Date of issue: 29/07/2014
revised date 10/02/2017

Safety Data Sheet

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

Product identifier:

Product name: Iodomethane

Product code(SDS NO): 80525jis_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

HEALTH HAZARDS

Acute toxicity Oral: Category 3
Acute toxicity Inhalation: Category 2
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 2A
Specific target organ toxicity - single exposure: Category 1(central nervous system)
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(central nervous system)
Specific target organ toxicity - repeated exposure: Category 2(respiratory system, thyroid)

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

Label elements

Signal word: Danger

HAZARD STATEMENT

Toxic if swallowed
Fatal if inhaled
Causes skin irritation
Causes serious eye irritation
Causes damage to organs (central nervous system) after single exposure
May cause respiratory irritation
May cause drowsiness or dizziness
Causes damage to organs (central nervous system) through prolonged or repeated exposure
May cause damage to organs (respiratory system, thyroid) through prolonged or repeated exposure

PRECAUTIONARY STATEMENT

Prevention

Do not breathe dust/fume/gas/mist/vapors/spray.
Wear respiratory protection.(as specified by the manufacturer/supplier or the competent authority.)
Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.
Wear protective gloves.
Wear eye protection/face protection.
Do not eat, drink or smoke when using this product.

Response

Get medical advice/attention if you feel unwell.
Immediately call a POISON CENTER or doctor/physician.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and water.
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: Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

Storage

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

Disposal

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

3. Composition/information on ingredients

Substance/Mixture:

Substance

Common name, synonyms: Methyl iodide

Ingredient name:Iodomethane
Content(%):97.0 <
Chemical formula:CH3I
Chemicals No, Japan:2-42
CAS No.:74-88-4
MW:141.94
ECNO:200-819-5

4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical attention/advice if you feel unwell.
Immediately call a POISON CENTER or doctor/physician.

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.

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

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.
The product is non-flammable.

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

Ventilate area after material pick up is complete.
Wear proper protective equipment.

Environmental precautions

Avoid release to the rivers, lakes, ocean, 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.

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.

Exhaust/ventilator

Exhaust/ventilator should be available.

Safety treatments

Avoid contact with skin.
Avoid contact with eyes.
Avoid breathing dust, vapor, mist, or gas.

Safety Measures/Incompatibility

Use only outdoors or in a well-ventilated area.
Wear protective gloves, protective clothing or face protection.
Wear protective gloves.
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 (1995) <= 2ppm

Adopted value

No Adopted value data available
ACGIH(1978) TWA: 2ppm (Eye dam; CNS impair)
Notation･･･Skin

OSHA-PEL

TWA 5ppm, 28mg/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.

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: Liquid
Color: Colorless
Odor: Characteristic odor
pH: 5.2(1w/w %, 25℃)

Phase change temperature

Initial Boiling Point/Boiling point: ca. 43℃
Melting point/Freezing point: -66.5℃
Decomposition temperature: 270℃
Flash point data N.A.
Auto-ignition temperature: 355℃

Explosive properties: Flammability or explosive limit

lower limit: 8.5vol %
upper limit: 66vol %
Vapor pressure: 50 kPa (20℃)
Relative Vapor Density (Air=1): 4.9
Relative density of the Vapor/air-mixture at 20℃ (Air = 1): 2.7
Specific gravity/Density: 2.28g/cm3(20℃)
Solubility
Solubility in water: 1.4 g/100 ml (20℃)
Solubility in solvent: Very soluble in ethanol and diethyl ether.
n-Octanol /water partition coefficient: log Pow1.51

10. Stability and Reactivity

Reactivity
Runaway polymerization will not occur.
Chemical stability
Stable under normal storage/handling conditions.
Turns brown on exposure to light and moisture.
Possibility of hazardous reactions
The vapour is heavier than air and may accumulate in lowered spaces causing a deficiency of oxygen.
Decomposes above 270°C . This produces hydrogen iodide.
Reacts with strong oxidants. This generates explosion hazard.
Reacts with oxygen at 300°C. This generates explosion hazard.
Conditions to avoid
Contact with incompatible materials.
Light. Air. Heat.
Incompatible materials
Strong oxidizing agents
Hazardous decomposition products
Carbon oxides, Hydrogen iodide

11. Toxicological Information

Information on toxicological effects
Acute toxicity
Acute toxicity (Oral)
[GHS Cat. Japan, base data]
rat LD50=76 mg/kg (DFGOT vol. 7, 1996)
Acute toxicity (Dermal)
[GHS Cat. Japan, base data]
rabbit (male, female) LD50 >2000mg/kg (Pesticide abstract, 2012; Japan food safety commission, 2011)
Acute toxicity (Inhalation)
[GHS Cat. Japan, base data]
vapor : rat LC50=232 ppm/4hr (ACGIH 7th, 2001)
Labor standard law, Japan; Toxic
Iodomethane
Irritant properties
Skin corrosion/irritation
[GHS Cat. Japan, base data]
rabbit : moderate (Pesticide abstract, 2012)
Serious eye damage /irritation
[GHS Cat. Japan, base data]
highly irritating (Japan food safety commission, 2011)
No Allergenic and sensitizing effects data available

Germ cell mutagenicity
[MOHL_J Notice]
Iodomethane
Reverse-mutation assay in bacteria(Ames test) :Positive
(Gas, MHLW(Japan)_Mutagenicity Test Results for Chemical Substances)

Carcinogenicity
IARC-Gr.3 : Not Classifiable as a Human Carcinogen
EU-Category 2; Substances suspected human carcinogens

No Teratogenic effects data available

No reproductive toxicity data available

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

STOT

STOT-single exposure

[cat.1]
[Japan published data]
CNS (PATTY 6th, 2012)

[cat.3(resp. irrit.)]
[Japan published data]
Respiratory tract irritation (ATSDR, 2004)

[cat.3(drow./dizz.)]
[Japan published data]
Narcosis (DFGOT vol. 7, 1996)

STOT-repeated exposure

[cat.1]
[Japan published data]
CNS (DFGOT vol. 7, 1996)

[cat.2]
[Japan published data]
respiratory apparatus/system; thyroid/thyroid gland (Japan pesticide abstract, 2012)

No Aspiration hazard data available

12. Ecological Information

Toxicity

No Aquatic toxicity data available

Water solubility
1.4 g/100 ml (20℃) (ICSC, 2012)

Persistence and degradability
BOD_Degradation : 16% (Registered chemicals data check & review, Japan)

Bioaccumulative potential
log Pow=1.51 (ICSC, 2012)

13. Disposal considerations

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

14. Transport Information

UN No, UN CLASS

UN number: 2644
UN proper shipping name: METHYL IODIDE
Transport hazard class(es): 6.1
Packing group: I

15. Regulatory Information

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

US major regulations

TSCA

Iodomethane

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

Acute Tox. 3: H301 Toxic if swallowed
Acute Tox. 2: H330 Fatal if inhaled
Skin Irrit. 2: H315 Causes skin irritation
Eye Irrit. 2A: H319 Causes serious eye irritation
STOT SE 1: H370 Causes damage to organs(central nervous system) after single exposure
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(central nervous system) through prolonged or repeated exposure
STOT RE 2: H372 May cause damage to organs(respiratory system, thyroid) through prolonged or repeated exposure

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)
2016 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).