Date of issue: 05/12/2013
revised date 18/07/2017

Safety Data Sheet

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

Product identifier:

Product name: Hexane

Product code(SDS NO): 67150jis_J_E1-2

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.
Address: 1-6, Ohmano-Cho, Koshigaya, Saitama 343-0844, Japan
Division: Quality Assurance Department
Telephone number: +81-48-986-6161
FAX: +81-48-989-2787
e-mail address: shiyaku-t@junsei.co.jp

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

PHYSICAL 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: Respiratory tract irritation Category 3
Specific target organ toxicity - single exposure: Narcosis Category 3
Specific target organ toxicity - repeated exposure: Category 1(nervous system)
Aspiration hazard: Category 1

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment - acute hazard: Category 2

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

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
May be fatal if swallowed and enters airways
Toxic to aquatic life

PRECAUTIONARY STATEMENT

Prevention

Do not handle until all safety precautions have been read and understood.
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/eye protection/face protection.
Wear eye protection/face protection.
Use personal protective equipment as required.
Do not eat, drink or smoke when using this product.

Response

In case of fire: Use appropriate media for extinction.
Get medical advice/attention 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.
IF SWALLOWED: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Storage

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

Disposal

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

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(%):95.0 <
Chemical formula:C6H14
Chemicals No, Japan:2-6
CAS No.:110-54-3
MW:86.18
ECNO:203-777-6

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

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Dizziness. Drowsiness. Lethargy. Headache. Nausea. Weakness. Unconsciousness. Abdominal pain.

(Symptoms when skin and/or eye contact)

Dry skin. Redness. Pain.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use foam, dry powder, CO2, dry sand.

Unsuitable extinguishing media

Water may be effective for cooling, but may not effect extinguishment.

Specific hazards arising from the substance or mixture

Containers may explode when heated.
Fire may produce irritating, corrosive and/or toxic gases.
Runoff from fire control or dilution water may cause pollution.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.
Cool container with water spray.

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 peace operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.
In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
Ventilate area after material pick up is complete.
Wear proper protective equipment.
PUBLIC SAFTY: Ventilate closed spaces before entering.

Environmental precautions

Runoff to sewer may create fire or explosion hazard.
Vapor explosion hazard indoors, outdoors or in sewers.
Avoid release to the rivers, lakes, ocean and groundwater.

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.

Stop leak if you can do it without risk.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Prevent entry into waterways, sewers, basements or confined areas.

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 & 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.

Avoid breathing dust, fume, gas, mist or vapor.

Safety Measures/Incompatibility

Do not handle until all safety precautions have been read and understood.

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing or face protection.

Wear protective gloves and face protection.

Wear eye protection/face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Recommendation for storage

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

Keep cool. Protect from sunlight.

Store locked up.

8. Exposure controls/personal protection

Control parameters

Control value

Japan control value (2004) <= 40ppm

Adopted value

JSOH(1985) 40ppm; 140mg/m3 (dermal)

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

Notation･･･Skin

OSHA-PEL

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. Recommended material(s): nitrile, impermeable or chemical resistant rubber
Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

Wear safety glasses with side-shields.
Wear eye/face protection.

Safety and Health measures

Wash ... thoroughly after handling.
Do not eat, drink or smoke when using this product.
Take off contaminated clothing and wash it before reuse.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Volatile liquid
Color: Colorless-clear
Odor: Characteristic odor
pH data N.A.

Phase change temperature

Initial Boiling Point/Boiling point: 69℃
Melting point/Freezing point: -95℃
Decomposition temperature data N.A.
Flash point: (c.c)-22℃
Auto-ignition temperature: 225℃
Explosive properties: Flammability or explosive limit
lower limit: 1.1 vol %
upper limit: 7.5 vol %
Vapor pressure: 17 kPa (20℃)
Relative Vapor Density (Air=1): 3.0
Relative density of the Vapor/air-mixture at 20℃ (Air = 1): 1.3
Specific gravity/Density: ca. 0.66 g/ml(20℃)
Solubility
Solubility in water: 0.0013 g/100 ml (20℃)
Solubility in solvent: Very soluble in ethanol and diethyl ether.
n-Octanol /water partition coefficient: log Pow3.9

10. Stability and Reactivity

Reactivity

Runaway polymerization will not occur.

Chemical stability

Stable under normal storage/handling conditions.
Highly flammable.

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(polyvinyl chloride), rubber(natural rubber) and coatings.

Conditions to avoid

Contact with incompatible materials.

Open flames. Heat. Sparks.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50=15800～32400 mg/kg(EHC122, 1991)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

vapor : rat LC50=48000ppm/4h

(Initial Environmental Risk Assessment of Chemicals (MOE_Japan) vol. 1,2002)

Labor standard law, Japan; Toxic

Hexane

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

rabbit/human : slight irritation (DFGOTvol.14, 2000)

Serious eye damage /irritation

[GHS Cat. Japan, base data]

rabbit : slight irritation (DFGOTvol.14, 2000)

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

Carcinogenicity

[Company proprietary data]

EPA "Inadequate Information to Assess Carcinogenic Potencial"(2005)

Reproductive toxicity

[GHS Cat. Japan, base data]

cat.2; rat : ATSDR, 1999

Delayed and immediate effects and also chronic effects from short- and long-term exposure

STOT

STOT-single exposure

[cat.3(resp. irrit.)]

[Japan published data]

Respiratory tract irritation (ACGIH 7th, 2001)

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

[Japan published data]

(Hexane) Narcosis (PATTY 5th, 2001)

STOT-repeated exposure

[cat.1]

[Japan published data]

nerve/nervous system (ACGIH 7th, 2001)

Aspiration hazard

[cat.1]

[GHS Cat. Japan, base data]

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

12. Ecological Information

Toxicity

Aquatic toxicity

Toxic to aquatic life

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

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

Water solubility

0.0013 g/100 ml (20℃) (ICSC, 2000)

Persistence and degradability

BOD_Degradation : 100% (Registered chemicals data check & review, Japan)

Bioaccumulative potential

log Pow=3.9 (ICSC, 2000)

13. Disposal considerations

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, UN CLASS

UN number: 1208

UN proper shipping name: HEXANES

Transport hazard class(es): 3

Packing group: II

ERG GUIDE NO.: 128

Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Noxious Liquid ; Cat. Y…Hexane

Flammable Liquid…Hexane

15. Regulatory Information

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

US major regulations

TSCA

Hexane

Other regulatory information

We are not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.
Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.
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, (5th ed., 2013), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)
2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)
2017 TLVs and BEIs. (ACGIH)
http://monographs.iarc.fr/ENG/Classification/index.php
Supplier's data/information
Chemical Risk Information Platform (CHRIP)(NITE) http://www.safe.nite.go.jp/japan/db.html
GHS Classification Guidance for Enterprises 2013 Revised Edition (August, 2013,METI)

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.
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 2015)