



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation MISA Standard 1, Rare Earth Metals

Product Number RMISA1

Other Identifying Product Numbers RMISA1-100, RMISA1-250

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company Ricca Chemical Company

Address 412 West Fork Drive

Arlington, TX 76012 USA

Telephone 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

Hazard Class	Category	Hazard Statements	Precautionary Statements
Skin Corrosion / Irritation	Category 2	H315	P264,P280,P302+P352,P321,P332+P313,P362+P364
Serious Eye Damage / Eye Irritation	Category 1	H318	P280,P305+P351+P338,P310
Corrosive to Metals	Category 1	H290	P234,P390,P406

2.2. GHS Label Elements

Pictograms:



Signal Word: Danger

Hazard Statements:

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

Hazard Number	Hazard Statement
H290	May be corrosive to metals
H315	Causes skin irritation
H318	Causes serious eye damage

Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

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Prevention

Precautionary Number	Precautionary Statement
P234	Keep only in original packaging.
P264	Wash hands, arms, and face thoroughly after handling.
P280	Wear protective gloves and eye protection.

Response

Precautionary Number	Precautionary Statement
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a poison center or doctor.
P332+P313	If skin irritation occurs: Get medical advice or attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P390	Absorb spillage to prevent material damage.

2.3. Hazards not Otherwise Classified

No other hazards identified.

2.4. Ingredients of Unknown Acute Toxicity

4.9 percent of this mixture consists of ingredient(s) of unknown acute oral toxicity. 5 percent of this mixture consists of ingredient(s) of unknown acute dermal toxicity.

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SECTION 3: Composition / Information on Ingredients

3.1. Components of Mixture

Chemical Name (IUPAC)	Common Name and Synonyms	CAS Number	Weight%
water	Water	7732-18-5	94.96
nitric acid	Nitric Acid	7697-37-2	4.81
cerium(III) nitrate hexahydrate	Cerium (III) Nitrate Hexahydrate; cerous nitrate hexahydrate	10294-41-4	< 0.1
thorium(4+) tetranitrate	Thorium Nitrate	13823-29-5	< 0.1
holmium (III) oxide	Holmium Oxide; Diholmium trioxide	12055-62-8	< 0.1
thulium (III) oxide	Thulium Oxide; Dithulium trioxide	12036-44-1	< 0.1
erbium (III) oxide	Erbium Oxide; Dierbium trioxide	12061-16-4	< 0.1
lutetium (III) oxide	Lutetium Oxide; Dilutetium trioxide	12032-20-1	< 0.1
ytterbium (III) oxide	Ytterbium (III) Oxide; Diytterbium trioxide	1314-37-0	< 0.1
trioxouranium	Uranium Oxide; Uranium trioxide	1344-58-7	< 0.1
scandium(III) oxide	Scandium Oxide; Discandium trioxide	12060-08-1	< 0.1
samarium (III) oxide	Samarium Oxide; Disamarium trioxide	12060-58-1	< 0.1
tetraterbium heptoxide	Terbium Oxide; Terbium heptahydrate	12037-01-3	< 0.1
hexapraseodymium undecaoxide	Praseodymium Oxide; Praseodymium (III,IV) oxide	12037-29-5	< 0.1
gadolinium (III) oxide	Gadolinium Oxide; Digadolinium trioxide	12064-62-9	< 0.1
dysprosium(III) oxide	Dysprosium Oxide	1308-87-8	< 0.1
europium(III) oxide	Europium Oxide	1308-96-9	< 0.1
lanthanum(III) oxide	Lanthanum Oxide; lanthanum trioxide	1312-81-8	< 0.1
neodymium (III) oxide	Neodymium Oxide; Dineodymium trioxide	1313-97-9	< 0.1
yttrium (III) oxide	Yttrium Oxide; Diyttrium trioxide	1314-36-9	< 0.1

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

Ingestion: Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: IF ON SKIN: Wash with plenty of water. May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time.

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4.2. Most Important Symptoms and Effects, Acute and Delayed

Causes skin irritation Corrosive Liquid. May be fatal if swallowed. Avoid contact with skin, eyes, and clothing. Avoid breathing vapor. If swallowed, do not induce vomiting. Dilute with water and call a physician. Wash areas of contact with plenty of water. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time.

4.3. Immediate Medical Attention or Special Treatment Needed

Immediately call a poison center or doctor. Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Immediately flush with plenty of water for at least 15 minutes. Remove any contaminated clothing. Wash with soap and water, then flush again with water. Call a physician if irritation develops. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use water or water spray.

5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Not combustible, but substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Can react with metals to release flammable hydrogen gas.

5.3. Special Protective Equipment and Precautions for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Absorb with suitable material and dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

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SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

Chemical Name	CAS Number	Exposure Limit
Uranium Oxide	1344-58-7	"0.25 mg/m3 TWA (as U)" As Uranium, insoluble compounds [RR-00045-3]
Nitric Acid	7697-37-2	2 ppm TWA; 5 mg/m3 TWA

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

No limits found.

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

No limits found.

ACGIH - Threshold Limit Values - Ceilings (TLV-C)

No limits found.

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

Chemical Name	CAS Number	Exposure Limit
Uranium Oxide	1344-58-7	"0.6 mg/m3 STEL (as U)" As Uranium soluble and insoluble compounds [RR-00617-7]
Nitric Acid	7697-37-2	4 ppm STEL

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

Chemical Name	CAS Number	Exposure Limit
Yttrium Oxide	1314-36-9	"1 mg/m3 TWA (as Y)" As Yttrium compounds [RR-00618-8]
Uranium Oxide	1344-58-7	"0.2 mg/m3 TWA (as U)" As Uranium soluble and insoluble compounds [RR-00617-7]
Nitric Acid	7697-37-2	2 ppm TWA

8.2. Engineering Controls

No specific controls are needed. Normal room ventilation is adequate.

8.3. Individual Protective Measures and Personal Protective Equipment

Respiratory Protection: Normal room ventilation is adequate.

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Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Physical State: liquid

Color: Colorless

Odor: Data not available.

Odor Threshold: Data not available.

Melting/Freezing Point: Approximately 0°C

Boiling Point/Range: Approximately 100°C

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Flash Point: Not flammable

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

pH: Acidic

Kinematic Viscosity: Data not available.

Solubility: miscible

Vapor Pressure: Data not available.

Evaporation Rate: Data not available.

Relative Density: 1.04

Relative Vapor Density: Data not available.

Particle Characteristics: Data not available.

Partition Coefficient n-octanol/water, log Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Keep only in original packaging. Strong bases, metallic powders.

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10.4. Hazardous Decomposition Products

Will not occur.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not acutely toxic.

Chemical Name	CAS Number	Toxicity
Cerium (III) Nitrate Hexahydrate	10294-41-4	Oral LD50 Rat 4200 mg/kg (Source: NLM_CIP)
Praseodymium Oxide	12037-29-5	Oral LD50 Rat >5000 mg/kg (no deaths occurred, Source: ECHA)
Samarium Oxide	12060-58-1	Oral LD50 Rat >5 g/kg (Source: NLM_CIP)
Erbium Oxide	12061-16-4	Oral LD50 Rat >5 g/kg (no deaths occurred, Source: NLM_CIP)
Gadolinium Oxide	12064-62-9	Oral LD50 Rat >5 g/kg (Source: NLM_CIP)
Dysprosium Oxide	1308-87-8	Oral LD50 Rat >5 g/kg (no deaths occurred, Source: ECHA)
Europium Oxide	1308-96-9	Oral LD50 Rat >5 g/kg (Source: NLM_CIP)
Uranium Oxide	1344-58-7	Oral LD50 Acute Toxicity Estimate 5 mg/kg (Source: ECHA)

Acute Toxicity - Dermal Exposure:

No information found.

Chemical Name	CAS Number	Toxicity
Cerium (III) Nitrate Hexahydrate	10294-41-4	Dermal LD50 Rat >2000 mg/kg (Source: ECHA_API) As Cerium nitrate [10108-73-3]

Acute Toxicity - Inhalation Exposure:

Not acutely toxic.

Chemical Name	CAS Number	Toxicity
Praseodymium Oxide	12037-29-5	Inhalation LC50 Rat >5.21 mg/L 4 h (no deaths occurred, dust, Source: ECHA)
Erbium Oxide	12061-16-4	Inhalation LC50 Rat >5.09 mg/L 4 h (no deaths occurred, dust, Source: ECHA)
Gadolinium Oxide	12064-62-9	Inhalation LC50 Rat >5.04 mg/L 4 h (no deaths occurred, particulate powder, Source: ECHA_API)
Neodymium Oxide	1313-97-9	Inhalation LC50 Rat >4.98 mg/L 4 h (no deaths occurred, dust, Source: ECHA_API)
Yttrium Oxide	1314-36-9	Inhalation LC50 Rat >5.09 mg/L 4 h (no deaths occurred, particulate powder, Source: ECHA_API)
Ytterbium (III) Oxide	1314-37-0	Inhalation LC50 Rat >1.31 mg/L 4 h (no deaths occurred, particulate powder, Source: ECHA_API)
Uranium Oxide	1344-58-7	Inhalation LC50 Acute Toxicity Estimate 0.05 mg/L 4 h (Source: ECHA)
Nitric Acid	7697-37-2	Inhalation LC50 Rat 3.22 mg/L 4 h (Source: WHMIS)

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11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
Nitric Acid	7697-37-2	Group 1 (Carcinogenic to Humans) - Monograph 100F [2012]; Monograph 54 [1992] As Acid mists, strong inorganic

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
No data found.		

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
No data found.		

11.3 Additional Toxicology Information:

Causes skin irritation. Causes serious eye damage.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Chemical Name	CAS Number	Species	Exposure	Toxicity
Cerium (III) Nitrate Hexahydrate	10294-41-4	Freshwater Fish	Acute	"LC50 96 h Oncorhynchus mykiss 0.3 mg/L [semi-static] (ECHA)" As Cerium nitrate [10108-73-3]
Cerium (III) Nitrate Hexahydrate	10294-41-4	Water Flea	Acute	"EC50 48 h Daphnia magna >100 mg/L (IUCLID)" As Cerium nitrate [10108-73-3]

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in soil

Data not available.



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12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

SECTION 14: Transportation Information

14.1 Transportation by Land - Department of Transportation (DOT, United States of America)

Sizes: 100 mL

UN Number: UN3264

Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, n.o.s. (Nitric Acid)

Hazard Class: 8

Packing Group: III

Hazard Label(s):



14.2 Transportation by Air - International Air Transport Association (IATA)

Sizes: 100 mL

UN Number: UN3264

Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, n.o.s. (Nitric Acid)

Hazard Class: 8

Packing Group: III

Hazard Label(s):





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14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 100 mL

UN Number: UN3264

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid)

Hazard Class: 8

Packing Group: III

Hazard Label(s):



SECTION 15: Regulatory Information

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15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
No data found.		

15.02. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Chemical Name	CAS Number	RQ	TPQ
Nitric Acid	7697-37-2	1000 lb TPQ	1000 lb EPCRA RQ

15.03. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Chemical Name	CAS Number	Regulatory Information
Nitric Acid	7697-37-2	1000 lb final RQ; 454 kg final RQ

15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

Chemical Name	CAS Number	List	Regulatory Information
Cerium (III) Nitrate Hexahydrate	10294-41-4	Emission Reporting	"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Thorium Nitrate	13823-29-5	Emission Reporting	"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Nitric Acid	7697-37-2	Emission Reporting	1.0 % de minimis concentration

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Thorium Nitrate	13823-29-5	Present
Nitric Acid	7697-37-2	Extraordinarily hazardous

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Thorium Nitrate	13823-29-5	Present
Nitric Acid	7697-37-2	Environmental hazard

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15.07. New Jersey Worker and Community Right-to-Know Components

Chemical Name	CAS Number	Regulatory Information
Cerium (III) Nitrate Hexahydrate	10294-41-4	"sn 3722" As Nitrate compounds [RR-01770-9]
Thorium Nitrate	13823-29-5	sn 1857
Nitric Acid	7697-37-2	sn 1356

15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
No data found.		

15.09. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Chemical Name	CAS Number	List	Status
Cerium (III) Nitrate Hexahydrate	10294-41-4	DSL	"Present" As Cerium nitrate [10108-73-3]
Lutetium Oxide	12032-20-1	DSL	Present
Thulium Oxide	12036-44-1	DSL	Present
Terbium Oxide	12037-01-3	NDSL	Present
Praseodymium Oxide	12037-29-5	DSL	Present
Holmium Oxide	12055-62-8	NDSL	Present
Scandium Oxide	12060-08-1	DSL	Present
Samarium Oxide	12060-58-1	DSL	Present
Erbium Oxide	12061-16-4	DSL	Present
Gadolinium Oxide	12064-62-9	DSL	Present
Dysprosium Oxide	1308-87-8	NDSL	Present
Europium Oxide	1308-96-9	DSL	Present
Lanthanum Oxide	1312-81-8	DSL	Present
Neodymium Oxide	1313-97-9	DSL	Present
Yttrium Oxide	1314-36-9	DSL	Present
Ytterbium (III) Oxide	1314-37-0	DSL	Present
Uranium Oxide	1344-58-7	DSL	Present
Thorium Nitrate	13823-29-5	DSL	Present
Nitric Acid	7697-37-2	DSL	Present
Water	7732-18-5	DSL	Present

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15.10. United States of America Toxic Substances Control Act (TSCA) List

Chemical Name	CAS Number	Status
Cerium (III) Nitrate Hexahydrate	10294-41-4	"Present (ACTIVE)" As Nitric acid, cerium(3+) salt (3:1) [10108-73-3]
Lutetium Oxide	12032-20-1	Present (ACTIVE)
Thulium Oxide	12036-44-1	Present (ACTIVE)
Terbium Oxide	12037-01-3	Present (ACTIVE)
Praseodymium Oxide	12037-29-5	Present (ACTIVE)
Holmium Oxide	12055-62-8	Present (ACTIVE)
Scandium Oxide	12060-08-1	Present (ACTIVE)
Samarium Oxide	12060-58-1	Present (ACTIVE)
Erbium Oxide	12061-16-4	Present (ACTIVE)
Gadolinium Oxide	12064-62-9	Present (ACTIVE)
Dysprosium Oxide	1308-87-8	Present (ACTIVE)
Europium Oxide	1308-96-9	Present (ACTIVE)
Lanthanum Oxide	1312-81-8	Present (ACTIVE)
Neodymium Oxide	1313-97-9	Present (ACTIVE)
Yttrium Oxide	1314-36-9	Present (ACTIVE)
Ytterbium (III) Oxide	1314-37-0	Present (ACTIVE)
Uranium Oxide	1344-58-7	Present (ACTIVE)
Thorium Nitrate	13823-29-5	Present (ACTIVE)
Nitric Acid	7697-37-2	Present (ACTIVE)
Water	7732-18-5	Present [XU] (ACTIVE)

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15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Chemical Name	CAS Number	List	Number
Cerium (III) Nitrate Hexahydrate	10294-41-4	EINECS	"233-297-2" As Cerium trinitrate [10108-73-3]
Lutetium Oxide	12032-20-1	EINECS	234-764-3
Thulium Oxide	12036-44-1	EINECS	234-851-6
Terbium Oxide	12037-01-3	EINECS	234-856-3
Praseodymium Oxide	12037-29-5	EINECS	234-857-9
Holmium Oxide	12055-62-8	EINECS	235-015-3
Scandium Oxide	12060-08-1	EINECS	235-042-0
Samarium Oxide	12060-58-1	EINECS	235-043-6
Erbium Oxide	12061-16-4	EINECS	235-045-7
Gadolinium Oxide	12064-62-9	EINECS	235-060-9
Dysprosium Oxide	1308-87-8	EINECS	215-164-0
Europium Oxide	1308-96-9	EINECS	215-165-6
Lanthanum Oxide	1312-81-8	EINECS	215-200-5
Neodymium Oxide	1313-97-9	EINECS	215-214-1
Yttrium Oxide	1314-36-9	EINECS	215-233-5
Ytterbium (III) Oxide	1314-37-0	EINECS	215-234-0
Uranium Oxide	1344-58-7	EINECS	215-701-9
Thorium Nitrate	13823-29-5	EINECS	237-514-1
Nitric Acid	7697-37-2	EINECS	231-714-2
Water	7732-18-5	EINECS	231-791-2

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15.12. China - Inventory of Existing chemical Substances (IECSC)

Chemical Name	CAS Number	Status
Cerium (III) Nitrate Hexahydrate	10294-41-4	Present [35628]
Lutetium Oxide	12032-20-1	Present (MEE Announcement No. 27 of 2020; Index No. 001)
Terbium Oxide	12037-01-3	Present (MEE Announcement No. 48 of 2021; Index No. 21)
Praseodymium Oxide	12037-29-5	Present [37582]
Holmium Oxide	12055-62-8	Present [37513]
Scandium Oxide	12060-08-1	Present [37528]
Samarium Oxide	12060-58-1	Present [37591]
Erbium Oxide	12061-16-4	Present [37480]
Gadolinium Oxide	12064-62-9	Present [37496]
Dysprosium Oxide	1308-87-8	Present [37475]
Europium Oxide	1308-96-9	Present [37669]
Lanthanum Oxide	1312-81-8	Present [37532]
Neodymium Oxide	1313-97-9	Present [37571]
Yttrium Oxide	1314-36-9	Present [37663]
Ytterbium (III) Oxide	1314-37-0	Present [37665]
Nitric Acid	7697-37-2	Present [35578]
Water	7732-18-5	Present [32224]

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15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

Chemical Name	CAS Number	List	Status
Cerium (III) Nitrate Hexahydrate	10294-41-4	Annex 1	"Present [KE-05423]" As Cerium nitrate [10108-73-3]
Lutetium Oxide	12032-20-1	Annex 1	Present [KE-22646]
Thulium Oxide	12036-44-1	Annex 1	Present [KE-33829]
Terbium Oxide	12037-01-3	Annex 1	Present [KE-33706]
Praseodymium Oxide	12037-29-5	Annex 1	Present [KE-29241]
Holmium Oxide	12055-62-8	Annex 1	Present [KE-19961]
Scandium Oxide	12060-08-1	Annex 1	Present [KE-30885]
Samarium Oxide	12060-58-1	Annex 1	Present [KE-30864]
Erbium Oxide	12061-16-4	Annex 1	Present [KE-10311]
Gadolinium Oxide	12064-62-9	Annex 1	Present [KE-10558]
Dysprosium Oxide	1308-87-8	Annex 1	Present [KE-10305]
Europium Oxide	1308-96-9	Annex 1	Present [KE-14110]
Lanthanum Oxide	1312-81-8	Annex 1	Present [KE-21836]
Neodymium Oxide	1313-97-9	Annex 1	Present [KE-25793]
Yttrium Oxide	1314-36-9	Annex 1	Present [KE-35504]
Ytterbium (III) Oxide	1314-37-0	Annex 1	Present [KE-35456]
Thorium Nitrate	13823-29-5	Annex 1	Present [KE-25929]
Nitric Acid	7697-37-2	Annex 1	Present [KE-25911]
Water	7732-18-5	Annex 1	Present [KE-35400]

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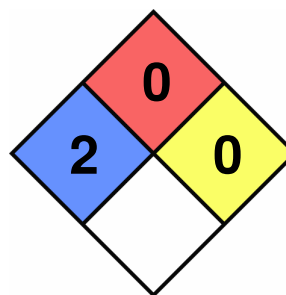
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Cerium (III) Nitrate Hexahydrate	10294-41-4	(1)-626
Lutetium Oxide	12032-20-1	(1)-775
Thulium Oxide	12036-44-1	(1)-821
Terbium Oxide	12037-01-3	(1)-819
Praseodymium Oxide	12037-29-5	(1)-800
Holmium Oxide	12055-62-8	(1)-741
Scandium Oxide	12060-08-1	(1)-1254
Samarium Oxide	12060-58-1	(1)-816
Erbium Oxide	12061-16-4	(1)-674
Gadolinium Oxide	12064-62-9	(1)-701
Dysprosium Oxide	1308-87-8	(1)-668
Europium Oxide	1308-96-9	(1)-679
Lanthanum Oxide	1312-81-8	(1)-757
Neodymium Oxide	1313-97-9	(1)-797
Yttrium Oxide	1314-36-9	(1)-560
Ytterbium (III) Oxide	1314-37-0	(1)-824
Nitric Acid	7697-37-2	(1)-394
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)

SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

Health: 2
Flammability: 0
Reactivity: 0
Special Hazard:





Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

16.2 Document Revision

Last Revision Date:

2026-05-22

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.