# Safety Data Sheet

According to the UN GHS revision 8

Creation Date: June 01, 2026
Revision Date: June 01, 2026

## 1. IDENTIFICATION

### 1.1 GHS Product identifier

**Product name:** 1,4-Naphthoquinone

**Catalog Number:** T7048

**CAS Number:** 130-15-4

### 1.2 Other means of identification

**Other names:** -

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses:** no data available

### 1.4 Supplier's details

**Company:** Targetmol Chemicals Inc.

**Address:** 34 Washington Street, Wellesley Hills, Massachusetts 02481 USA

**Tel/Fax:** (781) 999-4286

### 1.5 Emergency phone number

**Emergency phone number:** 781-999-4286

**Service hours:** Monday to Friday, 9am-5pm (Standard timezone: UTC/GMT -5 hours).

## 2. HAZARD IDENTIFICATION

### 2.1 Classification of the substance or mixture

Acute toxicity, oral (Category 3),H301
Skin corrosion/irritation (Category 2),H315
Serious eye damage/eye irritation (Category 2A),H319
Acute toxicity, inhalation (Category 1, 2),H330
Sensitisation, respiratory (Category 1, 1A, 1B),H334
Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3),H335
Hazardous to the aquatic environment, long-term hazard (Category 1),H410

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s):**

**Signal word:** Danger

**Hazard statement(s):**
H301 Toxic if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation
H330 Fatal if inhaled
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 May cause respiratory irritation
H410 Very toxic to aquatic life with long lasting effects

**Precautionary statement(s):**

**Prevention:**
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.

| | |
|---|---|
| | P284 Wear respiratory protection. |
| **Response:** | P301+P316 IF SWALLOWED: Get emergency medical help immediately.P321 Specific treatment (see ... on this label).P330 Rinse mouth.P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.P363 Wash contaminated clothing before reuse.P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.P316 Get emergency medical help immediately. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.P302+P352 IF ON SKIN: Wash with plenty of water/... P333+P317 If skin irritation or rash °Ccurs: Get medical help.P362+P364 Take off contaminated clothing and wash it before reuse.P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.P317 Get medical help.P320 Specific treatment is urgent (see ... on this label).P319 Get medical help if you feel unwell.P391 Collect spillage. |
| **Storage:** | P405 Store locked up.P403+P233 Store in a well-ventilated place. Keep container tightly closed. |
| **Disposal:** | P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. |

### 2.3 Other hazards which do not result in classification

no data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

| Chemical name | Common names and synonyms | CAS number | EC number |
|---|---|---|---|
| 1,4-Naphthoquinone | - | 130-15-4 | 204-977-6 |

## 4. FIRST-AID MEASURES

### 4.1 Description of necessary first-aid measures

**General advice**

Yellow triclinic needles from alcohol or petroleum ether

**If inhaled**

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a d°Ctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

**Following skin contact**

Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention .

**Following eye contact**

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

**Following ingestion**

Rinse mouth. Give one or two glasses of water to drink. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Give a slurry of activated charcoal in water to drink. Refer for medical attention .

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

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary . Monitor for sh°Ck and treat if necessary . Anticipate seizures and treat if necessary . For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport . Administer activated charcoal . Do not use emetics. Cover skin burns with dry, sterile dressings after decontamination . Maintain body temperature. Phenols and related compounds

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

ACUTE/CHRONIC HAZARDS: When heated to decomposition this chemical emits toxic fumes and smoke. (NTP, 1992)

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Fires involving this material can be controlled with a dry chemical, carbon dioxide, foam, or Halon extinguisher. (NTP, 1992)

### 5.2 Specific hazards arising from the chemical

Flash point data for this compound are not available; however, it is probably combustible. (NTP, 1992)

### 5.3 Special protective actions for fire-fighters

Use water spray, powder, foam, carbon dioxide.

## 6. ACCIDENTAL RELEASE MEASURES

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

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. Carefully collect remainder. Then store and dispose of according to l° Cal regulations.

### 6.2 Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. Carefully collect remainder. Then store and dispose of according to l° Cal regulations.

### 6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

NO open flames. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### 7.2 Conditions for safe storage, including any incompatibilities

Well closed.

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

**Occupational Exposure limit values**

no data available

**Biological limit values**

no data available

### 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### 8.3 Individual protection measures, such as personal protective equipment (PPE)

**Eye/face protection**

Wear face shield or eye protection in combination with breathing protection.

**Skin protection**

Protective gloves.

**Respiratory protection**

Use l°Cal exhaust or breathing protection.

**Thermal hazards**

no data available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Physical state** | Solid |
| **Color** | no data available |
| **Odour** | Odor like that of benzoquinone |
| **Melting point/freezing point** | 119-122°C |
| **Boiling point or initial boiling point and boiling range** | 243.22 °C at 760 mmHg |
| **Flammability** | Combustible. Gives off irritating or toxic fumes (or gases) in a fire. |
| **Lower and upper explosion limit/flammability limit** | no data available |
| **Flash point** | no data available |
| **Auto-ignition temperature** | no data available |
| **Decomposition temperature** | no data available |
| **pH** | no data available |
| **Kinematic viscosity** | no data available |
| **Solubility** | DMSO: 71.43 mg/mL (451.66 mM),Sonication is recommended.<br>H2O: < 1 mg/mL (insoluble)<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| **N-octanol-water partition coefficient** | log Kow = 1.71 |
| **Vapour pressure** | 0.00131mmHg at 25°C |
| **Density and/or relative density** | 1.42 |
| **Relative vapour density** | 5.46 (NTP, 1992) (Relative to Air) |
| **Particle characteristics** | no data avaliable |

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

1,4-NAPHTHOQUINONE may react with many acids and bases liberating heat and flammable gases (e.g., H2). The heat may be sufficient to start a fire in the unreacted portion of the ketone. May react with reducing agents such as hydrides, alkali metals, and nitrides to produce flammable gas (H2) and heat. Incompatible with isºCyanates, aldehydes, cyanides, peroxides, and anhydrides. May react violently with aldehydes, HNO3, HNO3 + H2O2, and HClO4.

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating fumes.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

Oral: LD50 Rat oral 190 mg/kgInhalation: no data availableDermal: no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**STOT-single exposure**

The substance is severely irritating to the eyes and skin. The substance is irritating to the respiratory tract.

**STOT-repeated exposure**

Repeated or prolonged contact with skin may cause dermatitis.

**Aspiration hazard**

A harmful concentration of airborne particles can be reached quickly when dispersed.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish: no data availableToxicity to daphnia and other aquatic invertebrates: no data availableToxicity to algae: no data availableToxicity to microorganisms: no data available

### 12.2 Persistence and degradability

AEROBIC: 1,4-Naphthoquinone (at 500 mg/kg soil) required 9 days for complete biodegradation in chernozem soil(1). 1,4-Naphthoquinone (at 1000 mg/kg soil) was 80% degraded within 22 days in a chernozem soil(2) and had a half-life of 1.2 days in soil in another study(3). 1,4-Naphthoquinone is oxidized in a standard biodegradability test utilizing a sewage in°Culum, having a 5 day BOD of 38% of the theoretical value(4).

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the K°C of 1,4-naphthoquinone can be estimated to be 16(SRC). According to a classification scheme(2), this estimated K°C value suggests that 1,4-naphthoquinone is expected to have very high mobility in soil.

### 12.5 Other adverse effects

no data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Disposal methods

**Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

**Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## 14. TRANSPORT INFORMATION

### 14.1 UN Number

no data available

### 14.2 UN Proper Shipping Name

no data available

### 14.3 Transport hazard class(es)

no data available

### 14.4 Packing group, if applicable

no data available

### 14.5 Environmental hazards

no data available

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

## 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations specific for the product in question

| | |
|---|---|
| European Inventory of Existing Commercial Chemical Substances (EINECS) | Listed. |
| EC Inventory | Listed. |
| United States Toxic Substances Control Act (TSCA) Inventory | Listed. |
| China Catalog of Hazardous chemicals 2015 | Not Listed. |
| New Zealand Inventory of Chemicals (NZIoC) | Listed. |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | Listed. |
| Vietnam National Chemical Inventory | Listed. |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) | Listed. |
| Korea Existing Chemicals List (KECL) | Listed. |

## 16. OTHER INFORMATION

**Information on revision**

**Creation Date** June 01, 2026

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**Abbreviations and acronyms**

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

**References**

IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.homeHSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htmIARC - International Agency for Research on Cancer, website: http://www.iarc.fr/eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_l°Cale=enCAMEO Chemicals, website: http://came°Chemicals.noaa.gov/search/simpleChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jspERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/ergGermany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jspECHA - European Chemicals Agency, website: https://echa.europa.eu/

**Other Information**

no data available