



Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Hexane

SDS No. : 3676E-3

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Safety Management Dept. of Chemicals

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2. Hazards identification

GHS classification and label elements of the product**Classification of the substance or mixture****PHYSICAL AND CHEMICAL HAZARDS**

Flammable liquids: Category 2

HEALTH HAZARDS

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

Reproductive toxicity: Category 2

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

Specific target organ toxicity – single exposure: Category 3 (Narcosis)

Specific target organ toxicity – repeated exposure: Category 1 (nervous system)

Aspiration hazard: Category 1

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 2

(Note) GHS classification without description: Not classified/Classification not possible

Label elements

Signal word: Danger

HAZARD STATEMENT

Highly flammable liquid and vapor

Causes skin irritation

Causes serious eye irritation

Suspected of damaging fertility or the unborn child

May cause respiratory irritation

May cause drowsiness or dizziness

Causes damage to organs through prolonged or repeated exposure (nervous system)

May be fatal if swallowed and enters airways

Toxic to aquatic life

PRECAUTIONARY STATEMENT**Prevention**

Avoid release to the environment.

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.



Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wash contaminated parts thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not eat, drink or smoke when using this product.

Response

In case of fire: Use appropriate media other than water for extinction.
Get medical advice/attention if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
Call a POISON CENTER or doctor/physician if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Do NOT induce vomiting.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Storage

Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal

Dispose of contents/container in accordance with local/national regulation.

Specific Physical and Chemical hazards

Highly flammable liquid. Vapor/air mixture may explode.

3. Composition/information on ingredients**Mixture/Substance selection:****Substance**

Ingredient name:Hexane

Content (%):95(min)

Chemical formula:CH₃(CH₂)₄CH₃

Chemicals No, Japan:2-6

CAS No.:110-54-3

MW:86.18

ECNO:203-777-6

Note : The figures shown above are not the specifications of the product.

4. First-aid measures**Descriptions of first-aid measures****General measures**

Get medical attention/advice if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

**IF ON SKIN (or hair)**

Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth.

Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor/physician.

5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

In case of fire, use foam, dry powder, CO2 to extinguish.

Unsuitable extinguishing media

Indoor firefighting equipment or outdoor firefighting equipment

Sprinkler equipment

Dry-powder firefighting equipment – except for phosphate etc.,hydrogen carbonate etc.

Straight stream water extinguisher

Water mist extinguisher

Reinforcing liquid jet extinguisher

Dry-powder extinguisher – except for phosphate etc.,hydrogen carbonate etc.

Bucket of water or tank of water

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters**Specific fire-fighting measures**

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

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

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

6. Accidental release measures**Personnel precautions, protective equipment and emergency procedures**

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

Collect spillage.



7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Use only outdoors or in a well-ventilated area.

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

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Take off contaminated clothing and wash it before reuse.

Storage

Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass

Iron

8. Exposure controls/personal protection

Control parameters

Adopted value

(Hexane)

ACGIH(1996) TWA: 50ppm (CNS impair; peripheral neuropathy; eye irr)

Notation

(Hexane)

Skin

OSHA-PEL

(Hexane)

TWA: 500ppm, 1800mg/m³

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection



- Wear respiratory protection.
- Hand protection
 - Wear protective gloves.
- Eye protection
 - Wear eye/face protection.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

- Physical state: Liquid
- Color: Colorless, clear
- Odor: Characteristic odor
- Melting point/Freezing point: -95°C
- Boiling point or initial boiling point: (Hexane) 69°C
- Boiling range data is not available.
- Flammability (gases, liquids and solids) data is not available.
- Lower and upper explosion limit/flammability limit:
 - Lower explosion limit: 1.1 vol %
 - Upper explosion limit: 7.5 vol %
- Flash point: (Hexane) -22°C
- Auto-ignition temperature: (Hexane) 225°C
- Decomposition temperature data is not available.
- pH data is not available.
- Kinematic viscosity: $\leq 20.5\text{mm}^2/\text{s}$ (40°C)
- Solubility:
 - Solubility in water: 0.0013 g/100 ml (20°C)
 - n-Octanol/water partition coefficient: $\log P_{ow} 3.9$
 - Vapor pressure: 17 kPa (20°C)
 - Density and/or relative density: 0.7
 - Relative vapor density (Air=1): 3
 - Relative density of the Vapor/air - mixture at 20°C (Air = 1): 1.3
- No Particle characteristics data is not available.

10. Stability and Reactivity

- Reactivity
 - Not available.
- Chemical stability
 - Stable under normal storage/handling conditions.
- Possibility of hazardous reactions
 - The vapour is heavier than air and may travel along the ground; distant ignition possible.
 - Reacts with strong oxidants. This generates fire and explosion hazard. Attacks some plastics, rubber and coatings. (ICSC 0279)
- Conditions to avoid
 - Contact with incompatible materials.
 - Contact with fire source.
- Incompatible materials
 - Strong oxidizing agents
- Hazardous decomposition products
 - Carbon oxides



11. Toxicological Information

Information on toxicological effects

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Hexane)

rabbit/human slight irritation (DFGOT vol.14, 2000)

Serious eye damage/irritation

[GHS Cat. Japan, base data]

(Hexane)

rabbit slight irritation (DFGOT vol.14, 2000)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity

[GHS Cat. Japan, base data]

(Hexane)

cat. 2; rat : ATSDR, 1999

STOT

STOT-single exposure

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

(Hexane)

respiratory tract irritation (ACGIH 7th, 2001)

[cat.3 (drow./dizz.)]

[GHS Cat. Japan, base data]

(Hexane)

narcotic effect (PATTY 5th, 2001)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

(Hexane)

nervous system (ACGIH 7th, 2001)

Aspiration hazard

[cat.1]

[GHS Cat. Japan, base data]

(Hexane)

cat. 1; hydrocarbon, kinematic viscosity < 20.5 mm²/s (40°C)

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Toxic to aquatic life

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Hexane)

Crustacea (Daphnia magna) LC50=3.88mg/L/48hr (EHC122, 1991)

Water solubility

(Hexane)

0.0013 g/100 ml (20°C) (ICSC, 2000)

Persistence and degradability



(Hexane)
BOD_Degradation : 100% (Registered chemicals data check & review)
Bioaccumulative potential
(Hexane)
log Pow=3.9 (ICSC, 2000)
Mobility in soil
Mobility in soil data is not available.
Other adverse effects
Ozone depleting chemical data is not available.

13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging
Waste treatment methods
Avoid release to the environment (- if this is not the intended use).
Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No. or ID No.: 1208
UN Proper Shipping Name :
HEXANES
Class or division (Transport hazard class) : 3
Packing group : II
ERG GUIDE No.: 128
IMDG Code (International Maritime Dangerous Goods Regulations)
UN No.: 1208
Proper Shipping Name :
HEXANES
Class or division : 3
Packing group : II
IATA Dangerous Goods Regulations
UN No.: 1208
Proper Shipping Name :
HEXANES
Class or division : 3
Hazard labels : Flamm.liquid
Packing group : II
Environmental hazards
MARPOL Annex III – Prevention of pollution by harmful substances
Marine pollutants (yes/no) : yes
MARPOL Annex V – Prevention of pollution by garbage discharge
Specific target organ toxicity – repeated exposure: cat.1
Hexane
Maritime transport in bulk according to IMO instruments
Noxious Liquid ; Cat. Y
Hexane
Flammable Liquid
Hexane



15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemicals listed in TSCA Inventory

Hexane

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

GHS classification and labelling

Flam. Liq. 2: H225 Highly flammable liquid and vapor

Skin Irrit. 2: H315 Causes skin irritation

Eye Irrit. 2: H319 Causes serious eye irritation

Repr. 2: H361 Suspected of damaging fertility or the unborn child

STOT SE 3: H335 May cause respiratory irritation

STOT SE 3: H336 May cause drowsiness or dizziness

STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure

Asp. Tox. 1: H304 May be fatal if swallowed and enters airways

Aquatic Acute 2: H401 Toxic to aquatic life

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (7th revised edition, 2017), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN

IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (61th Edition) 2020

Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2020 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2019).