

Safety Data Sheet

1. Chemical product and company identification

Product name : Tetralin

Company information

Name of manufacturer : KANTO CHEMICAL CO., INC.
 Address : 2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP
 Name of section : Business Administration Department, Reagent Division
 Telephone number : +81-3-6214-1090
 Facsimile number : +81-3-3241-1047
 Mail address : BC32@kanto.co.jp
 Reference No : 40074
 Recommended use : For research use only
 Restrictions on use : Seek expert judgment when using the product for applications other than those recommended.

2. Hazards identification

GHS classification

Physical hazards	Flammable liquids	Category 4
Health hazards	Acute toxicity (inhalation:vapors)	Category 2
	Skin corrosion/irritation	Category 2
	Specific target organ toxicity (single exposure)	Category 3 (narcosis)
	Specific target organ toxicity (repeated exposure)	Category 2 (blood)
Environmental hazards	Aquatic acute	Category 2

Hazard pictograms



Signal word : Danger

Hazard statements : Combustible liquid
 Causes skin irritation
 Fatal if inhaled
 May cause drowsiness or dizziness
 May cause damage to organs (blood) through prolonged or repeated exposure
 Toxic to aquatic life

Precautionary statements

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 Do not breathe mist/vapors.
 Wash hands, forearms and face thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Avoid release to the environment.



	Wear protective gloves/protective clothing/eye protection/face protection. [In case of inadequate ventilation] wear respiratory protection.
Response	: IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. Call a POISON CENTER or doctor if you feel unwell. Get medical advice/attention if you feel unwell. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage	: Store in a well-ventilated place. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

3. Composition/information on ingredients

Distinction of substance or mixture	: Substance
Synonyms	: 1, 2, 3, 4-Tetrahydronaphthalene

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Tetralin	≥ 95	C ₁₀ H ₁₂	Listed	204-340-2	119-64-2

4. First aid measures

First aid measures

First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately get medical treatment.
First-aid measures after skin contact	: Remove contaminated clothing and the substance. Wash with plenty of water. If skin irritation or rash occurs, get medical attention.
First-aid measures after eye contact	: Wash the affected areas under running water.
First-aid measures after ingestion	: The chemical is volatile. Do not induce vomiting because it increases the risk of aspiration into the lungs. Get medical attention immediately. If necessary, rinse mouth with water.

5. Fire fighting measures

Suitable extinguishing media	: Dry chemical powder, carbon dioxide, dry sand, foam
Unsuitable extinguishing media	: Water spray
Firefighting instructions	: Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area. Fight fire from windward. Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Foam extinguisher is effective for a large scale fire.



Personal protection (Emergency response) : Firefighters should wear protective equipment.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures : Wear proper protective equipment and avoid contact with skin and inhalation of vapor. Conduct operations from upwind and evacuate people downwind. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Environmental precautions

Environmental precautions : Attention should be given to avoid damage to the environment by flowing of spillage to rivers.

Methods and Equipment for Containment and Cleaning up

For containment : Absorb spill with inert material (e.g, diatomaceous earth, sand) and flush spillage area with copious amounts of water.

Prevention Measures for Secondary Accidents : Remove nearby sources of ignition and prepare extinguishing media.

7. Handling and storage

Handling

Technical measures : Wear proper protective equipment to avoid contact with skin or inhalation of vapor. Fire is strictly prohibited.
Ventilate well at working places.

Precautions for safe handling : Avoid formation of vapor and aerosols.
Do not allow contact with oxidizing substances.

Storage

Storage conditions : Store in a dark, cool place and tightly closed.

Material used in packaging/containers : Glass, fluorine resin, stainless steel.

8. Exposure controls / Personal protection equipment

ACGIH TWA	Not established
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Appropriate engineering controls : Use with an enclosed system or a local exhaust ventilation.

Protective equipment

Respiratory protection : If necessary, wear chemical cartridge respirator with an organic vapor cartage

Hand protection : Impervious protective gloves

Eye protection : Safety goggles

Skin and body protection : Protective clothing, protective boots

9. Physical and chemical properties

Physical state : Liquid

Color : Colorless - pale yellow

Odor : Menthol



pH	: No data available
Melting point	: -35.8 ° C
Freezing point	: No data available
Boiling point	: 207.6 ° C
Flash point	: 71.6 ° C (C.C.)
Auto-ignition temperature	: 385 ° C
Decomposition temperature	: No data available
Flammability	: Flammable
Vapor pressure	: 50 Pa (25°C)
Relative density	: 0.965 - 0.975 (20/20°C)
Density	: No data available
Relative gas density	: 4.6
Solubility	: Water: Practically insoluble. Organic solvents: Methanol: 50.6%. Soluble in ethanol, ether, benzene.
Partition coefficient n-octanol/water (Log Pow)	: 3.78
Explosive limits (vol %)	: 0.8(100°C) - 5.0(150°C) vol% (in an air)
Viscosity, kinematic	: 2.08 mm ² /s (20°C)
Particle characteristics	: No data available

10. Stability and reactivity

Reactivity	: May react with oxidizing substances.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: If left in air for a long period of time, peroxides may form and cause an explosion.
Conditions to avoid	: Light, heat.
Incompatible materials	: Oxidizing substances.
Hazardous decomposition products	: Carbon monoxide.

11. Toxicological information

Acute toxicity (oral)	: No classification rat LD50=2860 mg/kg
Acute toxicity (dermal)	: No classification rabbit LD50=16800 mg/kg
Acute toxicity (inhalation)	: No classification (gas) Fatal if inhaled (vapor) guinea pig LC50=389 ppm/4h Classification not possible (dust, mist)
Skin corrosion/irritation	: Causes skin irritation In a four-hour skin irritation study according to OECD TG 404 using rabbits, the substance caused moderate irritation with Draize scores of 3.11 for erythema and 1.56 for edema, and the effects were not completely reversible within 14 days. In addition, since its EU Risk Phrase is R36/38, which indicates that its hazard potential is equivalent to category 2, the substance was classified into category 2.



Serious eye damage/irritation	: No classification In a Draize study with rabbits according to OECD TG 405, the substance caused no significant irritation, with a Draize mean score of 5.17/110, and the effects were completely reversible within six days. Also, in another study using rabbits, 0.5 mL of the substance was applied, and the substance caused slight irritation but no damage, with a Draize score of 1/10. Therefore, the substance was classified into "No classification".
Respiratory sensitization	: Classification not possible
Skin sensitization	: No classification It is documented that in a guinea pig maximization test according to OECD TG 406, the substance was not sensitizing. Therefore, the substance was classified into "No classification".
Germ cell mutagenicity	: No classification Since the substance was negative in a micronucleus test by gavage using mice, and negative in a micronucleus test by inhalation using mice (six-hours/day, 13-weeks) (both were in vivo mutagenicity tests using somatic cells), the substance was classified into "No classification".
Carcinogenicity	: Classification not possible
Reproductive toxicity	: Classification not possible The substance did not show any effects on fetuses in a developmental toxicity test using rats performed in accordance with OECD TG 414. In a mouse inhalation test for 13-weeks (six-hours/day, five-days/week), ureter atrophy and atrophy of the ovary were found. However, since there is no available test data on sexual functions and fertility, and due to the lack of data, classification is not possible.
STOT-single exposure	: May cause drowsiness or dizziness In a rat oral administration test, at the doses of 2000 mg/kg or more, the rats exhibited symptoms of sluggishness, prostration, and narcosis, and in humans, signs such as headache and stupor have been reported. Therefore, the substance was classified into category 3 (narcosis).
STOT-repeated exposure	: May cause damage to organs (blood) through prolonged or repeated exposure In a 28-day toxicity study in rats with gavage, at the dose of 150 mg/kg/day, hemolytic anemia was seen, which was present at two weeks after the end of the administration period, and as the secondary reactions, increased reticulocyte counts and enhanced extramedullary hematopoiesis in the spleen have been reported. While, in a 13-week inhalation test in rats or mice, mainly at the doses of 0.333 mg/L and 0.666 mg/L, changes of blood indexes, including regenerative anemia or reduced erythrocyte count, were reported. Based on the above results, since the developmental doses of hemolytic anemia and related signs, that is, 150 mg/kg/day In the 28-day toxicity study with gavage (90-day conversion, 46.7 mg/kg/day) and 0.333 mg/L and 0.666 mg/L in the 13-week inhalation test are within the guidance values of Category 2, the substance was classified into category 2 (blood).
Aspiration hazard	: Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	: Toxic to aquatic life Danio rerio LC50=3.2 mg/L/96h
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Aquatic chronic : No classification

Persistence and degradability

Readily biodegradable
BOD : 81%

Bioaccumulative potential

Low bioconcentration
BCF : 118 - 237 (0.38 mg/L), 147 - 536 (0.038 mg/L)

Mobility in soil

No additional information available

Hazardous to the ozone layer

Ozone : Classification not possible

13. Disposal considerations

Ecology - waste materials : Burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.

Contaminated container and packaging : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

International Regulations

Transport by sea(IMDG)

UN-No. (IMDG) : 2810
Proper Shipping Name (IMDG) : TOXIC LIQUID, ORGANIC, N. O. S.
Packing group (IMDG) : II
Transport hazard class(es) : 6.1
(IMDG)

Air transport(IATA)

UN-No. (IATA) : 2810
Proper Shipping Name (IATA) : Toxic liquid, organic, n.o.s.
Packing group (IATA) : II
Transport hazard class(es) : 6.1
(IATA)

Marine pollutant : Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Pollutant category : Y
MFAG-No : 153

15. Regulatory information

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

16. Other information

Data sources : NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.
Encyclopaedia Chimica, Kyoritsu Shuppan Co, Ltd. (1963) .
Dictionary of Organic Compounds, The society of Synthetic Organic Chemistry, Kodansha Ltd. (1985) .



ICSC Card (2009) .

Solvents Handbook, T, Asahara el, Kodansha Scientific Ltd.
(1976) .

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product. The Safety Data Sheet (SDS) is prepared based on JIS Z7253.

