Date of issue for the 1.st edition: 18/07/2014
Date of revision : 07/08/2018

Safety Data Sheet

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

Product identifier:

Product name: Dimethyl sulfoxide

Product code(SDS NO): 35535jis_E-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 and chemical hazards

Flammable liquids: Category 4

HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2B

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

Label elements

Signal word: Warning

HAZARD STATEMENT

Combustible liquid

Causes eye irritation

PRECAUTIONARY STATEMENT

Prevention

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

Wash contaminated parts thoroughly after handling.

Wear protective gloves and face protection.

Response

In case of fire: Use appropriate media other than water for extinction.

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.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

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

Physical and Chemical hazards

Heating may cause fire.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Dimethyl sulfoxide

Content(%):99.0 <

Chemical formula:C2H6OS
Chemicals No, Japan:2-1553
CAS No.:67-68-5
MW:78.14
ECNO:200-664-3

4. First-aid measures

Descriptions of first-aid measures

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.
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.
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)

Headache. Nausea. Vomiting. Drowsiness.

(Symptoms when skin and/or eye contact)

Dry skin. Redness of th eyes. Blurred vision.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use water mist, foam, dry powder, CO2.

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.
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 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.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Protective measures against fire and 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

Wear protective gloves, protective clothing or face protection.

Wear protective gloves and 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.

8. Exposure controls/personal protection

Control parameters

No control value data available in MHLW

Adopted value

No Adopted value data available in JSOH

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): butyl 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.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties
Appearance: Liquid
Color: Colorless
Odor: Slightly characteristic odor
pH data N.A.
Phase change temperature
Initial Boiling Point/Boiling point: 189℃
Melting point/Freezing point: 18.5℃
Decomposition temperature: >190℃
Flash point: (C.C.) 87℃
Auto-ignition temperature: 215℃
Explosive properties: Flammability or explosive limit
Lower limit: 2.6 vol %
Upper limit: 42.0 vol %
Vapor pressure: 59.4 Pa (20℃)
Relative Vapor Density (Air=1): 2.7
Specific gravity/Density: 1.100(20/4℃)
Viscosity: 2.14mPas(20℃)
Solubility
Solubility in water: Miscible
Solubility in solvent: Freely soluble in ethanol, diethyether.
n-Octanol /water partition coefficient: log Pow-1.35

10. Stability and Reactivity

Chemical stability
Stable under normal storage/handling conditions.
Hygroscopic.
Possibility of hazardous reactions
The vapour is heavier than air and may travel along the ground; distant ignition possible.
Decomposes on heating and on burning. This produces toxic fumes.
Reacts violently with strong oxidants such as perchlorates.
Conditions to avoid
Contact with incompatible materials.
Open flames. Heat.
Incompatible materials
Strong acids, Strong oxidizing agents
Hazardous decomposition products
Carbon oxides, Sulfur oxides

11. Toxicological Information

Information on toxicological effects
Acute toxicity
Acute toxicity (Oral), Product
rat LD50 >20000 mg/kg (SIDS,2008)
Acute toxicity (Dermal), Product
rat LD50 >20000 mg/kg (SIDS,2008)
Irritant properties
Skin corrosion/irritation
rabbit (OECD TG 404):Slight erythema which disappeared in 3 days(SIDS,2008)
Serious eye damage /irritation
rabbit :slightly irritating (SIDS,2008)
No Allergenic and sensitizing effects data available

No Mutagenic effects data available
No Carcinogenic effects data available
No reproductive toxicity data available
No STOT-single/repeated exposure data available
No Aspiration hazard data available

12. Ecological Information

Ecotoxicity
No Aquatic toxicity data available
No Persistence and degradability data available
No Bioaccumulative potential data available

13. Disposal considerations

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

14. Transport Information

UN No, UN CLASS
Not applicable to UN NO.

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
US major regulations
TSCA
Dimethyl sulfoxide
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. 4: H227 Combustible liquid
Eye Irrit. 2B: H320 Causes eye irritation
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)
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2018 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 (Aug. 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 2016).