

Material Safety Data Sheet

1. Product and company identification

Product name : Gadolinium nitrate hexahydrate
Name of manufacturer : KANTO CHEMICAL CO., INC.
Address : 11-5 Nihonbashi Honcho 3-Chome, Chuo-Ku, Tokyo 103-0023 Japan
Name of section : Reagent division, catalog and products information section
Telephone number : +81-3-3639-8301
Facsimile number : +81-3-3639-9435
MSDS No. : 17609

2. Composition/Information on ingredients

Substance/Mixture : Substance
Chemical name or commercial name : Gadolinium nitrate hexahydrate
Ingredients and composition : Gadolinium nitrate hexahydrate min. 99.95%
Chemical formula : $\text{Gd}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$
CAS No. : 19598-90-4
TSCA Inventory : Not registered
EINECS No. : -
Dangerous and hazardous ingredients : Gadolinium nitrate hexahydrate

3. Summary of danger and Hazard

The most important danger and hazard : This substance has oxidizibility and increases flammability of other substances.
Adverse human health hazards : A large dose swallow may cause decreased blood, methemoglobinemia, headache, and dizziness.
Environmental effects : Not available
Physical and Chemical hazards : The chemical is noncombustible, but releases oxygen by decomposition and promotes combustibility of flammable substances. The mixture of the chemical and fine powder of flammable substances may burn vigorously or explode by heating or shock.
Class name of hazardous chemicals for SDS in Japan : Oxidizing substances

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. If necessary, 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 : Water, dry chemical powder, carbon dioxide, dry sand, foam
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 : As the chemical has hygroscopic property, keep the bottle tightly closed and store at a refrigerator. (0-6 °C)
Keep away from combustible substances.

8. Exposure control/Personal protection

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

Control parameters : Not established

Protective equipment

Respiration protective equipment

: Dust mask

Hands protective equipment : Impervious protective gloves

Eyes protective equipment : Safety goggles

9. Physical and chemical properties

Physical and chemical properties

Appearance : Crystal or powder

Color : Colorless-white

Odor : Odorless

Specific temperature or temperature range of physical conditions change

Boiling point : Decomposition

Melting point : 91 °C

Flash point : Noncombustible

Specific gravity : 2.332g/ml(20 °C)

Solubility

Solubility in solvents : Water ; Readily soluble
Easily soluble in 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.

Hazardous decomposition products

: Nitrogen oxides

11. Toxicological information

Acute toxicity : A large dose swallow may cause decreased blood, methemoglobinemia, headache, and dizziness.

Local effect :

Irritation to skin, eyes : If inhaled dust, nose, throat, and trachea are irritated.

Allergenic and sensitizing effects

: Not available

Chronic and long term toxicity : Not available

Carcinogenic effects : Listed on neither IARC nor NTP.
Mutagenicity : Not available
Teratogenic effects : Not available
Effects on the reproductive system : Not available

12. Ecological information

Rediualbility and degradability : Not available
Ecorediualbility : Not available
Ecotoxicity
Fish toxicty : 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.
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.
UN number : 1477

The information contained herein is based on several references and the present state of our knowledge. However the MSDS 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.