

Sodium tetraborate decahydrate,
JUNSEI CHEMICAL CO., LTD.,35360jis_J_E1-3,22/Mar/2022

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Safety Data Sheet

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

Product identifier:

Product name: Sodium tetraborate decahydrate

Reference number(SDS):35360jis_J_E1-3

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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2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

Reproductive toxicity: Category 1B

Specific target organ toxicity – single exposure: Category 1(central nervous system, gastrointestinal tract)

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

Specific target organ toxicity – repeated exposure: Category 1(respiratory organs, nervous system)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Long-term): Category 4

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

Label elements



Signal word: Danger

HAZARD STATEMENT

H315-Causes skin irritation

H319-Causes serious eye irritation

H360-May damage fertility or the unborn child

H370-Causes damage to organs

H335-May cause respiratory irritation

H372-Causes damage to organs through prolonged or repeated exposure

H413-May cause long lasting harmful effects to aquatic life

PRECAUTIONARY STATEMENT

Prevention

Obtain special instructions before use.

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.

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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 exposed or concerned: Get medical advice/attention.
Call a POISON CENTER/doctor/physician if you feel unwell.
IF exposed or concerned: Call a POISON CENTER/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.

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: Borax, Sodium borate

Ingredient name:Sodium tetraborate decahydrate

Content (%):99.0 <

Chemical formula: $B_4Na_{20}O_7 \cdot 10H_2O$

Chemicals No, Japan:1-69

CAS No.:1303-96-4[1330-43-4(anh)]

MW:381.37

ECNO:215-540-4(anh)

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

4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical advice/attention if you feel unwell.

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.

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.

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IF SWALLOWED

Rinse mouth. Do NOT induce vomiting.

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

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Cough. Sore throat. Nausea. Vomiting. Diarrhoea. Headache. Weakness. Drowsiness. Convulsions.

(Symptoms when skin and/or eye contact)

Conjunctival redness of the eyes. Pain of the eyes. Redness of the skin.

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.

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 full face piece operated positive pressure mode.

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.

If appropriate, moisten first to prevent dusting.

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 and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

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(Safety treatments)

- Avoid contact with skin.
- Avoid contact with eyes.

Safety Measures

- Obtain special instructions before use.
- 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/eye protection/face protection.
- Wear protective gloves.
- Wear eye protection/face protection.
- Use personal protective equipment as required.
- When using do not eat, drink or smoke.

Any incompatibilities

- Acids, Strong oxidizing agents 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.
- Take off contaminated clothing and wash it before reuse.

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.

8. Exposure controls/personal protection

Control parameters

Control value in MHLW is not available.

Adopted value

- Adopted value in JSOH is not available.
- ACGIH(2005) TWA: 2mg/m³(l);
- STEL: 6mg/m³(l) (URT irr)

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.
- 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.

Skin and body protection

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

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystals or crystalline powder

Color: White

Odor: None

Odor threshold data is not available.

Melting point/Freezing point: 75°C(loss of crystal water); 742°C(anhydrous form)

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: 1575°C

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

pH: 9.2 (47g/L, 20°C)

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 5.1 g/100 ml (20°C)

Solubility in solvent: Practically insoluble in ethanol.

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

Vapor pressure data is not available.

Vapor density data is not available.

VOC data is not available.

Evaporation rate data is not available.

Density and/or relative density: 1.72 g/cm³ (20°C)

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.

Critical temperature data is not available.

Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Reactivity data is not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

The solution in water is a weak base.

Conditions to avoid

Contact with incompatible materials.

Heat. Moisture.

Incompatible materials

Acids, Strong oxidizing agents

Hazardous decomposition products

Boron oxides, Sodium oxides.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50=3493~4980mg/kg (EHC 204, 1998)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

rabbit LD50>10000mg/kg (HSDB, Access on Aug. 2017)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

dust: rat LC50=>2mg/L/4hr (PATTY 6th, 2012)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

human : dermatitis (ACGIH, 7th, 2001);

rabbit/guinea pig : irritation (ECETOC TR63, 1995; NITE Initial Risk Assessment Report, 2008)

Serious eye damage/irritation

[GHS Cat. Japan, base data]

human : eyes irritating (ATSDR, 2010; EHC 204, 1998);

rabbit : irritation (PATTY 6th, 2012);

rabbit : conjunctival discoloration, blister formation, thickening, corneal irritation recovered on 8~21 days
(ECETOC TR63, 1995)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenicity

[ACGIH]

A4(2005) : Not Classifiable as a Human Carcinogen

Reproductive toxicity

[GHS Cat. Japan, base data]

cat. 1B; NITE Initial Risk Assessment Report, 2008; ATSDR, 2010;

STOT

STOT-single exposure

[cat.1]

[GHS Cat. Japan, base data]

gastrointestinal tract; central nervous system (Boric acid; ATSDR, 2010; NITE primary assessment, 2008; ACGIH 7th, 2005; ECETOC TR63, 1995)

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

respiratory tract irritation (Boric acid or Tetraboron disodium heptaoxide pentahydrate; ACGIH 7th, 2005; ATSDR, 2010; DFGOT, 2013; Access on May 2017)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

nervous system; respiratory system (MOE risk assessment, 2016; EHC 204, 1998; NITE primary risk assessment, 2008; ATSDR, 2010)

Aspiration hazard data is not available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

H413-May cause long lasting harmful effects to aquatic life

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Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

Fish (Danio rerio) LC50=125 mg/L/96hr [converted value 14.2 mg-B/L/96hr] (EHC204, 1998);

Crustacea (Daphnia magna) LC50 =644 mg/L/96hr [converted value 73 mg-B/L/96hr] (EHC204, 1998)

Water solubility

5.1 g/100 ml (20°C) (ICSC, 2014)

Persistence and degradability

[GHS Cat. Japan, base data]

Not degrade rapidly (metal element)

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.

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

Avoid release to the environment.

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

14. Transport Information

UN No., UN CLASS

UN No. or ID No.: Not applicable

UN Proper Shipping Name : Not applicable

Class or division (Transport hazard class) : Not applicable

Packing group : Not applicable

Not applicable to IMDG Code

Not applicable to IATA Dangerous Goods Regulations

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

MARPOL Annex V – Prevention of pollution by garbage discharge

Reproductive toxicity: cat.1, 1A, 1B

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Specific target organ toxicity – repeated exposure: cat.1

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Maritime transport in bulk according to IMO instruments

Not applicable to Maritime transport in bulk according to IMO instruments

15. Regulatory Information

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

Chemicals listed in TSCA Inventory

Sodium tetraborate decahydrate

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.

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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.

16. Other information

GHS classification and labelling

H315–Skin Irrit. 2: H315 Causes skin irritation
H319–Eye Irrit. 2: H319 Causes serious eye irritation
H360–Repr. 1B: H360 May damage fertility or the unborn child
H370–STOT SE 1: H370 Causes damage to organs
H335–STOT SE 3: H335 May cause respiratory irritation
H372–STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure
H413–Aquatic Chronic 4: H413 May cause long lasting harmful effects to aquatic life

Reference Book

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN
IMDG Code, 2018 Edition (Incorporating Amendment 39–18)
IATA Dangerous Goods Regulations (62nd Edition) 2021
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2021 TLVs and BEIs. (ACGIH)
JIS Z 7252 : 2019
JIS Z 7253 : 2019
2021 Recommendation on TLVs (JSOH)
Supplier's data/information
Chemicals safety data management system "GHS Assistant" Version 4.16 (<https://www.asahi-ghs.com/>)
NITE Chemical Risk Information Platform "NITE-CHRIP"
(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)

Definitions and Abbreviations

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



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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 2020).