

Safety Data Sheet

1. Chemical product and company identification

Product name : n-Decane

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 : 19007
 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 3
Health hazards	Aspiration hazard	Category 1

Hazard
pictograms



Signal word : Danger

Hazard statements : Flammable liquid and vapor
May be fatal if swallowed and enters airways

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.
 Wear protective gloves/protective clothing/eye protection/face protection.

Response : IF SWALLOWED: Immediately call a POISON CENTER or doctor.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
 Do not induce vomiting.

Storage : 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-Decane	≥ 99	C10H22	Listed	204-686-4	124-18-5

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. If necessary, get medical treatment.

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.

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) : Wear breathing apparatus.

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 : Remove nearby sources of ignition and prepare extinguishing



Secondary Accidents

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.
Do not use vinyl chloride resin, acrylic resin, polystyrene etc.

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 : Chemical cartridge respirator with an organic vapor cartage or airline respirator
- 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.
- Odor : Gasoline odor
- pH : No data available
- Melting point : -29.7 ° C
- Freezing point : No data available
- Boiling point : 174.2 ° C
- Flash point : 46 ° C (C.C.)
- Auto-ignition temperature : 210 ° C
- Decomposition temperature : No data available
- Flammability : Flammable
- Vapor pressure : 0.17 kPa (25°C)
- Relative density : No data available
- Density : 0.728 - 0.733 g/cm³ (20°C)
- Relative gas density : 4.9
- Solubility : Water: Insoluble. Organic solvents: Easily soluble in ethanol, ether.
- Partition coefficient n-octanol/water (log Pow) : 5.98



Explosive limits (vol %)	: 0.78 - 2.6 vol %
Viscosity, kinematic	: 1.15 mm ² /s (25/20°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	: 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) mouse LC50=36.2 mg/L/4h
Skin corrosion/irritation	: Classification not possible
Serious eye damage/irritation	: Classification not possible
Respiratory sensitization	: Classification not possible
Skin sensitization	: Classification not possible
Germ cell mutagenicity	: Classification not possible As for in vitro tests, a bacterial reverse mutation test was negative.
Carcinogenicity	: Classification not possible Besides, in a study where the substance alone or in combination with Benzo[a]pyrene (BP) was applied to the skin of female mice for 440 days (3 times/week), skin papilloma was observed in 38 of 50 cases in the combination administration group (this substance 25 mg + BP 5 microg), while it was observed in 12 of 50 cases in the group of BP alone, and in 1 of 50 cases in the group of this substance alone. An increase in the incidence of papilloma in the combination group suggested that this substance might have promoter activity.
Reproductive toxicity	: Classification not possible In a combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (OECD TG 422) using rats administered by gavage, no developmental and reproductive effects were observed both in parent and child animals at up to 1,000 mg/kg/day. However, it is difficult to classify as "Not classified" based only on this screening test result, and no other data were available for classification.
STOT-single exposure	: Classification not possible
STOT-repeated exposure	: Classification not possible

Aspiration hazard : May be fatal if swallowed and enters airways
This substance is a hydrocarbon. Since its calculated kinematic viscosity value based on numerical data (viscosity: 0.838 mPa*s (25 deg C), density: 0.73 g/cm³ (20 deg C)) listed in HSDB is 1.15 mm²/sec (25/20 deg C), this substance was classified in category 1. Besides, it is described in GESTIS that even if low doses of this substance are swallowed, there is a risk of serious lung damage as a consequence of aspiration. In addition, it is described that, in a test using rats, the aspiration of 0.2 mL of this substance caused death within 24 hours as a consequence of pulmonary edema.

12. Ecological information

Ecotoxicity

Aquatic acute : Classification not possible
Aquatic chronic : Classification not possible

Persistence and degradability

No additional information available

Bioaccumulative potential

High bioconcentration
log Pow : 5.98

Mobility in soil

No additional information available

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) : 2247
Proper Shipping Name (IMDG) : n-DECANE
Packing group (IMDG) : III
Transport hazard class(es) : 3

(IMDG)

Air transport(IATA)

UN-No. (IATA) : 2247
Proper Shipping Name (IATA) : n-Decane
Packing group (IATA) : III
Transport hazard class(es) : 3

(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 : 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 : 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.

