Date of issue : 18 November, 2003
Date of revision : 3 March, 2016

Safety Data Sheet

1. Product and company identification

Product name	:	Lutetium nitrate tetrahydrate, 3N5
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.	:	24277

2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Explosives	:	Out of category
Flammable solids	:	Out of category
Pyrophoric solids	:	Out of category
Self-heating substances and mixtures	:	Out of category
Oxidizing solids	:	Category 3

Human health hazard

Skin corrosion・Irritation	:	Category 2
Serious eye damage・Eye irritation	:	Category 2A

Pictogram or symbol

Signal word	:	Warning
Hazard statement	:	May intensify fire : oxidizer
		Causes skin irritation
		Causes serious eye irritation

Cautions

Safety measurements	:	Keep away from heat.
		Keep away from combustible substances.
		Wear appropriate protective gloves, glasses, clothing, face shield, or mask.
		Wash protective equipment thoroughly after use.
First-aid measures	:	If in eyes : Rinse cautiously with water for several minutes. Get medical treatment.

If on skin : Remove contaminated clothing and the substance. If skin irritation occurs, get medical treatment.

Wash hands thoroughly after handling.

Storage : Keep away from combustible substances.

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

: Lutetium nitrate tetrahydrate

Ingredients and composition

: Lutetium nitrate tetrahydrate min. 99.95%

Chemical formula : $Lu(NO_3)_3 \cdot 4H_2O$

CAS No. : 10099-67-9

TSCA Inventory : Registered

EINECS No. : 2332417

Dangerous and hazardous ingredients

: Lutetium nitrate tetrahydrate

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

5. Fire fighting measures

Extinguishing media : This product is noncombustible.

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.

6. Accidental release measures

Cautions for personnel : Wear proper equipment and avoid contact with skin and inhalation of dust. Keep away personnel except for authorized ones from spillage area by stretching ropes.

7. Cautions of handling and storage

Handling

Engineering measures : Wear proper protective equipment not to contact with skin or inhale the dust. Do not mixed with combustible substances like organic compounds, sulfur, phosphorous.

Storage

Adequate storage condition
: Store the bottle tightly closed in a cool, dark place because the substance has hygroscopic property.
Keep away from combustible substances.

Safety adequate container materials
: Glass, polyethylene, polypropylene

8. Exposure control/Personal protection

Engineering measures : Install a local ventilation system under dusty condition.

Control parameters

ACGIH(2009) : 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	:	White
Odor	:	Odorless
Boiling point	:	Decomposition
Melting point	:	Not available
Flash point	:	Noncombustible
Specific gravity	:	Not available
Solubility		
Solubility in solvents	:	Water ; Soluble
		Organic solvents ; Soluble in acetone, ethanol.

10. Stability and reactivity

Stability : Stable under normal usage.

Reactivity : The mixture with powdery combustible materials may cause ignite vigorously or explode by heating or shock.
May react with reducing substances.

Incompatible materials : Oxidizing substances

Hazardous decomposition products
: Nitrogen oxides

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.

Skin corrosiveness : Causes skin irritation(category 2)

Since causes irritation to the skin, it was classified into category 2.

Irritation to skin, eyes : Causes serious eye irritation(category 2A)

Since causes irritation to the eyes, it was classified into categopry 2A.

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

: Not possible to classify because of insufficient data.

If swallowed large amount, may cause blood pressure dropping, methemoglobinemia, headache, dizziness, however, it is not possible to classify because of insufficient data.

Specific target organ systemic toxicity repeated exposure

: Not possible to classify because of insufficient data.

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.

Rediualbility and degradability

: Not available

Ecorediualbility : Not available

13. Disposal consideration

Residual disposal : Dilute with copious water and adjust the pH of the solution, after that flush in drains. Unsolved substances are buried in a landfill site approved for the disposal of chemical and hazardous wastes. 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 : Class 5.1(Oxidizing substances) P. G. Ⅲ

UN number : 1477

Marine regulation information

UN No. : 1477

Proper shipping name	:	NITRATES, INORGANIC, N.O.S.
Class	:	5.1
Sub risk	:	-
Packing group	:	Ⅲ
Marine pollutant	:	Not applicable

Aviation regulation information

UN No.	:	1477
Proper shipping name	:	Nitrates, inorganic, n.o.s.
Class	:	5.1
Sub risk	:	-
Packing group	:	Ⅲ

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)

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.