Issue date: 9/1/2003
Revision date: 5/27/2022

Safety Data Sheet

1. Chemical product and company identification

Product name	:	Cerium(Ⅲ) chloride heptahydrate

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	:	07176
Product numbers applied by the SDS	:	07176、08308-84

2. Hazards identification

GHS classification

Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
Environmental hazards	Aquatic acute	Category 2
	Aquatic chronic	Category 1

Hazard pictograms

Signal word	:	Warning
Hazard statements	:	Causes skin irritation Causes serious eye irritation Toxic to aquatic life Very toxic to aquatic life with long lasting effects

Precautionary statements

Prevention	:	Wash hands, forearms and face thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	:	IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see supplemental first aid instruction on this label). If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.

		Take off contaminated clothing and wash it before reuse. Collect spillage.
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
Cerium(Ⅲ) chloride heptahydrate	≥ 99	CeCl3・7H2O	Listed	232-227-8	18618-55-8

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	:	Remove contaminated clothing and the substance. Wash with plenty of water. If skin irritation or rash occurs, get medical attention.
First-aid measures after eye contact	:	Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.
First-aid measures after ingestion	:	Give the victim water or salt water and induce vomiting. If necessary, 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	:	Thermal decomposition emits harmful hydrogen chloride.
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. Flush contaminated area with copious amounts of water.

7. Handling and storage

Handling

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

Precautions for safe handling : Avoid formation of dust and aerosols.
Do not allow contact with oxidizing substances.

Storage

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

Material used in packaging/containers : Glass, polyethylene, polypropylene.

8. Exposure controls / Personal protection equipment

ACGIH TWA	Not established

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	: Colorless - pale yellow
Odor	: Odorless
pH	: No data available
Melting point	: 794 - 812 ° C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative density	: No data available
Density	: 2.25 g/cm³ (23℃)
Relative gas density	: No data available

Solubility	:	Water: Readily soluble. Organic solvents: Easily soluble in ethanol, soluble in hydrochloric acid.
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	:	May react with oxidizing substances.
Chemical stability	:	Stable under normal conditions. Hygroscopic.
Possibility of hazardous reactions	:	Stable under normal conditions of use.
Conditions to avoid	:	Light, heat, moisture.
Incompatible materials	:	Oxidizing substances.
Hazardous decomposition products	:	Chlorine, hydrogen chloride, cerium oxide.

11. Toxicological information

Acute toxicity (oral)	:	No classification rat LD50=2111mg/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	:	Causes skin irritation Since the substance causes skin irritation, it was classified into category 2.
Serious eye damage/irritation	:	Causes serious eye irritation Since the substance causes eye irritation, it was classified into category 2A.
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 May cause respiratory tract irritation.
STOT-repeated exposure	:	Classification not possible
Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	Toxic to aquatic life Daphnia magna EC50=1.14mg/L/48h
Aquatic chronic	:	Very toxic to aquatic life with long lasting effects Daphnia magna NOEC=0.015mg/L/21-day

Persistence and degradability

No additional information available

Bioaccumulative potential

Low bioconcentration
BCF : 16

Mobility in soil

No additional information available

Hazardous to the ozone layer

Ozone	:	Classification not possible

13. Disposal considerations

Ecology - waste materials	:	Dilute with copious water and adjust the pH to neutral, then flush in drains. Or entrust approved waste disposal companies with the disposal.
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)	:	3077
Proper Shipping Name (IMDG)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Packing group (IMDG)	:	III
Transport hazard class(es) (IMDG)	:	9

Air transport(IATA)

UN-No. (IATA)	:	3077
Proper Shipping Name (IATA)	:	Environmentally hazardous substance, solid, n.o.s.
Packing group (IATA)	:	III
Transport hazard class(es) (IATA)	:	9
Marine pollutant	:	Applicable
MFAG-No	:	171

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	:	NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation. ECHA (European Chemicals Agency). Handbook of 17322 Chemical Products, The Chemical Daily Co. (2022) .

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.