

Safety Data Sheet

1. Chemical product and company identification

Product name : n-Octane

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 : 31004
 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 2
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity (single exposure)	Category 3 (narcosis)
	Specific target organ toxicity (single exposure)	Category 3 (respiratory tract irritation.)
	Aspiration hazard	Category 1
Environmental hazards	Aquatic acute	Category 1
	Aquatic chronic	Category 2

Hazard pictograms



Signal word : Danger

Hazard statements : Highly flammable liquid and vapor
 May be fatal if swallowed and enters airways
 Causes skin irritation
 Causes serious eye irritation
 May cause respiratory irritation
 May cause drowsiness or dizziness
 Very toxic to aquatic life
 Toxic to aquatic life with long lasting effects

Precautionary statements

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.



	Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take action to prevent static discharges. Avoid breathing 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.
Response	: IF SWALLOWED: Immediately call a POISON CENTER or doctor. IF ON SKIN: Wash with plenty of water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor if you feel unwell. Do not induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage.
Storage	: Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. 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

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
n-Octane	≥ 95	C ₈ H ₁₈	Listed	203-892-1	111-65-9

4. First aid measures

First aid measures

First-aid measures after inhalation	: Remove the victim to fresh air, and make him blow his nose and gargle.
First-aid measures after skin contact	: Wash the affected areas under running water.
First-aid measures after eye contact	: Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.
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.



Personal Protection in First Aid and Measures : Rescuers should wear proper protective equipment like rubber gloves, goggles.

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. Remove all sources of ignition. 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.
 Precautions for safe handling : Use with an enclosed system or a local exhaust ventilation. Use in well-ventilated areas.

Storage

Storage conditions : Store in a dark, cool place and tightly closed.
 Material used in packaging/containers : Glass, fluorine resin, stainless steel.
 Do not use polyvinyl chloride resin, polystyrene.

8. Exposure controls / Personal protection equipment

ACGIH TWA	300 ppm
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Appropriate engineering controls : Use with an enclosed system or a local exhaust ventilation.
 Protective equipment



Respiratory protection	: Chemical cartridge respirator with an organic vapor cartage or airline respirator
Hand protection	: Acid resistant gloves
Eye protection	: Safety goggles
Skin and body protection	: Protective clothing, protective boots

9. Physical and chemical properties

Physical state	: Liquid
Color	: Colorless.
Odor	: Characteristic
pH	: Neutral
Melting point	: -56.795 ° C
Freezing point	: No data available
Boiling point	: 125.665 ° C
Flash point	: 13 ° C (C.C.)
Auto-ignition temperature	: 218 ° C
Decomposition temperature	: No data available
Flammability	: Flammable
Vapor pressure	: 9.8 hPa (20°C)
Relative vapor density at 20° C	: 3.9
Relative density	: No data available
Density	: 0.701 - 0.706 g/cm ³ (20°C)
Relative gas density	: 3.9
Solubility	: Organic solvents; Soluble in ethanol, chloroform, diethyl ether, ketones. Water: 0.002 % (25°C)
Partition coefficient n-octanol/water (log Pow)	: 5.18
Explosive limits (vol %)	: 0.8 - 3.2 vol %
Viscosity, kinematic	: 0.74 mm ² /s (25°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	: Stable under normal conditions of use.
Conditions to avoid	: Light, heat.
Incompatible materials	: Oxidizing substances.
Hazardous decomposition products	: Carbon monoxide.

11. Toxicological information

Acute toxicity (oral)	: Classification not possible
Acute toxicity (dermal)	: Classification not possible



Acute toxicity (inhalation)	: No classification (gas) Classification not possible (vapor) No classification (dust, mist) rat LC50=118mg/L/4h
Skin corrosion/irritation	: Causes skin irritation There is a report that in a test with volunteers, in which this substance was applied on the forearm for 1 hour and on the thigh for 5 hours, hyperemia, inflammation and pigmentation occurred with a burning and itching sensation at the site of application. It is also described that after the 5-hour application, blister formation was observed but this disappeared. Based on the above, this substance was classified into category 2.
Serious eye damage/irritation	: Causes serious eye irritation Although no report on the eye irritation was available, it was classified into category 2 for the skin irritation. Besides, this substance is a hydrocarbon and it was described that mild to moderate eye irritation and reversible ocular injury may occur, therefore, this substance was classified into category 2A.
Respiratory sensitization	: Classification not possible
Skin sensitization	: Classification not possible
Germ cell mutagenicity	: Classification not possible
Carcinogenicity	: Classification not possible
Reproductive toxicity	: Classification not possible
STOT-single exposure	: May cause drowsiness or dizziness May cause respiratory irritation This substance is irritating to the nose and throat. In addition, there are descriptions of narcotic effects and convulsions when exposed to high concentrations. There are reports of cardiac arrest, respiratory paralysis, convulsions, asphyxiation and death in rats exposed to 0.2 mL of this substance by inhalation, lateral position at 31 mg/L and loss of reflex at 44 mg/L in inhalation exposure of mice, narcotic effects at 6600-13700 ppm in inhalation exposure of mice, and respiratory arrest at 16000 ppm and 32000 ppm in inhalation exposure of mice. From the above, it is considered that this substance causes respiratory tract irritation and narcotic effects, and it was classified into category 3 (respiratory tract irritation, narcosis).
STOT-repeated exposure	: Classification not possible
Aspiration hazard	: May be fatal if swallowed and enters airways Since this substance is a hydrocarbon with 0.7373 mm ² /s of kinematic viscosity and there was a description that chemical pneumonitis was caused due to aspiration, which is common in hydrocarbons, in humans, it was classified into category 1.

12. Ecological information

Ecotoxicity

Aquatic acute	: Very toxic to aquatic life Mysidopsis bahia LC50=0.1mg/L/96h
Aquatic chronic	: Toxic to aquatic life with long lasting effects Oryzias latipes NOEC=0.028mg/L/41-day

Persistence and degradability

It is rapidly degradable from the test results in which 70% degradation was measured after 10 days with unacclimated sewage sludge and so on.



Bioaccumulative potential

High bioconcentration
log Pow : 5.18

Mobility in soil

Low mobility
Koc : 31000

Hazardous to the ozone layer

Ozone : Classification not possible

13. Disposal considerations

Ecological waste information : 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) : 1262
Proper Shipping Name (IMDG) : OCTANES
Packing group (IMDG) : II
Transport hazard class(es) : 3
(IMDG)

Air transport(IATA)

UN-No. (IATA) : 1262
Proper Shipping Name (IATA) : Octanes
Packing group (IATA) : II
Transport hazard class(es) : 3
(IATA)

Marine pollutant : Applicable

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

Pollutant category : X
MFAG-No : 128

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 : Handbook of 17322 Chemical Products, The Chemical Daily Co. (2022) .
Solvents Handbook, T, Asahara el, Kodansha Scientific Ltd. (1976) .
Handbook of Dangerous Substances Springer-Verlag Tokyo (1991) .
NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.



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.

