

Safety Data Sheets

1. Identification

Product name : Butyronitrile

Name of supplier : JUNSEI CHEMICAL CO., LTD.

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Product code(SDS NO) : 63475jis_J_E1-1

2. Hazards identification

GHS classification and label elements of the product

GHS classification

PHYSICAL HAZARDS

Flammable liquids : Category 2

HEALTH HAZARDS

Acute toxicity Oral : Category 3

Acute toxicity Dermal : Category 3

Acute toxicity inhalation : Category 3

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



Signal word : Danger

HAZARD STATEMENT

Highly flammable liquid and Vapor

Toxic if swallowed.

Toxic in contact with skin.

Toxic if inhaled

PRECAUTIONARY STATEMENT

Prevention

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

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wash contaminated parts thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Wear protective gloves/eye protection/face protection.

Wear protective gloves/protective clothing.

Response

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

Rinse mouth.

Butyronitrile, JUNSEI CHEMICAL CO., LTD., 63475jis_J_E1-1,06/01/2014

Take off immediately all contaminated clothing.

Wash contaminated clothing before reuse.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN: Wash with plenty of soap and water.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

Storage

Store locked up.

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

Store in well-ventilated place. Keep cool.

Disposal

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

Physical and Chemical hazards

Highly flammable liquid. Vapor/air mixture may explode.

3. Composition/information on ingredients

Substance/Preparation : Substance

Common name, synonyms : Propyl cyanide

Ingredient name: Butyronitrile

content(%): 98.0 <

Chemical formula: C₄H₇N

Chemicals No, Japan: 2-3910; 2-3924

CAS No.: 109-74-0

MW: 69.11

HAZCODE_EU: 2_H225; 3_H301; 3_H311; 3_H331

ECNO: 203-700-6

4. First-aid measures

General procedures

Call a POISON CENTER or doctor/physician.

IF INHALED

Remove victim to fresh air and keep at rest in a position 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.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash with plenty of soap and water.

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.

Immediately call a POISON CENTER or doctor/physician.

Induce vomiting (ONLY IN CONSCIOUS PERSONS!).

5. Fire-fighting measures

Suitable extinguishing media

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

Specific hazards arising from the chemical

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

Specific fire-fighting measures

Cool container with water spray.

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 neutralization, 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

(Exposure Control for handling personnel)

Avoid breathing dust/fume/gas/mist/Vapors/spray.

Use personal protective equipment as required.

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

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

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

Use only outdoors or in a well-ventilated area.

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

When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Recommendation for storage

Keep cool . Protect from sunlight.

Store locked up.

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

8. Exposure controls/personal protection

Control parameters e.g. occupational exposure limit values or biological limit values

Adopted value

NIOSH-REL

TWA 8ppm, 22mg/m³

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Protective equipment

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.

Wash contaminated clothing before reuse.

9. Physical and Chemical Properties

Physical properties

Appearance :LIQUID

Color :COLOURLESS

Odor :CHARACTERISTIC ODOUR

pH data N.A.

Phase change temperature

Initial Boiling Point/Boiling point :116–118°C

Melting point/Freezing point :–112°C

Decomposition temperature data N.A.

Flash point :17°C

Auto-ignition temperature :501°C

Auto-ignition temperature data N.A.

Explosion :Flammability or explosive limit

lower limit :1.6 vol %

upper limit :?vol %

Vapor pressure :2 kPa (20°C)

Relative Vapor Density (Air=1) :2.4

Relative density of the Vapor/air-mixture at 20°C (Air = 1) :1.02

Specific gravity/Density :0.8

Solubility

Solubility in water :3 g/100 ml (25°C)

n-Octanol /water partition coefficient : log Pow0.5–0.6

10. Stability and Reactivity

Stability

Stable under normal storage/handling conditions.

Highly flammable.

Possibility of hazardous reactions

Decomposes on burning. Decomposes on contact with hot surfaces, flames or acids. This produces toxic and corrosive fumes including hydrogen cyanide and nitrogen oxides.

Reacts violently with strong acids, strong bases, strong oxidants and strong reducing agents.

Conditions to avoid

Contact with incompatible materials.

Open flames. Heat.

Incompatible materials

Acids, Strong acids, Strong bases, Strong oxidizing agents, Strong reducing agents

Hazardous decomposition products

Carbon oxides, Nitrogen oxides, Hydrogen cyanide.

11. Toxicological Information

Symptoms related to the physical, chemical and toxicological characteristics

Acute toxicity

Oral toxicity component(s) data

rat LD50 =50-100 mg/kg (PATTY 5th, 2001)

Dermal toxicity component(s) data

rabbit LD50=400 mg/kg (HSDB, 2003)

Irritant properties

Skin corrosion/irritation

Skin corrosion/Irritation component(s) data

rabbit 395 mg open ; MILD

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

No Teratogenic effects data available

No Carcinogenic effects data available

No Toxicity for reproduction data available

No Delayed/chronic effects from short/long-term exposure data available

No Aspiration hazard data available

12. Ecological Information**Ecotoxicity**

No Aquatic toxicity data available

Water solubility

3 g/100 ml (25°C) (ICSC, 2003)

No Persistence and degradability data available

Bioaccumulative potential

log Pow=0.5-0.6 (ICSC, 2003)

13. Disposal Considerations**Disposal methods**

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

14. Transport Information

UN No, UN CLASS

UN No :2411

UN CLASS :3

Sub. Risk :6.1

PG :II

Proper shipping name :BUTYRONITRILE
ERG GUIDE NO :131

15. Regulatory Information

GHS classification and labelling

Flam. Liq. 2 : H225 Highly flammable liquid and Vapor

Acute Tox. 3 : H301 Toxic if swallowed.

Acute Tox. 3 : H311 Toxic in contact with skin.

Acute Tox. 3 : H331 Toxic if inhaled

US major regulations

TSCA

Butyronitrile

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (4th ed., 2011), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 17th edit. UN

Classification, labelling and packaging of substances and mixtures (reg.(EC) No 1272/2008)

2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2013 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/monoeval/grlist.html>

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 are advised to make their own test

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, EU official data