Date of issue: 16/11/2017

Safety Data Sheet

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

Product identifier:

Product name: Ammonium Chloride

Product code(SDS NO): 18076jis_E-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

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

HEALTH HAZARDS

Acute toxicity Oral: Category 4

Serious eye damage/eye irritation: Category 2B

Specific target organ toxicity - single exposure: Category 2(nervous system)

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

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment - acute hazard: Category 2

Hazardous to the aquatic environment - long-term hazard: Category 2

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

Label elements

Signal word: Danger

HAZARD STATEMENT

Harmful if swallowed

Causes eye irritation

May cause damage to organs after single exposure

Causes damage to organs through prolonged or repeated exposure

Toxic to aquatic life

Toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

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

Collect spillage.

Get medical advice/attention if you feel unwell.

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.

Storage

Store locked up.

Disposal

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

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Ammonium chloride
Content(%):99.0 <
Chemical formula:ClH4N
Chemicals No, Japan:1-218
CAS No.:12125-02-9
MW:53.49
ECNO:235-186-4

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. Nausea. Vomiting.

(Symptoms when skin and/or eye contact)

Redness. Eye's pain.

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.
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 after material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Avoid release to the 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.

Stop leak if you can do it without risk.

Prevent dust cloud.

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, fume, gas, mist or vapor.

Safety Measures/Incompatibility

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

No control value data available

Adopted value

No Adopted value data available

ACGIH(1970) TWA: 10mg/m3　STEL: 20mg/m3 (Eye & 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. 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.

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: Crystalline powder or solid

Color: White

Odor: None

pH: 4.5～5.5 (50g/L , 25℃)

Phase change temperature

Initial Boiling Point/Boiling point: 520℃

Melting point/Freezing point: 338℃

Decomposition temperature: 338℃

Flash point data N.A.

Auto-ignition temperature data N.A.

Explosive properties data N.A.

Vapor pressure: 0.13 kPa (160℃)

Vapor density data N.A.

Specific gravity/Density: 1.5g/cm3(20℃)

Solubility

Solubility in water: 28.3 g/100 ml (25℃)

Solubility in solvent: Slightly soluble in ethanol.

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.

Hygroscopic.

Possibility of hazardous reactions

Decomposes on heating. This produces toxic and irritating fumes.
The solution in water is a weak acid.
Reacts violently with ammonium nitrate and potassium chlorate. This generates fire and explosion hazard.
Attacks copper and its compounds.

Conditions to avoid

Contact with incompatible materials.
Moisture, Heat.

Incompatible materials

Strong bases, Ammonium nitrate, Potassium chlorate.

Hazardous decomposition products

Nitrogen oxides, Ammonia, Chlorides.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]
rat LD50=1410～1658 mg/kg (SIDS, 2009)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]
rabbit (Draize test _GLP) : mean score for each animal < 1 (SIDS, 2009).

Serious eye damage /irritation

[GHS Cat. Japan, base data]
rabbit mild (ACGIH 7th, 2001)

Sensitization

Skin sensitization

[GHS Cat. Japan, base data]
guinea pig (maximization test_GLP) : not sensitizing (SIDS, 2001)

Germ cell mutagenicity

[GHS Cat. Japan, base data]
mouse (i.p.) bone marrow micronucleus test (in vivo somatic cell mutagenicity test) : Negative (SIDS, 2009)
Reverse-mutation assay in bacteria(Ames test) :Negative(SIDS, 2009; IUCLID, 2000)
Chromosome aberration test :Positive(SIDS, 2009)

No Carcinogenic effects data available

No reproductive toxicity data available

Delayed and immediate effects and also chronic effects from short- and long-term exposure

STOT

STOT-single exposure

[cat.2]

[Japan published data]
Respiratory tract irritation (SIDS, 2009)

STOT-repeated exposure

[cat.1]

[Japan published data]
systemic toxicity (SIDS, 2009)

No Aspiration hazard data available

12. Ecological Information

Toxicity

Aquatic toxicity

Toxic to aquatic life

Toxic to aquatic life with long lasting effects

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

Fish (Rainbow trout) LC50=2.19 mg/L/96 hr （ECETOC TR91, 2003）

Water solubility

28.3 g/100 ml (25℃) (ICSC, 2000)

No Persistence and degradability data available

No Bioaccumulative potential data available

13. Disposal considerations

Waste treatment methods

Avoid release to the environment (- if this is not the intended use).

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

14. Transport Information

UN No, UN CLASS

UN number: 3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Transport hazard class(es): 9

Packing group: III

ERG GUIDE NO.: 171

15. Regulatory Information

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

US major regulations

TSCA

Ammonium chloride

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

Acute Tox. 4: H302 Harmful if swallowed

Eye Irrit. 2B: H320 Causes eye irritation

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

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

Aquatic Acute 2: H401 Toxic to aquatic life

Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012) 2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2017 TLVs and BEIs. (ACGIH)

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

Supplier's data/information

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

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

General Disclaimer

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 tests to determinate 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 (NITE published in 2015).