

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Description:	Tellurium lump
Cat No. :	10758
Synonyms	Telloy
CAS No	13494-80-9
Molecular Formula	Te

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

Recommended Use	Laboratory chemicals.
Uses advised against	No Information available

Details of the supplier of the safety data sheet

Importer	Supplier
Fisher Scientific Korea	Thermo Fisher Scientific Chemicals, Inc.
D5,D6, Incheon Airport Logistics Complex	30 Bond Street
150, Gonghangdong-Ro 296 Beon-Gil	Ward Hill, MA 01835-8099
Jung-Gu, Incheon	
Tel: +82-1661-9555	
Fax: +82-2-2023-0603	

E-mail address	Chem.KR@thermofisher.com
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Emergency Telephone Number

Emergency telephone: Medical: +(82) 070-7686-0086 or + 1-703-741-5970
 CHEMTREC: 080 822 1374 (Local), CHEMTREC: 1-800-424-9300 or + 1-703-527-3887
 Korea: 00-308-13-2549 (24 hours a day, 7 days a week)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture
Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Sensitization	Category 1 Sub-category 1B
Reproductive Toxicity	Category 1
/; Effects on or via lactation	

Environmental hazards

Based on available data, the classification criteria are not met

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Label Elements



Signal Word

Danger

Hazard Statements

H317 - May cause an allergic skin reaction

H332 - Harmful if inhaled

H360 - May damage fertility or the unborn child

H362 - May cause harm to breast-fed children

Precautionary Statements

Prevention

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P271 - Use only outdoors or in a well-ventilated area

P272 - Contaminated work clothing should not be allowed out of the workplace

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P263 - Avoid contact during pregnancy and while nursing

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

Response

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P312 - Call a POISON CENTER or doctor if you feel unwell

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

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

P321 - Specific treatment (see supplemental first aid instructions on this label)

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

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor

Storage

P405 - Store locked up

Disposal

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

Other Hazards

This product does not contain any known or suspected endocrine disruptors

Toxic to terrestrial vertebrates

NFPA

Health
3

Flammability
1

Instability
0

Physical hazards
N/A

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	Common Name	CAS No	Index No	Weight %
Tellurium	Telloy	13494-80-9	KE-33095	99 - 100

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SECTION 4: FIRST AID MEASURES

Description of first aid measures

General Advice

If symptoms persist, call a physician.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Ingestion

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

None under normal use conditions.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

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Environmental precautions

Should not be released into the environment.

Methods and Material for Containment and Cleaning Up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Ensure adequate ventilation. Avoid ingestion and inhalation.

Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

Specific End Uses

Use in laboratories.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Component	CAS No	Korea	ACGIH TLV	OSHA PEL
Tellurium	13494-80-9	TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³	(Vacated) TWA: 0.1 mg/m ³ TWA: 0.1 mg/m ³

Component	CAS No	European Union	The United Kingdom	Germany
Tellurium	13494-80-9	Not listed	STEL: 0.3 mg/m ³ 15 min TWA: 0.1 mg/m ³ 8 hr	Not listed

ACGIH - Biological Exposure Indices

Component	CAS No	ACGIH - Biological Exposure Indices
Tellurium	13494-80-9	Not listed

Exposure Controls

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Goggles

Hand Protection

Protective gloves

Skin and body protection

Long sleeved clothing

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g.

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sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Personal protective equipment Use only those certified by the Korea Occupational Safety and Health Administration.
Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators
Recommended Filter type: Particulates filter conforming to EN 143
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
When RPE is used a face piece Fit Test should be conducted

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls No information available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance (Physical State, Color, etc.) Silver Solid Powder

Odor Odorless
Odor Threshold No data available
pH No information available

Melting Point/Range 450 °C / 842 °F
Softening Point No data available
Boiling Point/Range 990 °C / 1814 °F
Flash Point No information available **Method -** No information available

Evaporation Rate Not applicable **Solid**
Flammability (solid,gas) No information available
Explosion Limits No data available

Vapor Pressure 1 mmHg @ 520 °C
Vapor Density Not applicable **Solid**
Specific Gravity / Density No data available
Bulk Density No data available
Water Solubility Insoluble
Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Component	CAS No	log Pow
Tellurium	13494-80-9	No data available

Autoignition Temperature No data available
Decomposition Temperature No data available
Viscosity Not applicable **Solid**
Explosive Properties No information available
Oxidizing Properties No information available

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Molecular Formula Te
Molecular Weight 127.6

SECTION 10: STABILITY AND REACTIVITY

Reactivity None known, based on information available

Chemical Stability Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization Hazardous polymerization does not occur.
Hazardous Reactions None under normal processing.

Conditions to Avoid Incompatible products. Excess heat. Avoid dust formation.

Incompatible Materials Strong oxidizing agents.

Hazardous Decomposition Products
None under normal use conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

Information on expected route of exposure

Inhalation May produce an allergic reaction. Harmful by inhalation. Avoid breathing dust or spray mist.
Ingestion May cause allergic reaction. May be harmful if swallowed.
Eyes Avoid contact with eyes. Sensitization.
Skin Avoid contact with skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Information on Health Hazards

(a) acute toxicity;

Oral Based on available data, the classification criteria are not met
Dermal No data available
Inhalation Category 4

Component	CAS No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tellurium	13494-80-9	>5000 mg/kg (Rat)	No data available	>2420 mg/m ³ (Rat) 4 h

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

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**Respiratory
Skin**

No data available
Category 1

Component	CAS No	Test method	Test species	Study result
Tellurium	13494-80-9	No data available	No data available	No data available

No information available

(e) germ cell mutagenicity;

No data available

Component	CAS No	Test method	Test species	Study result
Tellurium	13494-80-9	No data available	No data available	No data available

(f) carcinogenicity;

No data available

Component	CAS No	Test method	Test species / Duration	Study result
Tellurium	13494-80-9	No data available	No data available	No data available

There are no known carcinogenic chemicals in this product

Component	CAS No	IARC	NTP	ACGIH	OSHA	UK
Tellurium	13494-80-9	Not listed	Not listed	Not listed	Not listed	Not listed

(g) reproductive toxicity;

Category 1

Component	CAS No	Test method	Test species / Duration	Study result
Tellurium	13494-80-9	No data available	No data available	No data available

(h) STOT-single exposure;

No data available

(i) STOT-repeated exposure;

No data available

Target Organs

None known.

(j) aspiration hazard;

Not applicable
Solid

Other Adverse Effects

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

Component	CAS No	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Tellurium	13494-80-9	Not applicable	Not applicable	Not applicable

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity effects

Do not empty into drains. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	CAS No	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Tellurium	13494-80-9	LC50>37.1 mg/L 96h	EC50 = 5.7 mg/L 48h	No data available	No data available

Persistence and degradability

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Persistence Degradability

Insoluble in water.
Not relevant for inorganic substances.

Bioaccumulative potential

May have some potential to bioaccumulate

Mobility in soil

Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water solubility.

Ozone Depletion Potential

Component	CAS No	Ozone Depletion Potential
Tellurium	13494-80-9	Not listed

Other adverse effects

No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues/Unused Products

Waste is classified as hazardous. Dispose in accordance with the Wastes Control Act (폐기물관리법).

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport

Not Regulated

IATA

Not regulated

IMDG/IMO

Marine Pollutant

Not regulated
No hazards identified

Special Precautions for User

No special precautions required

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Legend: X - Listed '-' - Not Listed

International Inventories

Component	CAS No	KECL	TSCA	EINECS	IECSC	DSL	NDSL	PICCS	ENCS	ISHL	AICS
Tellurium	13494-80-9	KE-33095	X	236-813-4	X	X	-	X	X		X

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Tellurium	13494-80-9	Not applicable	Not applicable	Not applicable	Annex I - Y28

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential
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Tellurium	13494-80-9	Not applicable	Not applicable	Not applicable
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Korean National Regulations

Component	CAS No	Act on Registration and Evaluation of Chemical Substances (K-REACH)	Authorised Chemicals	Existing Substances Subject to Registration
Tellurium	13494-80-9	Annex 1 - KE-33095	Not applicable	Not applicable

Component	CAS No	Chemical Control Act - Toxic Chemicals	Chemical Control Act - Prohibited Chemicals	Chemical Control Act - Use Restricted Chemicals
Tellurium	13494-80-9	Not applicable	Not applicable	Not applicable

Component	CAS No	Chemical Control Act - Accident Precaution Chemicals (% in mixtures)	Chemical Control Act - Accident Precaution Chemicals - Quantity limits Storage (% in mixtures)	Chemical Control Act - Accident Precaution Chemicals - Quantity limits Manufacture/Use (% in mixtures)
Tellurium	13494-80-9	Not applicable	Not applicable	Not applicable

Component	CAS No	Waste Control Law	Ministry of Environment - CMR risk	Ministry of Environment - Critically Controlled Substance
Tellurium	13494-80-9	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Harmful Agents Subject to Work Environment Monitoring	ISHA - Prohibited substances	ISHA - Substances requiring permission
Tellurium	13494-80-9	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Substances subject to control	ISHA - Harmful Agents Requiring Health Examination	ISHA - Permissible Exposure Limits
Tellurium	13494-80-9	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Subject to Process Safety Reports (minimum quantity)	ISHA - Threshold Limit Values (TLVs) Chemicals	ISHA - Special management materials
Tellurium	13494-80-9	Not applicable	TWA: 0.1 mg/m ³	Not applicable

National Fire Association - Dangerous Substances Minimum quantity requiring a permit

Component	CAS No	Class 1 - Oxidising solids	Class 2 - Flammable solid	Class 3 - Spontaneously Combustible Substances and Dangerous Substances When Wet	Class 4 - Flammable liquids	Class 5 - Self-reactive substances	Class 6 - Oxidising liquids
Tellurium	13494-80-9	Not applicable	5. Metal powder 500 kg Powder	Not applicable	Not applicable	Not applicable	Not applicable

Control Parameters

Component	CAS No	Korea	ACGIH - Biological Exposure Indices
Tellurium	13494-80-9	TWA: 0.1 mg/m ³	Not listed

US Management Information

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OSHA - Occupational Safety and Health Administration

Not applicable

Component	CAS No	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Tellurium	13494-80-9	Not applicable	Not applicable

CERCLA

Not applicable

Component	CAS No	CERCLA Extremely Hazardous Substances RQs	Hazardous Substances RQs	SARA 313 - Threshold Values %
Tellurium	13494-80-9	Not applicable	Not applicable	Not applicable

GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Danger.

H332 - Harmful if inhaled. H317 - May cause an allergic skin reaction. H360Df - May damage the unborn child. Suspected of damaging fertility. H362 - May cause harm to breast-fed children. H413 - May cause long lasting harmful effects to aquatic life.

P280 - Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention. P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 - Call a POISON CENTER or doctor if you feel unwell.

SECTION 16: OTHER INFORMATION

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

POW - Partition coefficient Octanol:Water

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

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Revision Date 08-Jun-2024

Prepared By	Health, Safety and Environmental Department
Creation Date	18-Oct-2010
Revision Date	08-Jun-2024
Revision Number	6
Revision Summary	New emergency telephone response service provider.

MOEL's Public Notice No. 2023-9 (Standards for Classification and Labeling of Chemical Substances and Safety Data Sheets)

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet