

Sodium sulfate decahydrate,
JUNSEI CHEMICAL CO., LTD.,83450jis_J_E2-2,09/Aug/2023

Date of issue for the 1st edition : 09/Feb/2018

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Safety Data Sheet

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

Product identifier:

Product name: Sodium sulfate decahydrate

Reference number(SDS):83450jis_J_E2-2

Product type:

Reagent

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

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Section 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2B

Specific target organ toxicity – single exposure: Category 1 (gastrointestinal tract)

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

Label elements



Signal word: Danger

HAZARD STATEMENT

H320–Causes eye irritation

H370–Causes damage to organs

PRECAUTIONARY STATEMENT

Prevention

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

Wash contaminated parts thoroughly after handling.

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

Response

IF exposed or concerned: Call a POISON CENTER/doctor/physician.

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 locked up.

Disposal

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

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

Ingredient name: Sodium sulfate decahydrate

Content (%): 98.0~102.0

Chemical formula: $\text{Na}_2\text{O}_4\text{S} \cdot 10\text{H}_2\text{O}$

Chemicals No, Japan: 1-501

CAS No.: 7727-73-3 [7757-82-6(anh)]

MW: 322.19

ECNO: 231-820-9

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

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

IF exposed or concerned: Call a POISON CENTER/doctor/physician.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

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

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water or 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.

If victim is conscious, give 1 – 2 glasses of water.

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

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Nausea. Vomiting. Abdominal pain. Diarrhoea

Indication of any immediate medical attention and special treatment needed

Information on indication of any immediate medical attention and special treatment needed is not available.

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

Use appropriate extinguishing media suitable for surrounding facilities.

The product is non-flammable.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

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.

Sodium sulfate decahydrate,

JUNSEI CHEMICAL CO., LTD., 83450jis_J_E2-2,09/Aug/2023

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

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

Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

Section 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

Avoid release to headsprings, 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.

Section 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

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

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Any incompatibilities

Strong acids, Strong oxidizing agents, Aluminium, Magnesium should not be mixed with the chemicals.

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

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

Storage

Conditions for safe storage

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

Keep cool. Protect from sunlight.

Store in accordance with local/national regulation.

Store locked up.

Container and packaging materials for safe handling data is not available.

Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

Section 8. Exposure controls/personal protection

Control parameters

Control value in MHLW is not available.

Adopted value

Adopted value in JSOH is not available.

Adopted value in ACGIH is not available.

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.

Recommended respiratory protection: Dust mask(JIS T8151)

Hand protection

Wear protective gloves.

Inspect before use and replace worn or damaged gloves.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Chemical-resistant, impervious gloves complying with an approved standard (e.g. JIS T8116) should be used.

Eye protection

Wear safety glasses with side-shields.

Wear eye/face protection.

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

Personal protective equipment for the body and skin should be selected based on the task being performed and the risks involved.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystals or granules

Color: Colorless~White

Odor: Odorless

Odor threshold data is not available.

Melting point/Freezing point: 32.4°C

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability (gases, liquids and solids): Non-flammable

Lower and upper explosion limit/flammability limit data is not available.

Flash point: Non-flammable

Auto-ignition temperature data is not available.

Decomposition temperature: >890°C

Self-Accelerating Decomposition Temperature/SADT data is not available.

pH: 5.0~8.0 (50g/L, 25°C)

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Freely soluble.

Solubility in solvent: Practically insoluble in ethanol.

n-Octanol/water partition coefficient data is not available.

Sodium sulfate decahydrate,
JUNSEI CHEMICAL CO., LTD.,83450jis_J_E2-2,09/Aug/2023

Vapor pressure data is not available.
Density and/or relative density: 1.46
Relative vapor density (Air=1) data is not available.
Relative density of the Vapor/air – mixture at 20°C (Air = 1) data is not available.
Particle characteristics data is not available.

Other information

Critical temperature data is not available.
Evaporation rate data is not available.
VOC data is not available.
Other information is not available.

Section 10. Stability and Reactivity

Reactivity

Runaway polymerization will not occur.

Chemical stability

Stable under normal storage/handling conditions.
Efflorescence.

Possibility of hazardous reactions

Decomposes on heating. This produces sulfur oxides and sodium oxides.

Conditions to avoid

Contact with incompatible materials.
Heating. Air.

Incompatible materials

Strong acids, Strong oxidizing agents, Aluminium, Magnesium.

Hazardous decomposition products

Sulfur oxides, Sodium oxides.

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Based on available data, the classification criteria are not met.

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium sulfate)

rat LD50 >10000mg/kg (SIDS, 2006)

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Irritant properties

Skin corrosion/irritation

[Product]

Based on available data, the classification criteria are not met.

Sodium sulfate decahydrate,

JUNSEI CHEMICAL CO., LTD., 83450jis_J_E2-2,09/Aug/2023

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium sulfate)

rabbit(OECD TG404): mild irritation (SIDS, 2006)

Serious eye damage/irritation

[Product]

Category 2B, Causes eye irritation

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium sulfate)

rabbit(OECD TG405): mild irritation (SIDS, 2006)

Sensitization

Respiratory sensitization

[Product]

Based on available data, the classification criteria are not met.

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium sulfate)

guinea pigs (OECD TG406) : Negative (SIDS, 2006)

rabbits : Sensitising effects are highly unlikely. (SIDS, 2006)

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium sulfate)

No in vivo data

Reverse-mutation assay in bacteria (Ames test) : Negative(SIDS, 2006)

Chromosome aberration test : Negative(SIDS, 2006)

Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Reproductive toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 1, Causes damage to organs

[Data for components of the product]

[cat.1]

[GHS Cat. Japan, base data]

(Sodium sulfate)

gastrointestinal tract (SIDS, 2006)

Sodium sulfate decahydrate,
JUNSEI CHEMICAL CO., LTD.,83450jis_J_E2-2,09/Aug/2023

STOT-repeated exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Information on other hazards

Reference data : Anhydrous of this product(CAS No. 7757-82-6)

Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Product]

Based on available data, the classification criteria are not met.

[Data for components of the product]

Hazardous to the aquatic environment, short-term (acute)

[GHS Cat. Japan, base data]

(Sodium sulfate decahydrate)

Algae (selenastrum) EC50=1584.583mg/L/72hr;

Crustacea (Ceriodaphnia dubia) EC50=3150.21mg/L/48hr;

Fish (Pimephales promelas) LC50=7960mg/L/96hr (AQUIRE, 2019)

Hazardous to the aquatic environment, long-term (chronic)

[GHS Cat. Japan, base data]

(Sodium sulfate)

Algae (selenastrum) NOEC=1060mg/L SO₄/72hr (as NaSO₄: 1265mg/L);

Crustacea (Ceriodaphnia dubia) NOEC=610mg/L SO₄/7days (as NaSO₄: 728mg/L);

Fish (rainbow trout) NOEC=205mg/L SO₄/31days (as NaSO₄: 245mg/L) (AQUIRE, 2019)

Water solubility

[Data for components of the product]

(Sodium sulfate)

very good (ICSC, 2005)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

Bioaccumulative potential data is not available.

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

Additional information

Reference data : Anhydrous of this product(CAS No. 7757-82-6)

Section 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

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

Section 14. Transport Information**UN No., UN CLASS**

UN Number or ID Number : Not regulated
UN Proper Shipping Name : Not regulated
Class or division (Transport hazard class) : Not regulated
Packing group : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : Not regulated
UN Proper Shipping Name : Not regulated
Class or division (Transport hazard class) : Not regulated
Packing group : Not regulated

IATA (Dangerous Goods Regulations)

UN Number or ID Number : Not regulated
UN Proper Shipping Name : Not regulated
Class or division (Transport hazard class) : Not regulated
Packing group : Not regulated

Environmental hazards

Marine pollutants (yes/no) : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Noxious Liquid Substances ; Cat. Z
Sodium sulfate

Section 15. Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture****U.S. Toxic Substances Control Act (TSCA) Inventory**

Chemicals listed in TSCA Inventory
7727-73-3[7757-82-6(anh)]

All components are listed or exempted.

Other regulatory information

We are not able to check up the regulatory information with 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.
Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

Section 16. Other information**GHS classification and labelling**

H320-Serious eye damage/eye irritation, Category 2B: H320 Causes eye irritation
H370-STOT – single exposure, Category 1: H370 Causes damage to organs

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN
IMDG Code, 2020 Edition (Incorporating Amendment 40-20)
IATA Dangerous Goods Regulations (64th Edition) 2023

Sodium sulfate decahydrate,

JUNSEI CHEMICAL CO., LTD., 83450jis_J_E2-2,09/Aug/2023

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2023 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2022 Recommendation on TLVs (JSOH)

Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial

Safety and Health Department, Labour Standards Bureau, MHLW in Japan

Supplier's data/information

Chemicals safety data management system "GHS Assistant" Version 4.24 (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform "NITE-CHRIIP"

(https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop)

GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.0) (Mar. 2020, METI)

Abbreviations and acronyms

SDS (Safety Data Sheet)

LD50 (Lethal Dose, 50%)

LC50 (Lethal Concentration, 50%)

IARC (International Agency for Research on Cancer)

ACGIH (American Conference of Governmental Industrial Hygienists)

EPA (US Environmental Protection Agency)

NTP (US National Toxicology Program)

JSOH (Japan Society for Occupational Health)

EU (European Union)

EC50 (Effective Concentration, 50%)

NOEC (No Observed Effect Concentration)

BOD (Biochemical Oxygen Demand)

COD (Chemical Oxygen Demand)

BCF (Bioconcentration Factor)

anh (anhydride)

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 2021).