Date of issue for the 1st edition : 06/02/2020

Safety Data Sheet

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

Product identifier:

Product name: Potassium nitrate, tablet

Product code (SDS NO): 37398jis_E-1

Relevant identified uses of the substance or mixture and uses advised against

Uses advised against: This product conform to JSFA(Japan's Specifications and Standards for Food Additives). Do not use for other purposes.

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

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

Oxidizing solids: Category 3

HEALTH HAZARDS

Reproductive toxicity: Category 2

Specific target organ toxicity - single exposure: Category 1(blood)

Specific target organ toxicity - repeated exposure: Category 1(blood)

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

Label elements

Signal word: Danger

HAZARD STATEMENT

H272-May intensify fire; oxidizer

H361-Suspected of damaging fertility or the unborn child

H370-Causes damage to organs after single exposure

H372-Causes damage to organs through prolonged or repeated exposure

PRECAUTIONARY STATEMENT

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

Keep/Store away from clothing/combustible materials.

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

Wash contaminated parts thoroughly after handling.

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

Use personal protective equipment as required.

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

Response

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

Get medical advice/attention if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

Storage

Store locked up.

Disposal

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

Specific Physical and Chemical hazards

Oxidizing material. Organic or combustible material may catch fire in contact with it.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Potassium nitrate

Content (%):99.0 <

Chemical formula:KNO3

Chemicals No, Japan:1-449

CAS No.:7757-79-1

MW:101.10

ECNO:231-818-8

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.

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.

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)

Cough. Sore throat. Abdominal pain. Blue lips, fingernails and skin. Dizziness. Laboured breathing. Confusion. Convulsions. Diarrhoea. Headache. Nausea. Unconsciousness.

(Symptoms when skin and/or eye contact)

Redness. Eye's pain.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use flood with water to extinguish.

Not combustible but enhances combustion of other substances.

Unsuitable extinguishing media

Do not use dry chemicals or foams. CO2 may provide limited

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/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 until material pick up is complete.

Wear proper protective equipment.

PUBLIC SAFTY: Ventilate closed spaces before entering.

Environmental precautions

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

Runoff may create fire or explosion hazard.

Methods and materials for containment and cleaning up

With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

Wash away remainder with plenty of water.

Preventive measures for secondary accident

Collect spillage.

Stop leak if you can do it without risk.

Keep combustibles (wood, paper, oil, etc.) away from spilled material.

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/sparks/open flames/hot surfaces. - No smoking.

Keep/Store away from clothing/combustible materials.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(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.

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

Wear protective gloves, protective clothing or face protection.
Use personal protective equipment as required.
When using do not eat, drink or smoke.

Any incompatibilities

Reducing agents, Strong reducing 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.

Storage

Conditions for safe storage

Store in a well-ventilated place. Keep container tightly closed.
Keep cool. Protect from sunlight.
Store locked up.

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

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.

OSHA-PEL value is not available.
NIOSH-REL value 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.

Hand protection

Wear protective gloves. Recommended material(s): neoprene, nitrile, butyl rubber, viton, PVC, 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.

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: Tablet
Color: White
Odor: None
Odor threshold data is not available.
pH: 5.0～8.0 (50g/L, 25℃)
Boiling point or initial boiling point: 400℃
Boiling range data is not available.
Evaporation rate data is not available.

Melting point/Freezing point: 333～334℃
Decomposition temperature: 400℃
Self-Accelerating Decomposition Temperature/SADT data is not available.
Flammability (gases, liquids and solids) data is not available.
Flash point data is not available.
Auto-ignition temperature data is not available.
Lower and upper explosion limit/flammability limit data is not available.
Vapor pressure data is not available.
Vapor density data is not available.
VOC data is not available.
Relative vapor density (Air=1) data is not available.
Relative density of the Vapor/air - mixture at 20℃ (Air = 1) data is not available.
Density and/or relative density: 2.1g/cm3(25℃)
Dynamic viscosity data is not available.
Kinematic viscosity data is not available.
Solubility:
Solubility in water: 35.7 g/100 ml (25℃)
Solubility in solvent: Slightly soluble in ethanol.
n-Octanol/water partition coefficient data is not available.
No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity data is not available.
Chemical stability
Stable under normal storage/handling conditions.
Possibility of hazardous reactions
Decomposes on heating. This increases fire hazard.
The substance is a strong oxidant. It reacts with combustible and reducing materials.
Conditions to avoid
Contact with incompatible materials.
Heat.
Incompatible materials
Reducing agents, Combustible substances
Hazardous decomposition products
Nitrogen oxides, Oxygen gas, Potassium oxides.

11. Toxicological Information

Information on toxicological effects
Acute toxicity
Acute toxicity (Oral)
[GHS Cat. Japan, base data]
rat LD50=3750mg/kg (ECETOC TR 25, 1988)
Irritant properties
Skin corrosion/irritation data is not available.
Serious eye damage/irritation data is not available.
Allergenic and sensitizing effects data is not available.
Mutagenic effects data is not available.
Carcinogenic effects data is not available.
Reproductive toxicity
[GHS Cat. Japan, base data]
cat. 2; HSDB, 2005

STOT
STOT-single exposure
[cat.1]
[GHS Cat. Japan, base data]
blood (ECETOC TR 27, 1988)
STOT-repeated exposure
[cat.1]
[GHS Cat. Japan, base data]
blood (ECETOC TR 27, 1988)
Aspiration hazard data is not available.

12. Ecological Information

Ecotoxicity
Aquatic toxicity
Aquatic acute toxicity component(s) data
[GHS Cat. Japan, base data]
Crustacea (Daphnia magna) TLm=490mg/L/48hr (IUCLID, 2000)
Water solubility
35.7 g/100 ml (25℃) (ICSC, 2001)
Persistence and degradability data is not available.
Bioaccumulative potential data is not available.
Mobility in soil data is not available.
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
Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No., UN CLASS
UN No.: 1486
Proper Shipping Name : POTASSIUM NITRATE
Class or division : 5.1
Packing group : III
ERG GUIDE No.: 140
IMDG Code (International Maritime Dangerous Goods Regulations)
UN No.: 1486
Proper Shipping Name : POTASSIUM NITRATE
Class or division : 5.1
Packing group : III
IATA Dangerous Goods Regulations
UN No.: 1486
Proper Shipping Name : POTASSIUM NITRATE
Class or division : 5.1
Hazard labels : Oxidizer
Packing group : III
Environmental hazards
MARPOL Annex III - Prevention of pollution by harmful substances
Marine pollutants (yes/no) : no

15. Regulatory Information

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

Environmental hazards

MARPOL Annex V - Prevention of pollution by garbage discharge

Specific target organ toxicity - repeated exposure: cat.1

Potassium nitrate

US major regulations

Chemicals listed in TSCA Inventory

Potassium nitrate

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).

16. Other information

GHS classification and labelling

H272-Ox. Sol. 3: H272 May intensify fire; oxidizer

H361-Repr. 2: H361 Suspected of damaging fertility or the unborn child

H370-STOT SE 1: H370 Causes damage to organs after single exposure

H372-STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN

IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (60th Edition) 2019

Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2019 TLVs and BEIs. (ACGIH)

http://monographs.iarc.fr/ENG/Classification/index.php

JIS Z 7253 : 2019

JIS Z 7252 : 2019

2019 Recommendation on TLVs (JSOH)

Supplier's data/information

Chemicals safety data management system "GHS Assistant" (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 2013 Revised Edition (Aug. 2013, METI)

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 2018).