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Safety Data Sheet

1. Chemical product and company identification

Product name : 1-Decene

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 : 10008
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	Skin corrosion/irritation	Category 2
	Aspiration hazard	Category 1

Hazard pictograms

Signal word : Danger

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

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.
Wash hands, forearms and face thoroughly after handling.
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 .
Do not induce vomiting.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.

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
1-Decene	≥ 98	C10H20	Listed	212-819-2	872-05-9

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	:	Rinse mouth with water. Give the victim one or two glasses of water or milk. Do not induce vomiting. Get medical treatment as soon as possible.
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. 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

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.
Odor	:	Characteristic
pH	:	No data available
Melting point	:	-66 ° C
Freezing point	:	No data available
Boiling point	:	172 ° C
Flash point	:	46 ° C (C.C.)
Auto-ignition temperature	:	235 ° C
Decomposition temperature	:	No data available
Flammability	:	Flammable
Vapor pressure	:	0.23 kPa (20℃)

Relative density	:	No data available
Density	:	0.738 - 0.743 g/cm³ (20℃)
Relative gas density	:	4.84
Solubility	:	Water: Slightly soluble Organic solvent: Soluble in ethanol and diethyl ether.
Partition coefficient n-octanol/water (log Pow)	:	8
Explosive limits (vol %)	:	0.5 - 5.4 vol %
Viscosity, kinematic	:	0.84 mm²/s (40℃)
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)	:	No classification rat LD50>10000 mg/kg
Acute toxicity (dermal)	:	No classification rabbit LD50>10000 mg/kg
Acute toxicity (inhalation)	:	No classification (gas) Classification not possible (vapor) Classification not possible (dust, mist)
Skin corrosion/irritation	:	Causes skin irritation In the Draize test (OECD TG404, GLP-compliant) using rabbit, mean scores of 2.0 for erythema/scab formation and 1.7 for edema, and the primary irritation index (PII) of 3.67 were reported. Based on the document, the substance was classified as category 2.
Serious eye damage/irritation	:	No classification The substance was classified as "No classification" based on the documented case of "non-irritating" resulted from the Draize test in which all irritation score was 0 in rabbits. As relevant notes, vapors in high concentration may produce slight irritation to human eyes.
Respiratory sensitization	:	Classification not possible
Skin sensitization	:	Classification not possible
Germ cell mutagenicity	:	Classification not possible The classification was not possible due to lack of in vivo test data. As relevant information, as for in vitro study, negative results in the Ames test were reported.
Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	Classification not possible

STOT-single exposure	:	Classification not possible The LD50 value in the acute oral toxicity in rats was reported as over 10000 mg/kg with no signs of toxicity. The clinical findings after dermal application in rabbits were only local loss of fur and skin damage, with no description of systemic effects. The LD50 value of the dermal study was reported as over 10000 mg/kg. Considering from these results, the classification corresponded to "No classification" for both oral and dermal routes. As for inhalation route, no effect was seen up to the saturated vapor pressure concentration which corresponded to the guidance values, however, the effect at concentrations beyond the guidance values was still unknown. Therefore, the classification of this hazard class was concluded as "Classification not possible".
STOT-repeated exposure	:	Classification not possible
Aspiration hazard	:	May be fatal if swallowed and enters airways Since the substance corresponds to hydrocarbons with the coefficient of kinematic viscosity of 20.5 mm2/s or less based on the fact that the coefficient of kinematic viscosity at 40 degree centigrade is 0.84 mm2/s, the substance was classified as category 1. As relevant information, there is a description that the substance has a potential which can cause chemical pneumonitis due to inhaling into the lung readily at the occurrence of vomiting.

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 : 8

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)	:	1993

Proper Shipping Name (IMDG)	:	FLAMMABLE LIQUID, N.O.S.
Packing group (IMDG)	:	III
Transport hazard class(es) (IMDG)	:	3

Air transport(IATA)

UN-No. (IATA)	:	1993
Proper Shipping Name (IATA)	:	Flammable liquid, n.o.s.
Packing group (IATA)	:	III
Transport hazard class(es) (IATA)	:	3

Marine pollutant : Not 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 : NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.
ICSC Card (2009) .
ECHA (European Chemicals Agency).

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.