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Safety Data Sheet

1. Product and company identification

Product name	:	Ammonium formate
Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, Japan
Name of section	:	Business Administration Department, Reagent Division
Telephone number	:	+81-3-6214-1090
Facsimile number	:	+81-3-3241-1047
Mail address	:	BC32@kanto.co.jp
SDS No.	:	01294
Product numbers applied by the SDS	:	01167, 01294

2. Summary of danger and Hazard

GHS classification : Not applicable

3. Composition/Information on ingredients

Substance/Mixture	:	Substance
Chemical name or commercial name	:	Ammonium formate
Ingredients and composition	:	Ammonium formate min. 95.0%
Chemical formula	:	HCOONH4
CAS No.	:	540-69-2
TSCA Inventory	:	Registered
EINECS No.	:	2087539

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.
Ingestion	:	Give the victim water or salt water and induce vomiting. If necessary, get medical attention.

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.
Protection for firefighters	:	Firefighters should wear protective equipment.

6. Accidental release measures

Cautions for personnel : Wear proper protective equipment and avoid contact with skin and inhalation of dust. Conduct operations from upwind and evacuate people downwind.

Cautions for environment : Attention should be given to avoid discharge of spilled product into rivers and resulting environmental damage. When diluting spill with large amounts of water, discharge of untreated wastewater into the environment must be avoided.

Removal measure : Sweep up in a chemical waste container. Flush contaminated area with copious amounts of water.

7. Cautions of handling and storage

Handling

Engineering measures : If necessary, wear proper protective equipment to avoid contact with skin or inhalation of dust.

Cautions for safety handling

: Avoid formation of dust and aerosols.

Storage

Adequate storage condition

: Store the bottle tightly closed in a cool, dark place because the substance is deliquescent.

Safety adequate container materials

: Glass, polyethylene, polypropylene

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 dust mask

Hands protective equipment

: Impervious protective gloves

Eyes protective equipment

: Safety goggles

9. Physical and chemical properties

Appearance : Crystal

Color : Colorless - white

Odor : Acrid odor

pH : 6.4-7.0(0.2mol/L solution, 25℃)

Boiling point : Decomposition(180℃)

Melting point : 116℃

Flash point : Not available

Auto-ignition point : Not available

Explosion characteristics

Explosion limit : Not available

Vapor pressure : Not available

Density : 1.266g/cm3(20℃)

Solubility

Solubility in solvents : Water ; 50.5%(0℃)

Organic solvents ; Practically insoluble in ethanol

log Pow : -3.34

10. Stability and reactivity

Stability : The chemical has deliquescent property, and emits ammonia gas gradually at room temperature.

Reactivity : May react with oxidizing substances.

Incompatible conditions : Light, heat, moisture

Incompatible materials : Oxidizing substances

Hazardous decomposition products

: Carbon monoxide, Nitrogen oxide, Ammonia gas

11. Toxicological information

Acute toxicity : Oral : No classification

Dermal : Classification not possible

Inhalation(vapor) : Classification not possible

Inhalation(dust, mist) : Classification not possible

rat oral LD50>2000mg/kg

Skin corrosion/irritation : Classification not possible

Serious eye damage/irritation

: Classification not possible

Respiratory sensitization or Skin sensitization

: Respiratory sensitization : Classification not possible

Skin sensitization : Classification not possible

Germ cell mutagenicity : Classification not possible

Carcinogenicity : Classification not possible

Reproductive toxicity : Classification not possible

STOT-single exposure : Classification not possible

In acute oral toxicity tests in rats (OECD TG423), following administration at 2,000 mg/kg, category 2 upper limit, piloerection and hunched posture were observed. However, no fatal cases were reported and no abnormalities were found at necropsy. Although the oral route data corresponds to "out of category", there is no toxicity data for other routes. Thus, the classification was not possible because of insufficient data.

STOT-repeated exposure : Classification not possible

Aspiration hazard : Classification not possible

12. Ecological information

Ecotoxicity

Fish toxicity : Acute aquatic toxicity : No classification

Chronic aquatic toxicity : No classification

Fish(Danio rerio) LC50=130mg/L/96H

Persistence and degradability

: Not available

Bioaccumulative potential : No bioconcentration

Mobility in soil : Not available

Hazardous to the ozone layer
: Not available

13. Disposal consideration

Residual disposal : Dilute with copious water and adjust the pH to neutral, then flush in drains. Or entrust approved waste disposal companies with the disposal.

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

14. Transport information

UN class : It is not regulated under UN regulations.

15. Regulatory information

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

16. Other information

References

Encyclopaedia Chemica, Kyoritsu Shuppan Co., Ltd.(1963)

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

Handbook of 16817 Chemical Products, The Chemical Daily Co.(2017)

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.