Date of issue: 13/03/2014
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Safety Data Sheet

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

Product identifier:

Product name: Dichloromethane

Product code(SDS NO): 34355jis_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 4
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 2A
Carcinogenicity: Category 2
Specific target organ toxicity - single exposure: Category 1(central nervous system, respiratory system)
Specific target organ toxicity - single exposure: Narcosis Category 3
Specific target organ toxicity - repeated exposure: Category 1(central nervous system, liver)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment - acute hazard: Category 3

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

Label elements

Signal word: Danger

HAZARD STATEMENT

Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
Suspected of causing cancer
Causes damage to organs after single exposure
May cause drowsiness or dizziness
Causes damage to organs through prolonged or repeated exposure
Harmful to aquatic life

PRECAUTIONARY STATEMENT

Prevention

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

Response

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

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

Mixture/Substance selection:

Substance

Common name, synonyms: Methylene chloride

Ingredient name:Dichloromethane
Content(%):99.0<
Chemical formula:CH_2Cl_2
Chemicals No, Japan:2-36
CAS No.:75-09-2
MW:84.93
ECNO:200-838-9

Impurities and stabilizing additives

Stabilizer(GR, EP):Amylene (0.001～0.004%)

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.

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. Headache. Nausea. Weakness. Unconsciousness. Abdominal pain.

(Symptoms when skin and/or eye contact)

Dry skin. Redness. Burning sensation. Eye's pain.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

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

Avoid release to the rivers, lakes, ocean and groundwater.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

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).

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, 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.

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) <= 50ppm

Adopted value

JSOH(1999) 50ppm; 170mg/m3; (ceiling limit) 100ppm; 340mg/m3 (dermal)

ACGIH(1997) TWA: 50ppm (COHb-emia; CNS impair)

OSHA-PEL

TWA 25ppm; STEL 125ppm

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.

Wear positive pressure self-contained breathing apparatus (SCBA).

Hand protection

Wear protective gloves. Recommended material(s): viton, 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
Odor: Characteristic odor
Odor threshold: 205～307ppm; 540～2160 mg/m3
pH data N.A.
Phase change temperature
Initial Boiling Point/Boiling point: 40℃
Melting point/Freezing point: -95.1℃
Decomposition temperature: >120℃
Flash point data N.A.
Auto-ignition temperature: 605℃
Explosive properties: Flammability or explosive limit
lower limit: 13vol %
upper limit: 23vol %
Vapor pressure: 47.4 kPa （20℃）
Relative Vapor Density (Air=1): 2.9
Relative density of the Vapor/air-mixture at 20℃ (Air = 1): 1.9
Specific gravity/Density: 1.3266g/cm3(20℃)
Kinematic viscosity: 0.3mm2/s(20℃)
Solubility
Solubility in water: 1.3 g/100 ml (20℃)
Solubility in solvent: Very soluble in ethanol and in diethyl ether.
n-Octanol /water partition coefficient: log Pow1.25

10. Stability and Reactivity

Reactivity
Runaway polymerization will not occur.
Chemical stability
Stable under normal storage/handling conditions.
Flammable under specific conditions.
※Do NOT use in the vicinity of a fire or a hot surface, or during welding.
Possibility of hazardous reactions
The vapour is heavier than air. As a result of flow, agitation, etc., electrostatic charges can be generated.
Decomposes on heating or on burning and on contact with hot surfaces. This produces toxic and corrosive fumes.
Reacts violently with strong oxidants, strong bases and metals such as aluminium powder and magnesium powder. This generates fire and explosion hazard.
Attacks some forms of plastic (e.g. Polyvinyl chloride, Polystyrene), rubber (e.g. Natural rubber, Nitrile rubber, Butyl rubber) and coatings.
Conditions to avoid
Contact with incompatible materials.
Open flames. Heat. Light.
Incompatible materials
Strong bases, Strong oxidizing agents, Metal powder.
Hazardous decomposition products
Carbon oxides, Chlorine, Hydrogen chloride. Phosgene .

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50=1600 mg/kg (EPA_JP risk assessment vol.2, 2003)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

vapor : rat LC50=53 mg/L/6hr [equivalent : 64 mg/L/4hr (ca. 18,000 ppm)]

(CERI-NITE Hazard Assessment No.15, 2004)

Labor standard law, Japan; Toxic

Dichloromethane

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

rabbit : moderate (CERI-NITE Hazard Assessment No.15, 2004)

Serious eye damage /irritation

[GHS Cat. Japan, base data]

rabbit : moderate or severe inflammation (CERI-NITE Hazard Assessment No.15, 2004)

No Allergenic and sensitizing effects data available

Germ cell mutagenicity

[GHS Cat. Japan, base data]

Somatic cell mutagenicity tests in vivo (micronucleus/chromosome aberration tests) : Negative

(IARC 71, 1999 et al.)

Mutagen [MOHL_J Notice]

Dichloromethane

Reverse-mutation assay in bacteria(Ames test) :Positive

(Gas, MHLW in Japan_Mutagenicity Test Results for Chemical Substances)

Carcinogenicity

[GHS Cat. Japan, base data]

cat.2; IARC (1999) Gr.2B et al.

IARC-Gr.2A : Probably carcinogenic to humans

ACGIH-A3(1997) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

JSOH-2A: Sufficient Evidence of Carcinogenicity for Humans

EU-Category 2; Substances suspected human carcinogens

EPA "Likely to Be Carcinogenic to Humans"(2005)

NTP-Reasonably Anticipated To Be Human Carcinogen

Labor standard law, Japan : Carcinogen

Dichloromethane

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; respiratory apparatus/system (CERI/NITE hazard assessment No.15, 2004)

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

[Japan published data]

Narcosis (CERI/NITE hazard assessment No.15, 2004)

STOT-repeated exposure

[cat.1]

[Japan published data]

CNS; liver (CERI/NITE hazard assessment No.15, 2004)

No Aspiration hazard data available

12. Ecological Information

Toxicity

Aquatic toxicity

Harmful to aquatic life

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

Crustacea(Daphnia magna) LC50=27 mg/L/48hr (CaPSAR, 1993)

Water solubility

1.3 g/100 ml (20℃) (ICSC, 2017)

Persistence and degradability

BOD_Degradation : 13% (Registered chemicals data check & review, Japan)

Bioaccumulative potential

log Pow=1.25 (ICSC, 2017); BCF=40 (Registered chemicals data check & review, Japan)

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: 1593

UN proper shipping name: DICHLOROMETHANE

Transport hazard class(es): 6.1

Packing group: III

ERG GUIDE NO.: 160

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

Noxious Liquid ; Cat. Y…Dichloromethane

15. Regulatory Information

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

US major regulations

TSCA

Dichloromethane

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. 4: H302 Harmful if swallowed

Skin Irrit. 2: H315 Causes skin irritation

Eye Irrit. 2A: H319 Causes serious eye irritation

Carc. 2: H351 Suspected of causing cancer
STOT SE 1: H370 Causes damage to organs after single exposure
STOT SE 3: H336 May cause drowsiness or dizziness
STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure
Aquatic Acute 3: H402 Harmful 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
NITE Chemical Risk Information Platform(NITE-CHRIP)
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).