Issue date: 7/18/2003
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Safety Data Sheet

1. Chemical product and company identification

Product name	:	Iron(Ⅲ) nitrate nonahydrate

Company information

Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP
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
Reference No	:	16026
Product numbers applied by the SDS	:	16026, 20081
Recommended use	:	For research use only
Restrictions on use	:	Seek expert judgment when using the product for applications other than those recommended.

2. Hazards identification

GHS classification

Physical hazards	Oxidizing solids	Category 3
Health hazards	Specific target organ toxicity (single exposure)	Category 3 (respiratory tract irritation.)

Hazard pictograms

Signal word	:	Warning
Hazard statements	:	May intensify fire; oxidizer May cause respiratory irritation

Precautionary statements

Prevention	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. Avoid breathing dust. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
Storage	:	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	:	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

3. Composition/information on ingredients

Distinction of substance or mixture : Substance

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Iron(Ⅲ) nitrate nonahydrate	≥ 98.5	Fe(NO3)3・9H2O	Listed	233-899-5	7782-61-8

4. First aid measures

First aid measures

First-aid measures after inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.

First-aid measures after skin contact : Wash the affected areas under running water.

First-aid measures after eye contact : Wash the affected areas under running water.

First-aid measures after ingestion : Give the victim water or salt water and make him vomit. Get medical attention.

Personal Protection in First Aid and Measures : Rescuers should wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

Suitable extinguishing media : This product is noncombustible.

Unsuitable extinguishing media : None

Fire hazard : Contact with combustible material may cause fire.

Firefighting instructions : 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.

Personal protection (Emergency response) : Firefighters should wear protective equipment.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

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

Environmental precautions

Environmental precautions : 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.

Methods and Equipment for Containment and Cleaning up

For containment : Sweep up in a chemical waste container. Neutralize residue with calcium hydroxide or sodium carbonate water solution and then flush contaminated area with copious amounts of water.

Prevention Measures for Secondary Accidents : Do not allow contact with organic substances or combustible substances.

7. Handling and storage

Handling

Technical measures	:	Wear appropriate protective equipment to avoid contact with skin or inhalation of dust.
Precautions for safe handling	:	Avoid formation of dust and aerosols. The substance is an oxdizer. Avoid contact with organic substances.

Storage

Storage conditions	:	As the chemical is deliquescent, keep the bottle tightly closed and store in a cool place. Keep away from combustible matrials.
Material used in packaging/containers	:	Glass, polyethylene, polypropylene.

8. Exposure controls / Personal protection equipment

ACGIH TWA	1 mg/m³ (as Fe)

Appropriate engineering controls : Install a local ventilation system in case of dusty condition.

Protective equipment

Respiratory protection	:	If necessary, wear dust mask
Hand protection	:	Impervious protective gloves
Eye protection	:	Safety goggles
Skin and body protection	:	Protective clothing, protective boots

9. Physical and chemical properties

Physical state	:	Solid
Color	:	Pale violet
Odor	:	Odorless
pH	:	Acidity
Melting point	:	47.2 ° C
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	≈ 125 ° C
Flammability	:	Not flammable.
Vapor pressure	:	No data available
Relative density	:	No data available
Density	:	1.68 g/cm³ (21℃)
Relative gas density	:	No data available
Solubility	:	Water: Readily soluble. Organic solvents: Soluble in acetone, ethanol.
Partition coefficient n-octanol/water (log Pow)	:	No data available
Explosive limits (vol %)	:	No data available

Viscosity, kinematic	:	No data available
Particle characteristics	:	No data available

10. Stability and reactivity

Reactivity	:	Has oxidative properties.
Chemical stability	:	Stable under normal conditions. Deliquescent.
Possibility of hazardous reactions	:	The mixture with powdery combustible materials may burn vigorously or explode by heating or shock.
Conditions to avoid	:	Light, heat, moisture.
Incompatible materials	:	Reducing substances, combustible materials.
Hazardous decomposition products	:	Nitrogen oxides.

11. Toxicological information

Acute toxicity (oral)	:	No classification rat LD50=3250mg/kg
Acute toxicity (dermal)	:	Classification not possible
Acute toxicity (inhalation)	:	No classification (gas) Classification not possible (vapor) Classification not possible (dust, mist)
Skin corrosion/irritation	:	Classification not possible May cause skin irritation.
Serious eye damage/irritation	:	Classification not possible May cause eye irritation.
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	:	May cause respiratory irritation Although there is no data of this product, since aqueous soluble iron salt is supposed to indicate the respiratory tract irritation, it was classified into category 3(respiratory tract irritation).
STOT-repeated exposure	:	Classification not possible There is no information about this substance. There is a description that, in general, human health concerns about water-soluble nitraten intake include infantile methemoglobinemia as a consequence of nitrite formed by intestinal microbial reduction of nitrate in food and water, and that neonates have an incompletely developed system for methemoglobin reduction and are thus at high risk.
Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	Classification not possible
Aquatic chronic	:	Classification not possible

Persistence and degradability

No additional information available

Bioaccumulative potential

No additional information available

Mobility in soil

No additional information available

Hazardous to the ozone layer

Ozone	:	Classification not possible

13. Disposal considerations

Ecological waste information	:	Dissolve the chemical in a large amount of water and form iron hydroxide precipitation by addition of calcium hydroxide solution or sodium carbonate solution. Filter the precipitation and bury in a landfill site approved for hazardous waste disposal. Or consult approved disposal companies.
Contaminated container and packaging	:	In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

International Regulations

Transport by sea(IMDG)

UN-No. (IMDG)	:	1466
Proper Shipping Name (IMDG)	:	FERRIC NITRATE
Packing group (IMDG)	:	III
Transport hazard class(es) (IMDG)	:	5.1

Air transport(IATA)

UN-No. (IATA)	:	1466
Proper Shipping Name (IATA)	:	Ferric nitrate
Packing group (IATA)	:	III
Transport hazard class(es) (IATA)	:	5.1
Marine pollutant	:	Not applicable
MFAG-No	:	140

15. Regulatory information

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

16. Other information

Data sources	:	Encyclopaedia Chimica, Kyoritsu Shuppan Co, Ltd. (1963) . Dangerous Properties of Industrial Materials,6th ed. N.I.Sax Van Nostrand Reinhold Company (1984) . NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.

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.