Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

Product Identifier:

Identification as on the label/Trade name: Tellurium Metal Powder, Enriched Tellurium.
Molecular weight: 127.60
Chemical formula: Te
Synonyms: None.

Details of the supplier of the Safety Data Sheet:

Neonest AB
Storgatan 70C, Solna
SE-17152
Sweden

Contact details:

+46-76-219-9731

24-hour Emergency Contact:

Swedish Poisons Centre
Phone: 112 - Ask for Poisons Information, 112 – begär Giftinformation.

Other International Contacts:

CHEMTREC 24-hour: +1-703-741-5500 (US + Worldwide)
NHS: 111 (UK)
Charite: +49 30 450 531 000 (Netherlands)
INTCF: +34 917689800 (Spain)
CapTv: +33 1 40 05 48 48 (France)

Section 2: Hazards Identification

Classification of the substances or mixture:

The mixture is classified according to: Regulation EC 1272/2008 [EU-GHS/CLP]

Hazard classes/Hazard categories:	Hazard statement:
Skin Sensitizer (Category 1B)	H317
Acute Toxicity, Inhalation (Category 4)	H332
Reproductive Toxicity (Category 1B	H360
Aquatic Chronic (Category 4)	H413

Label elements:

Hazard pictograms:

Signal Words: Danger.

Hazard Statements:

H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H360 May damage fertility or the unborn child.
H413 May cause long lasting harmful effects to aquatic life.

Precautionary Statements:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local and national regulations.

Other hazards: None known.

Section 3: Composition/Information on Ingredients

Substance/Mixture: Substance.

Ingredients:

Substance name (IUPAC/EC)	**CAS-No.** **EC-No.**	**Molecular weight**	**Concentration % by weight**	**Classification** EC1272/2008
Tellurium	13494-80-9 236-813-4	127.60	>99%	Skin Sens. 1B H317 Acute Tox. 4 H332 Repr. 1B H360 H360 Aquatic Chronic 4 H413

For explanation of abbreviations see Section 16.

Section 4: First-Aid Measures

Description of first aid measures:

In case of inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
In case of skin contact: In case of contact, immediately wash skin with soap and copious amounts of water.
In case of eye contact: Contamination of the eyes should be treated by immediate and prolonged irrigation with copious amounts of water. Assure adequate flushing of the eyes by separating the eyelids with fingers.
In case of ingestion: If swallowed, wash out mouth with water, provided person is conscious. Call a physician. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:
Inhalation: Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.
Skin contact: Very toxic in contact with skin.
Ingestion: Very toxic if swallowed.
Indication of any immediate medical attention and special treatment needed: Treat symptomatically. Show this safety data sheet to a physician or emergency room.

Section 5: Fire-Fighting Measures

Extinguisher media:

Suitable extinguisher media: Use water spray, alcohol resistant foam, dry chemical powder or carbon dioxide.
Unsuitable extinguishing media: None known.
Special hazards arising from the mixture: Tellurium oxides. This material, like most materials in powder form, is capable of creating a dust explosion. Flammable solid. Emits toxic fumes under fire conditions.
Advice for fire-fighters: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Further information: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Evacuate area. Shut off all sources of ignition. Use non-sparking tools. Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.
Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods for containment and cleaning up:
Methods for cleaning up: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Reference to other sections:
Treat recovered material as described in the section "Disposal considerations".

Section 7: Handling and Storage

Precautions for safe handling:

Advice on safe handling: Avoid contact with skin and eyes, and formation of dusts and aerosols.
Hygiene measures: Do not eat, drink or smoke when using this product.

Conditions for safe storage, including incompatibilities:
Requirements for storage areas and containers: Store in a cool place. Keep container tightly closed in a dry and well-ventilated place.

Section 8: Exposure Controls/Personal Protection

Control parameters:

Occupational exposure limits:

ACGIH TLV	TWA:	0.1 mg/m³
OSHA PEL	(Vacated) TWA:	0.1 mg/m³
	TWA: 0.1 mg/m³	
NIOSH IDLH	IDLH:	25 mg/m³
	TWA:	0.1 mg/m³
Quebec	TWA:	0.1 mg/m³
Mexico OEL (TWA)	TWA:	0.1 mg/m³
Ontario TWAEV	TWA:	0.1 mg/m³

Exposure controls:

Appropriate engineering controls: Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear safety goggles, face shield, other protective clothing. Safety shower and eye bath. Do not get in eyes or on skin or clothing.
Hand protection: Use chemical resistant gloves. Examples of preferred glove barrier materials include: Butyl rubber, Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, polyvinyl alcohol, Polyvinyl chloride.
Body protection: Wear protective clothing as appropriate.
Respiratory protection: Wear appropriate NIOSH/MSHA-approved respirator. Use only in a chemical fume hood. Do not breathe dust.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance (form): Solid (powder).
Colour: Silver.
Odour: Odourless.
Odour threshold: No data available.
Molecular Weight: 127.60
pH (concentration): No data available.
Melting point/range (°C): 450 °C
Boiling point/range (°C): 990 °C
Freezing point (°C): No data available.
Flash point (°C): No data available.

Evaporation rate: No data available.
Flammability (solid, gas): No data available.
Ignition temperature (°C): No data available.
Upper/lower flammability/explosive limits: No data available.
Vapour pressure (20 °C): 1mm Hg @ 520 °C
Vapour density: No data available.
Relative density (25 °C): 6.24g/mL at 25 °C
Water solubility (g/L) at 20 °C: Insoluble.
n-Octanol/Water partition coefficient: No data available.
Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity, dynamic (mPa s): No data available.
Explosive properties: The substance or mixture is not classified as explosive.
Oxidising properties: The substance or mixture is not classified as oxidizing.

Section 10: Stability and Reactivity

Reactivity: No dangerous reaction known under conditions of normal use.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.
Conditions to avoid: None known.
Incompatible materials: Zinc, cadmium, sodium, potassium, strong acids, strong bases, halogens.
Hazardous decomposition products: None known.

Section 11: Toxicological Information

Information on toxicological effects:

Acute Toxicity:
Harmful if inhaled.
LD_{50} Oral, Rat - 83 mg/kg

Classification according to GHS (1272/2008/EG, CLP)

Skin corrosion/irritation:
Not classified based on available information.
Serious eye damage/eye irritation:
Not classified based on available information.
Respiratory or skin sensitisation:
May cause an allergic skin reaction.
Germ cell mutagenicity:
Not classified based on available information.
Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen.
Reproductive toxicity:
Effects on Fertility: Post-implantation mortality (dead or resorbed implants per total number of implants). Specific Developmental Abnormalities: central nervous system.
Effects on Embryo or Foetus: Fetotoxicity (except death). Specific Developmental Abnormalities: musculoskeletal system. Effect on Newborn: Other neonatal measure or effects.

Developmental Toxicity - Rat - Oral
Specific Developmental Abnormalities: central nervous system.
Specific target organ toxicity – single exposure (STOT):
Not classified based on available information.
Specific target organ toxicity (STOT) – repeated exposure:
Not classified based on available information.
Aspiration toxicity:
Not classified based on available information.

Section 12: Ecological Information

Toxicity: Do not empty into drains. Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
Persistence and degradability: Insoluble in water.
Bioaccumulative potential: No data available.
Mobility in soil: Not likely mobile in the environment due to its low water solubility.
Results of PBT& vPvB assessment: Not relevant.
Other adverse effects: No data available.

Section 13: Disposal Considerations

Waste treatment methods: Material in the elemental state should be recovered for reuse or recycling. Contact licensed professional waste disposal service to dispose of this material. Dissolve the material in a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Section 14: Transport Information

DOT:

Proper Shipping Name: TOXIC SOLID, INORGANIC, N.O.S. (Tellurium).
Hazard Class: 6.1
UN Number: 3288
Packing Group: III

IMDG:

Proper Shipping Name: TOXIC SOLID, INORGANIC, N.O.S. (Tellurium).
Hazard Class: 6.1
UN Number: 3288
Packing Group: III
EMS No: F-A, S-A
Marine Pollutant: No

IATA:

Proper Shipping Name: TOXIC SOLID, INORGANIC, N.O.S. (Tellurium).
Hazard Class: 6.1
UN Number: 3288
Packing Group: III

Section 15: Regulatory Information

EU regulations:

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
Not listed.
Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
Not listed.
Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry
Not listed.
Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
Not listed.

Authorisations:

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
Not listed.

Restrictions on use:

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use
Not regulated.
Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Not listed.
Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work
Not regulated.
Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding.
Not regulated.

Other EU regulations:

Directive 2012/18/EU on major accident hazards involving dangerous substances
Not listed.
Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.
Always applicable.

Directive 94/33/EC on the protection of young people at work
Not listed.

Other regulations: The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.
U.S. Federal Regulations
TSCA 12(b): Not applicable.
SARA 302: No components are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (de minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard.
Clean Water Act: Not applicable.
Clean Air Act: Not applicable.
OSHA: Not applicable.
CERCLA: Not applicable.
WHMIS Hazard Class: D1A Very toxic material.
Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components: No components are subject to the Pennsylvania Right to Know Act.
New Jersey Right To Know Components: No components are subject to the New Jersey Right to Know Act.
Rhode Island Right to Know Components: No components are subject to the Rhode Island Right to Know Act.
California Prop. 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.
National regulations: Follow national regulation for work with chemical agents.
Chemical safety assessment: No Chemical Safety Assessment has been carried out.

Section 16: Other Information

List of abbreviations:
ACGIH American Conference of Governmental Industrial Hygienists
ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road
ALARA As Low As Is Reasonably Achievable
AMU Atomic Mass Unit
ANSI American National Standards Institute
BLS Basic Life Support
CAM Continuous Air Monitor
CAS Chemical Abstracts Service (division of the American Chemical Society)
CEN European Committee for Standardization
CERCLA Comprehensive Environmental Response Compensation and Liability Act
CLP Classification, Labelling and Packaging (European Union)
CPR Controlled Products Regulations (Canada)
CWA Clean Water Act (USA)
DAC Derived Air Concentration (USA)
DOE United States Department of Energy (USA)
DOT United States Department of Transportation (USA)
DSL Domestic Substances List (Canada)
EC50 Half Maximal Effective Concentration
EINECS European Inventory of Existing Commercial Chemical Substances

EHS Environmentally Hazardous Substance
ELINCS European List of Notified Chemical Substances
EMS Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA Environmental Protection Agency (USA)
EPCRA Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986
GHS Globally Harmonized System
HMIS Hazardous Materials Identification System (USA)
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Containers
ICAO International Civil Aviation Organization
IDLH Immediately Dangerous to Life or Health
IMDG International Maritime Code for Dangerous Goods
LC50 Lethal concentration, 50 percent
LD50 Lethal dose, 50 percent
LDLO Lethal Dose Low
LOEC Lowest-Observed-Effective Concentration
MARPOL International Convention for the Prevention of Pollution from Ships
MSHA Mine Safety and Health Administration (USA)
NCRP National Council on Radiation Protection & Measurements (USA)
NDSL Non-Domestic Substances List (Canada)
NFPA National Fire Protection Association (USA)
NIOSH National Institute for Occupational Safety and Health (USA)
NOEC No Observed Effect Concentration
N.O.S. Not Otherwise Specified
NRC Nuclear Regulatory Commission (USA)
NTP National Toxicology Program (USA)
OSHA Occupational Safety and Health Administration (USA)
PBT Persistent Bioaccumulative and Toxic Chemical
PEL Permissible Exposure Limit
PIH Poisonous by Inhalation Hazard
RCRA Resource Conservation and Recovery Act (USA)
RCT Radiation Control Technician
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (Europe)
RID Regulations Concerning the International Transport of Dangerous Goods by Rail
RTECS Registry of Toxic Effects of Chemical Substances
SARA Superfund Amendments and Reauthorization Act (USA)
TDG Transportation of Dangerous Goods (Canada)
TIH Toxic by Inhalation Hazard
TLV Threshold Limit Value
TPQ Threshold Planning Quantity
TSCA Toxic Substances Control Act
TWA Time Weighted Average
UN United Nations (Number)
VOC Volatile Organic Compound
vPvB Very Persistent Very Bioaccumulative Chemical
WGK Wassergefährdungsklassen (Germany: Water Hazard Classes)

WHMIS Workplace Hazardous Materials Information System

References:

Not available.

Full text of any H-statements not written out in full under Sections 2 to 15:

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H360 May damage fertility or the unborn child.

H413 May cause long lasting harmful effects to aquatic life.

Revision information:

None.

Training information:

Follow training instructions when handling this material.

Further Information:

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.