 °C - closed cup
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	1.22
n) Water solubility	Miscible in ether, benzene, acetone
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

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9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Carbon dioxide, Carbon monoxide, Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male - 5.110 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - 0,11 mg/l - vapor

(OECD Test Guideline 403)

Symptoms: mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages:, damage of respiratory tract

LC50 Inhalation - Rat - 4 h - 0,35 mg/l - aerosol

LD50 Dermal - Rat - male and female - > 9.400 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

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Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Lungs Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After absorption:

agitation

Impairment of vision

Dermatitis

bronchitis

The following applies to isocyanates in general: strong irritations after contact with eyes and skin. Mucosal irritations, coughing, and dyspnoea after inhalation. Inhalation may lead to the formation of oedemas in the respiratory tract. In given circumstances cardiotoxic.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - 133 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates
static test EC50 - *Daphnia magna* (Water flea) - 12,5 mg/l - 48 h
(OECD Test Guideline 202)

Toxicity to algae ErC50 - *Skeletonema costatum* (marine diatom) - 3.230 mg/l - 96 h
(OECD Test Guideline 201)

Toxicity to bacteria EC50 - activated sludge - > 100 mg/l - 3 h
(OECD Test Guideline 209)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
static test NOEC - *Daphnia magna* (Water flea) - 2 mg/l - 21 d
(OECD Test Guideline 211)

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12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d Result: 0 % - Not readily biodegradable. (OECD Test Guideline 302C)

12.3 Bioaccumulative potential

Bioaccumulation Cyprinus carpio (Carp) - 60 d at 24,8 °C - 1,8 mg/l(m-tolyldiene diisocyanate) Bioconcentration factor (BCF): 130

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no data available

SECTION 13:

13.1 Disposal considerations

Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur.

Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 2078

Packing group: II

Class: 6.1

Proper shipping name: Toluene diisocyanate

Reportable Quantity(RQ): no data available

Poison Inhalation Hazard: no data available

Environmental Hazards: No

IMDG

UN number: 2078

Packing group: II

EMS-No: no data available

Proper shipping name: Toluene diisocyanate

IATA

UN number: 2078

Packing group: II

Class: 6.1

Proper shipping name: Toluene diisocyanate

SECTION 15: Regulatory information

Phone: +1 (833) 552-7181 Email: QualityAssurance@aladdinsci.com Website: <https://www.aladdinsci.com/>

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This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

Prepared By

Regulatory Affairs

ALADDIN SCIENTIFIC CORPORATION

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SDS sections updated v1

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