Date of issue : 17 February, 2014
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Safety Data Sheet

1. Product and company identification

Product name	:	Ammonium sulfide solution, Colorless
Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, Japan
Name of section	:	Reagent division, catalog and products information section
Telephone number	:	+81-3-6214-1090
Facsimile number	:	+81-3-3241-1047
Mail address	:	BC32@gms.kanto.co.jp
SDS No.	:	01323

2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Flammable liquids	:	Out of category
Pyrophoric liquids	:	Out of category
Self-heating substances and mixtures	:	Out of category

Human health hazard

Skin corrosion/irritation	:	Category 1B
Serious eye damage/eye irritation	:	Category 1
Specific target organ systemic toxicity(single exposure)	:	Category 2
Specific target organ systemic toxicity(repeated exposure)	:	Category 2

Pictogram or symbol

Signal word : Danger

Hazard statement : Causes severe skin burns and eye damage

Causes serious eye damage

May cause damage to organs (respiratory organs)

May cause damage to organs (respiratory organs) through prolonged or repeated exposure

Cautions

Safety measurements : Do not breathe dust, mist, and vapor.

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

Wear appropriate protective gloves, glasses, clothing, face shield, or mask.

Wash protective equipment thoroughly after use.

Wash hands thoroughly after handling.

First-aid measures : If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical treatment if you feel unwell.

If swallowed: Rinse mouth, do not induce vomiting. Immediately get medical treatment.

If in eyes : Rinse cautiously with water for several minutes. Get medical treatment.

If on skin : Remove contaminated clothing and the substance. Immediately get medical treatment.

If exposed, get medical treatment.

Get medical treatment, if you feel unwell.

Storage : Store locked up.

Disposal : Dispose of contents and containers appropriately in accordance with related regulations.

3. Composition/Information on ingredients

Substance/Mixture : Substance

Chemical name or commercial name

: Ammonium sulfide

Ingredients and composition

: Ammonium sulfide min. 0.5% (as Sulfur)

Chemical formula : (NH4)2S

CAS No. : 12135-76-1

TSCA Inventory : Registered

EINECS No. : 2352255

Dangerous and hazardous ingredients

: Ammonium sulfide

4. First aid measures

Inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.

Skin contact : Wash the affected areas under running water.

Eye contact : Wash the affected areas under running water for at least 15 minutes. Get medical treatment.

Ingestion : Rinse mouth with water. Give the victim one or two glasses of water or milk. Do not induce vomiting. Get medical treatment as soon as possible.

Protection for first aid person

: Rescuers should wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

Extinguishing media : Water, dry chemical powder, carbon dioxide, dry sand, foam

Prohibited extinguishing media

: None

Particular fire fighting : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Foam extinguisher is effective for a large scale fire.

Protection for firefighters

: Wear breathing apparatus.

6. Accidental release measures

Cautions for personnel : Wear proper protective equipment and avoid contact with skin and inhalation of vapor. Conduct operations from upwind and evacuate people downwind. Remove all sources of ignition. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Cautions for environment : Attention should be given to avoid damage to the environment by flowing of spillage to rivers.

Removal measure : Absorb spill with inert material (e.g., diatomaceous earth, sand) and flush spillage area with copious amounts of water.

Prevention of second accident

: Remove nearby sources of ignition and prepare extinguishing media.

7. Cautions of handling and storage

Handling

Engineering measures : Wear proper protective equipment to avoid contact with skin or inhalation of vapor. Pay attention to fire.

Ventilate well at working places.

Cautions for safety handling

: Use with an enclosed system or a local exhaust ventilation. Use in well-ventilated areas.

Cautions : Do not contact with oxidizing substances and acids.

Storage

Adequate storage condition

: Store in a dark, cool place and tightly closed.

Safety adequate container materials

: Glass, Fluorine resin, Polyethylene

8. Exposure control/Personal protection

Engineering measures : Use with an enclosed system or a local exhaust ventilation.

Control parameters

ACGIH(2015) : Not established

Protective equipment

Respiration protective equipment

: If necessary, wear proper protective equipment(gas mask for ammonium gas)

Hands protective equipment

: Impervious protective gloves

Eyes protective equipment

: Safety goggles

Skin and body protective equipment

: Protective clothing, protective boots

9. Physical and chemical properties

Appearance	: Liquid
Color	: Colorless
Odor	: Ammonia like odor
Boiling point	: 40℃
Melting point	: Not available
Density	: Approx. 1g/cm3(20℃)
Solubility	
Solubility in solvents	: Water ; Miscible

10. Stability and reactivity

Stability	: Heating may generate explosive ammonia gas or hydrogen sulfide gas.
Reactivity	: As the product is alkaline, reacts with acids.
Incompatible conditions	: Light, heat
Incompatible materials	: Acids, Oxidizing substances
Hazardous decomposition products	: Nitrogen oxide, Hydrogen sulfide gas

11. Toxicological information

Acute toxicity : Oral : Not possible to classify because of insufficient data.

Dermal : Not possible to classify because of insufficient data.

Inhalation(vapor) : Not possible to classify because of insufficient data.

Inhalation(dust, mist) : Not possible to classify because of insufficient data.

(as Ammonium sulfide)

mouse oral LDLO=80mg/kg

Skin corrosion/irritation : Causes severe skin burns and eye damage(category 1B)

Since the solution has strong alkalinity, it has corrosiveness to human skin, it was classified into category 1B.

Serious eye damage/eye irritation

: Causes serious eye damage(category 1)

Since the solution has strong alkalinity, it has corrosiveness to human eyes, it was classified into category 1.

Respiratory sensitization or Skin sensitization

: Respiratory sensitization : Not possible to classify because of insufficient data.

Skin sensitization : Not possible to classify because of insufficient data.

Mutagenicity : Not possible to classify because of insufficient data.

Carcinogenic effects : Not possible to classify because of insufficient data

Effects on the reproductive system

: Not possible to classify because of insufficient data.

Specific target organ systemic toxicity single exposure

: May cause damage to organs (respiratory organs)(category 2)

The effect of short term exposure showed respiratory tract corrosiveness.

Specific target organ systemic toxicity repeated exposure

: May cause damage to organs (respiratory organs) through prolonged or repeated exposure(category 2)

The effect of repeated exposure showed the damage of lungs.

Aspiration hazard : Not possible to classify because of insufficient data.

12. Ecological information

Ecotoxicity

Fish toxicity : Acute aquatic toxicity : Not possible to classify because of insufficient data.

Chronic aquatic toxicity : Not possible to classify because of insufficient data.

Persistence and degradability

: Not available

Bioaccumulative potential : Not available

13. Disposal consideration

Residual disposal : Dissolve in water and add sodium sulfide to precipitate iron(Ⅲ) chloride. Filter the precipitation and bury in a landfill site approved for hazardous waste disposal.

The supernatant liquid is flushed in a drain after neutralizing. Or consult approved disposal companies.

Containers : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

UN class : Class 8(Corrosive substances) P. G. Ⅱ

UN number : 2683

Marine regulation information

UN No. : 2683

Proper shipping name : AMMONIUM SULPHIDE SOLUTION

Class : 8

Sub risk : 3, 6.1

Packing group : Ⅱ

Marine pollutant : Not applicable

Aviation regulation information

UN No. : 2683

Proper shipping name : Ammonium sulphide solution

Class : 8

Sub risk : 3, 6.1

Packing group : Ⅱ

15. Regulatory information

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

16. Other information

References

Dictionary of Organic Compounds, The society of Synthetic Organic Chemistry, Kodansha Ltd.(1985)

Dangerous Properties of Industrial Materials,6th ed. N.I.Sax Van Nostrand Reinhold Company(1984)

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully.The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements.The information herein is only provision of information, and it does not represent a guarantee the properties of the product.The Safety Data Sheet(SDS) is prepared based on JIS Z7253, and it has the same required elements on the Material Safety Data Sheet(MSDS) which is prepared based on JIS Z7250:2010.