

SAFETY DATA SHEET

Version 8.2
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SDS No. Eternal-Element - ET-YCI-202501
Product Number Eternal-Element - ET-YCI-202501

Yttrium(III) chloride hexahydrate

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Yttrium(III) chloride hexahydrate
Product Number : ET-YCI-202501
Brand : Eternal-Element
CAS-No. : 10025-94-2

1.2 Details of the supplier of the safety data sheet

Company : Shanghai Sheeny Metal Mateirals Co.,Ltd.
Room 210, Kedi Building,
No. 688 Huajiang Road, Jiading District,
SHANGHAI
201800 SHANGHAI
CHINA
上海斯年金属材料有限公司
上海市嘉定区华江公路688号凯迪大厦
210室
邮政编码 : 201800
Telephone : +86 16602150044
Fax : +86 16602150044

1.3 Emergency telephone

Emergency Phone # : +86 4006632276

1.4 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For R&D use only. Not for pharmaceutical, household or other uses.

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance : solid
Color : white

May cause an allergic skin reaction. Causes serious eye damage. Very toxic to aquatic life with long lasting effects.

GHS Classification

Serious eye damage/eye irritation : Category 1
Skin sensitization : Sub-category 1B
Short-term (acute) aquatic hazard : Category 1
Long-term (chronic) aquatic hazard : Category 1

GHS label elements

Hazard pictograms : 
Signal Word : Danger
Hazard Statements : H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.



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P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/ doctor.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P391 Collect spillage.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Physical and chemical hazards

Not classified based on available information.

Health hazards

Causes serious eye damage. May cause an allergic skin reaction.

Environmental hazards

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Components

Chemical name	CAS-No.	Concentration (% w/w)
yttrium chloride hexahydrate	10025-94-2	<= 100

4. FIRST AID MEASURES

General advice : Show this material safety data sheet to the doctor in attendance.

If inhaled : After inhalation: fresh air.

In case of skin contact : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact : After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed : After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Most important symptoms and effects, both acute and delayed	: The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Protection of first-aiders	: For personal protection see section 8.
Notes to physician	: No data available

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: For this substance/mixture no limitations of extinguishing agents are given.
Specific hazards during fire fighting	: Not combustible. Ambient fire may liberate hazardous vapours.
Hazardous combustion products	: Hydrogen chloride gas Yttrium oxides
Specific extinguishing methods	: Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Special protective equipment for fire-fighters	: Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders :
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For personal protection see section 8.

- Environmental precautions : Do not let product enter drains.
- Methods and materials for containment and cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

7. HANDLING AND STORAGE

Handling

For precautions see section 2.2.

- Avoidance of contact : Strong oxidizing agents

Storage

- Further information on storage conditions : Tightly closed. Dry.
- Storage class : 11, Combustible Solids
- Recommended storage temperature : Recommended storage temperature see product label.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
yttrium chloride hexahydrate	10025-94-2	PC-TWA	1 mg/m ³ (Yttrium)	GBZ 2.1-2007
		TWA	1 mg/m ³ (Yttrium)	ACGIH

- Engineering measures** : No data available

Personal protective equipment

- Respiratory protection : required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.



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Recommended Filter type: : Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Eye/face protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Tightly fitting safety goggles

Skin and body protection : protective clothing

Hand protection

Material : Nitrile rubber
Break through time : 480 min
Glove thickness : 0.11 mm
Protective index : Full contact
Manufacturer : KCL 741 Dermatril® L

Material : Nitrile rubber
Break through time : 480 min
Glove thickness : 0.11 mm
Protective index : Splash contact
Manufacturer : KCL 741 Dermatril® L

Remarks : This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

Color : white

Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Melting point/ range	: 100 °C Method : dec.
Boiling point/boiling range	: No data available
Flash point	: Not applicable
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Flammability (liquids)	: No data available
Burning rate	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Relative density	: No data available
Density	: 2.18 g/cm ³ (25 °C) Method : lit.
Water solubility	: No data available
Partition coefficient: n-octanol/water	: Not applicable for inorganic substances
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Explosive properties	: No data available

Oxidizing properties : none
Molecular weight : 303.36 g/mol
Particle characteristics
Particle size : No data available

10. STABILITY AND REACTIVITY

Reactivity : No data available
Chemical stability : The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions : No data available
Conditions to avoid : Avoid moisture.
no information available
Incompatible materials : Strong oxidizing agents
Hazardous decomposition : In the event of fire: see section 5 products

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - female - \geq 2,000 mg/kg
(OECD Test Guideline 423)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: yttrium chloride
Inhalation : No data available

LD50 Dermal - Rat - male and female - $>$ 2,000 mg/kg
(OECD Test Guideline 402)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: yttrium chloride

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Eyes - Bovine cornea

Result: Irreversible effects on the eye - 4 h
(OECD Test Guideline 437)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: yttrium chloride

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: positive

(OECD Test Guideline 406)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: yttrium chloride

Germ cell mutagenicity

Test Type : Ames test

Test system : S. typhimurium

Metabolic activation : with and without metabolic activation

Method : OECD Test Guideline 471

Result: negative

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: yttrium chloride

Test Type : Chromosome aberration test in vitro

Test system : Chinese hamster ovary cells

Metabolic activation : with and without metabolic activation

Method : OECD Test Guideline 473

Result: negative

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: yttrium chloride

Test Type : gene mutation test

Test system : mouse lymphoma cells

Metabolic activation : with and without metabolic activation

Method : OECD Test Guideline 476

Result: negative

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: yttrium chloride

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - $\geq 1,000$ mg/kg

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: yttrium chloride

RTECS : ZG3160000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

yttrium chloride hexahydrate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.62 mg/l

End point: mortality

Exposure time : 96 h

Test Type: semi-static test

Analytical monitoring : yes

Method : OECD Test Guideline 203

GLP: yes

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: yttrium chloride

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (activated sludge): 470 mg/l

Exposure time : 3 h

Test Type: static test

Method : OECD Test Guideline 209

GLP: yes

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: yttrium chloride

Persistence and degradability

Components:

yttrium chloride hexahydrate:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

Components:

yttrium chloride hexahydrate:

Partition coefficient: n-octanol/water : Remarks: Not applicable for inorganic substances

Mobility in soil

No data available

Other adverse effects**Components:****yttrium chloride hexahydrate:**

Additional ecological information : Discharge into the environment must be avoided.

13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Offer surplus and non-recyclable solutions to a licensed disposal company.

14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(yttrium chloride hexahydrate)
Class : 9
Packing group : III
Labels : Class 9 - Miscellaneous dangerous substances and articles
Packing instruction (cargo aircraft) : 956
Packing instruction (passenger aircraft) : 956

IMDG-Code

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(yttrium chloride hexahydrate)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC Code

Not applicable for product as supplied.

National regulation**GB 6944/12268**

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(yttrium chloride hexahydrate)

Class : 9
Packing group : III
Labels : 9

Special precautions for user

Remarks : EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.
Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals :

Hazardous Chemicals for Priority Management :
under SAWS

Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for :
Import and Export

16. OTHER INFORMATION

Revision Date : 2025/01/25

Further information

Other information : The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product.

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Date format : yyyy/mm/dd

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
GBZ 2.1-2007 : Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

ACGIH / TWA : 8-hour, time-weighted average
GBZ 2.1-2007 / PC-TWA : Permissible concentration - time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United

States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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