

## Safety Data Sheet

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

Product identifier:

Product name: Molecular sieves 3A 1/16

Product code(SDS NO): 77125jis\_J\_E1-1

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

Competent section: 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

Carcinogenicity: Category 1A

Specific target organ toxicity – single exposure: Category 2(respiratory apparatus/system)

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

Specific target organ toxicity – repeated exposure: Category 1(lung)

Specific target organ toxicity – repeated exposure: Category 2(respiratory apparatus/system; kidney)

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

Label elements



Signal word: Danger

HAZARD STATEMENT

May cause cancer

May cause damage to respiratory apparatus/system after single exposure

May cause respiratory irritation

Causes damage to lung through prolonged or repeated exposure

May causes damage to respiratory apparatus/system, kidney 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.

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

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

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 or doctor/physician if you feel unwell.

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

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Substance/Mixture:

Mixture

Chemical identity: Fired mixture of synthetic zeolite and a clay mineral(CAS NO.308080-99-1)

Ingredient name: Silicon dioxide

Content(%): <65

Chemical formula: SiO<sub>2</sub>

Chemicals No, Japan: 1-548

CAS No.: 7631-86-9

MW: 60.08

ECNO: 231-545-4

Ingredient name: Aluminium oxide

Content(%): <40

Chemical formula: Al<sub>2</sub>O<sub>3</sub>

Chemicals No, Japan: 1-23

CAS No.: 1344-28-1

MW: 101.96

ECNO: 215-691-6

Ingredient name: Sodium oxide

Content(%): <30

Chemical formula: Na<sub>2</sub>O

Chemicals No, Japan: 1-495

CAS No.: 1313-59-3

MW: 61.98

ECNO: 215-208-9

Ingredient name: Potassium oxide

Content(%): <15

Chemical formula: K<sub>2</sub>O

Chemicals No, Japan: 9-2423

CAS No.: 12136-45-7

MW: 94.2

ECNO: 235-227-6

Ingredient name: Magnesium oxide

Content(%): <5

Chemical formula: MgO

Chemicals No, Japan: 1-465

CAS No.: 1309-48-4

MW: 40.30

ECNO: 215-171-9

Ingredient name: Sodium pyrophosphate

Content(%):<2

Chemical formula:Na4O7P2

Chemicals No, Japan:1-497

CAS No.:7722-88-5

MW:265.9

ECNO:231-767-1

Ingredient name:Refractories, fibers

Content(%):<2

CAS No.:142844-00-6

Ingredient name:Silica (Quartz)

Content(%):<5

Chemical formula:O2Si

Chemicals No, Japan:1-548

CAS No.:14808-60-7

MW:60.08

ECNO:238-878-4

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 attention/advice if you feel unwell.

IF exposed or concerned: Get medical attention/advice.

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

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

###### 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.

#### 5. Fire-fighting measures

##### Extinguishing media

###### Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

The product is non-flammable.

##### 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.

**Special protective equipment and precautions for fire-fighters**

Wear fire/flare resistant/retardant clothing.

Wear cold insulating gloves/face shield/eye 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 after material pick up is complete.

Wear proper protective equipment.

**Environmental precautions**

Avoid release to the rivers, lakes, ocean, 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.

**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, vapor, mist, or gas.

**Safety Measures/Incompatibility**

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 or 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****Adopted value**

(Magnesium oxide)

ACGIH(2000) TWA: 10mg/m<sup>3</sup>(I) (URT; metal fume fever)

(Aluminium oxide)

ACGIH(2007) TWA: (Insoluble)1mg/m<sup>3</sup>(R) (Pneumoconiosis; LRT irr; neurotoxicity)

(Silica (Quartz))

ACGIH(2009) TWA: 0.025mg/m<sup>3</sup>(R) (Pulmonary fibrosis; lung cancer)

OSHA-PEL

(Magnesium oxide)

TWA 15mg/m<sup>3</sup>

(Aluminium oxide)

TWA 5mg/m<sup>3</sup>

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 positive pressure self-contained breathing apparatus (SCBA).

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Safety and Health measures

Wash ... thoroughly after handling.

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

## 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: granular

Color: brown

Odor: None

pH: 8~12 (10% slurry)

Phase change temperature

Initial Boiling Point/Boiling point data N.A.

Melting point/Freezing point data N.A.

Decomposition temperature data N.A.

Flash point data N.A.

Auto-ignition temperature data N.A.

Explosive properties data N.A.

Vapor pressure data N.A.

Vapor density data N.A.

Specific gravity/Density: 600~900g/l (bulk density)

Solubility

Solubility in water: Insoluble

n-Octanol /water partition coefficient data N.A.

## 10. Stability and Reactivity

Reactivity

Runaway polymerization will not occur.

Chemical stability

Stable under normal storage/handling conditions.

Conditions to avoid

Contact with incompatible materials.

Incompatible materials

Hydrocarbons, Hydrogen chloride.

Hazardous decomposition products

Phosphorus oxides

## 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral), Product

rat LD50 > 32000 mg/kg(Supplier's data/information)#

Acute toxicity (Dermal), Product

rabbit LD50 > 2000 mg/kg(Supplier's data/information)#

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Sodium pyrophosphate)

rat LD50=1000 mg/kg (ACGIH, 2001)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Sodium pyrophosphate)

human:mild to moderate irritating (ACGIH 7th, 2001)

Serious eye damage /irritation

[GHS Cat. Japan, base data]

(Sodium pyrophosphate)

human:mild to moderate irritating (ACGIH 7th, 2001)

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

No Teratogenic effects data available

Carcinogenicity

(Silica (Quartz))

IARC-Gr.1 : Carcinogenic to humans

ACGIH-A2(2009) : Suspected Human Carcinogen

(Silicon dioxide)

IARC-Gr.3 : Not Classifiable as a Human Carcinogen

(Aluminium oxide)

ACGIH-A4(2007) : Not Classifiable as a Human Carcinogen

(Magnesium oxide)

ACGIH-A4(2000) : Not Classifiable as a Human Carcinogen

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]

(Silica (Quartz)) respiratory apparatus/system ( SITTIG 4th, 2002 )

[cat.3(resp. irrit.)]

[Japan published data]

(Aluminium oxide) Respiratory tract irritation ( ICSC, 2000 )

(Sodium pyrophosphate) Respiratory tract irritation ( HSFS, 2001 )

(Refractories, fibers) Respiratory tract irritation ( ACGIH, 2001 )

STOT-repeated exposure

[cat.1]

[Japan published data]

(Aluminium oxide) lung ( EHC, 1997 )

(Refractories, fibers) lung ( IARC 81, 2002 )

(Silica (Quartz)) respiratory apparatus/system; kidney ( ACGIH, 2005 )

No Aspiration hazard data available

Additional data

There are no data available on the preparation itself.

(Data attached # show test data by similar products)

## 12. Ecological Information

Toxicity

Aquatic toxicity

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

(Sodium pyrophosphate)

Crustacea (Daphnia magna) LC50=391mg/L/48hr (AQUIRE, 2003)

No Persistence and degradability data available

No Bioaccumulative potential data available

Additional information

There are no data available on the preparation itself.

## 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

Sodium oxide; Aluminium oxide; Magnesium oxide; Silicon dioxide; Sodium pyrophosphate; Potassium oxide; Silica (Quartz)

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

Carc. 1A: H350 May cause cancer

STOT SE 2: H371 May cause damage to organs after single exposure

STOT SE 3: H335 May cause respiratory irritation

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

STOT RE 2: H373 May causes damage to organs through prolonged or repeated exposure

**Reference Book**

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN  
Recommendations on the TRANSPORT OF DANGEROUS GOODS 18th edit., 2013 UN  
Classification, labelling and packaging of substances and mixtures (table 3-1 ECNO6182012)  
2012 EMERGENCY RESPONSE GUIDEBOOK (US DOT)  
2014 TLVs and BEIs. (ACGIH)

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

Supplier's data/information

Chemical Risk Information Platform (CHRIP)(NITE) <http://www.safe.nite.go.jp/japan/db.html>

GHS Classification Guidance for Enterprises 2013 Revised Edition (August, 2013, METI)

**Other information**

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 is advised to make their own tests to determine 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.