

Australian statement of hazardous nature : Classified as hazardous according to criteria of Safe Work Australia

## Section 1 - Identification

**Product Name** Tellurium, plasma standard solution, Specpure®, Te 1000 µg/ml

<b>Product Code</b>	<b>47183</b>
<b>Address</b>	ThermoFisher Scientific Australia Pty Ltd 5 Caribbean Drive, Scoresby VICTORIA 3179, Australia
<b>Emergency Tel.</b>	<b>CHEMTREC®</b> <b>03 9757 4559 or +613 9757 4559</b>
<b>Telephone / Fax Numbers</b>	Tel: 1300 735 292 Fax: 1800 067 639
<b>E-mail address</b>	ANZinfo@thermofisher.com

**Recommended Use** Laboratory chemicals.

**Uses advised against** This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling and storing these substances. This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction. This product contains one or more substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

## Section 2 - Hazard(s) Identification

### Classification under Safe Work Australia

Classified as hazardous according to criteria of Safe Work Australia

#### Physical hazards

Substances/mixtures corrosive to metal	Category 1
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#### Health hazards

Skin Corrosion/Irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Reproductive Toxicity	Category 1B
Specific target organ toxicity - (single exposure)	Category 3

#### Environmental hazards

No hazards identified

#### Label Elements



Exclamation Mark



Health Hazard



Corrosion

Signal Word

Danger

#### Hazard Statements

H290 - May be corrosive to metals  
H314 - Causes severe skin burns and eye damage  
H335 - May cause respiratory irritation  
H360 - May damage fertility or the unborn child

#### Precautionary Statements

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P234 - Keep only in original packaging  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
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  
P363 - Wash contaminated clothing before reuse  
P390 - Absorb spillage to prevent material damage  
P402 - Store in a dry place  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
P406 - Store in corrosion resistant polypropylene container with a resistant inliner  
P501 - Dispose of contents/ container to an approved waste disposal plant

#### Other information

Toxic to terrestrial vertebrates  
This product does not contain any known or suspected endocrine disruptors

## Section 3 - Composition and Information on Ingredients

Component	CAS No	Weight %
Water	7732-18-5	69.9
Hydrochloric acid	7647-01-0	30.0

## Section 4 - First Aid Measures

#### Inhalation

If not breathing, give artificial respiration. Remove from exposure, lie down. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.

#### Ingestion

Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an

	unconscious person. Call a physician immediately.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>General Advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Self-Protection of the First Aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
<b>First Aid Facilities</b>	Eyewash, safety shower and washroom.
<b>Most important symptoms and effects</b>	Causes burns by all exposure routes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
<b>Notes to Physician</b>	Treat symptomatically.

## Section 5 - Fire Fighting Measures

### Suitable Extinguishing Media

Not combustible. CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

### Extinguishing media which must not be used for safety reasons

No information available.

### Hazardous Decomposition Products

Hydrogen chloride, Tellurium oxide.

### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes.

### Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## Section 6 - Accidental Release Measures

### Emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### Environmental Precautions

Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

### Methods for Containment and Clean Up

#### Clean-up methods - small spillage

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

#### Clean-up methods - large spillage

Typically only supplied in small quantities as packaged goods.

If extremely toxic or used in larger quantities ensure a spillage action plan is in place. Evacuate area. Control the source and/or contain the spill if safe and able to do so. Use temporary diking, sand bags, dry sand, earth or proprietary booms/absorbent pads if available. Obtain advice on containment, neutralisation and clean-up from local emergency responders.

#### 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. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

#### Conditions for Safe Storage, Including any Incompatibilities

Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

AS 1940-2004 - The storage and handling of flammable and combustible liquids

## Section 8 - Exposure Controls and Personal Protection

#### Exposure limits

**AUS** - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] updated in August, 2005. Safe Work Australia

**ACGIH** - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace.

**UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020.

**DE** - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

**NZ** - Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

Component	Australia	New Zealand WEL	ACGIH TLV	The United Kingdom	Germany
Hydrochloric acid	Ceiling: 5 ppm Ceiling: 7.5 mg/m <sup>3</sup>	Ceiling: 5 ppm Ceiling: 7.5 mg/m <sup>3</sup>	Ceiling: 2 ppm	STEL: 5 ppm 15 min STEL: 8 mg/m <sup>3</sup> 15 min TWA: 1 ppm 8 hr TWA: 2 mg/m <sup>3</sup> 8 hr	TWA: 2 ppm (8 Stunden). AGW - exposure factor 2 TWA: 3 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 2 TWA: 2 ppm (8 Stunden). MAK TWA: 3.0 mg/m <sup>3</sup> (8 Stunden). MAK Höhepunkt: 4 ppm Höhepunkt: 6 mg/m <sup>3</sup>

#### Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### Exposure Controls

##### Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment.

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 (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

### Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Nitrile rubber	See manufacturers recommendations	-	AS/NZS 2161	(minimum requirement)

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. 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.

### Skin and body protection

Long sleeved clothing

### Respiratory Protection

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices

### Recommended Filter type:

Acid gases filter (or AUS/NZ equivalent)  
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

Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

# Section 9 - Physical and Chemical Properties

## Information on basic physical and chemical properties

### Appearance

#### Physical State

Liquid

### Odor

Acidic

### Odor Threshold

No data available

### pH

No information available

### Melting Point/Range

No data available

### Softening Point

No data available

### Boiling Point/Range

No information available

### Flash Point

No information available

**Method -** No information available

### Evaporation Rate

No data available

### Flammability (solid,gas)

Not applicable

Liquid

### Explosion Limits

No data available

### Vapor Pressure

23 hPa @ 20 °C

### Vapor Density

No data available

(Air = 1.0)

### Specific Gravity / Density

No data available

### Bulk Density

Not applicable

Liquid

### Water Solubility

Miscible

### Solubility in other solvents

No information available

### Partition Coefficient (n-octanol/water)

### Autoignition Temperature

No data available

### Decomposition Temperature

No data available

### Viscosity

No data available

### Explosive Properties

Vapors may form explosive mixtures with air

**Oxidizing Properties** No information available

**Other information**

**Molecular Formula** Te in 30% HCl

## Section 10 - Stability and Reactivity

**Reactivity** None known, based on information available

**Stability** Stable under normal conditions.

**Conditions to Avoid** Keep away from open flames, hot surfaces and sources of ignition.

**Incompatible Materials** Strong bases.

**Hazardous Decomposition Products** Hydrogen chloride. Tellurium oxide.

**Hazardous Polymerization** No information available.

## Section 11 - Toxicological Information

### Information on Toxicological Effects

#### Product Information

**(a) acute toxicity;**

**Oral**

Based on available data, the classification criteria are not met

**Dermal**

Based on available data, the classification criteria are not met

**Inhalation**

Based on available data, the classification criteria are not met

#### Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	-	-	-
Hydrochloric acid	238 - 277 mg/kg ( Rat )	> 5010 mg/kg ( Rabbit )	1.68 mg/L ( Rat ) 1 h

**(b) skin corrosion/irritation;** Category 1 B

**(c) serious eye damage/irritation;** Category 1

**(d) respiratory or skin sensitization;**

**Respiratory**

No data available

**Skin**

No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;** No data available

There are no known carcinogenic chemicals in this product

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** Category 3

**Results / Target organs**

Central nervous system (CNS)

	Respiratory system
(i) STOT-repeated exposure;	No data available
Target Organs	None known.
(j) aspiration hazard;	Category 1
Symptoms / effects, both acute and delayed	Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

## Section 12 - Ecological Information

**Ecotoxicity effects** The product contains following substances which are hazardous for the environment. Contains a substance which is: Very toxic to aquatic organisms. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Hydrochloric acid	282 mg/L LC50 96 h Gambusia affinis mg/L LC50 48 h Leuciscus idus	56mg/L EC50 72h Daphnia	-	-

**Persistence and Degradability** Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary

**Persistence** May persist, based on information available.

**Degradation in sewage treatment plant** Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**Bioaccumulative Potential** May have some potential to bioaccumulate

**Mobility** The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility Highly mobile in soils

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Ozone Depletion Potential** This product does not contain any known or suspected substance

## Section 13 - Disposal Considerations

**Waste from Residues/Unused Products** Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

**Other Information** Chemical wastes should be disposed through a licensed commercial waste collection service. Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

## Section 14 - Transport Information

IMDG/IMO

UN-No UN1789  
Proper Shipping Name HYDROCHLORIC ACID  
Hazard Class 8  
Packing Group II

**ADG**

UN-No UN1789  
Proper Shipping Name HYDROCHLORIC ACID  
Hazard Class 8  
Packing Group II

Component	Hazchem Code
Hydrochloric acid	2RE
7647-01-0 ( 30.0 )	2R

**IATA**

UN-No UN1789  
Proper Shipping Name HYDROCHLORIC ACID  
Hazard Class 8  
Packing Group II

Environmental hazards No hazards identified  
Special Precautions No special precautions required  
Additional information None known

## Section 15 - Regulatory Information

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

**National Regulations Australia**

See section 8 for national exposure control parameters.

**Standard for the Uniform Scheduling of Medicines and Poisons**

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons.

Component	Standard for the Uniform Scheduling of Medicines and Poisons
Hydrochloric acid - 7647-01-0	Schedule 5 listed - except its salts and derivatives; in preparations except: in preparations containing <=0.5% of Hydrochloric acid, or for therapeutic use Schedule 6 listed - except its salts and derivatives; except: when included in Schedule 5, in preparations for therapeutic use, or in preparations containing <=0.5% of Hydrochloric acid

**Australian Industrial Chemicals Introduction Scheme (AICIS)**

Component	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Water - 7732-18-5	Present	-
Hydrochloric acid - 7647-01-0	Present	-

**Australian - Illicit Drug Precursors/Reagents Substance List**

This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling and storing these substances.



### Chemicals of Security Concern

This product contains one or more substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern

Component	Australian - Illicit Drug Precursors/Reagents Substance List	Chemicals of Security Concern
Hydrochloric acid - 7647-01-0	Category 3	Listed in Appendix A

### Legend

Category 3 - Chemicals and apparatus that may be used in the illicit production of drugs. Purchases from this list should alert companies or organizations to seek further indicators of any suspicious orders or enquiries. No official reporting is required for items on this list unless considered warranted

**Chemicals of Security Concern** - for further information see <http://www.chemicalsecurity.gov.au/securityconcerns>

**National pollutant inventory** Subject to reporting requirements

Component	National pollutant inventory
Hydrochloric acid - 7647-01-0	10 tonne/yr. Threshold category 1 400 tonne/yr. Threshold category 2a 1 tonne/h. Threshold category 2a 2000 tonne/yr. Threshold category 2b 60000 MWH. Threshold category 2b 20 MW. Threshold category 2b

### Prohibition or notification/licensing requirements

Shown below are details of specific prohibition/notifications or licensing requirements when they apply.

This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction.

### International Inventories

Component	AICS	NZIoC	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	ISHL	IECSC	KECL
Water	X	X	231-791-2	-	X	X	-	X	X		X	KE-35400
Hydrochloric acid	X	X	231-595-7	-	X	X	-	X	X	X	X	KE-20189

**Legend:** X - Listed, '-' - Not Listed. **KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### International Regulations

**Ozone Depletion Potential** This product does not contain any known or suspected substance

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Rotterdam Convention (PIC)** Not applicable

### Basel convention on the control of transboundary movements of hazardous wastes and their disposal

Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

Component	Basel Convention (Hazardous Waste)	Australian Hazardous Waste Act - Categories of Wastes to Be Controlled
Hydrochloric acid - 7647-01-0	Annex I - Y34	Y34 solid or solution

Component	CAS No	OECD HPV	Restriction of	Seveso III Directive	Seveso III Directive
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			Hazardous Substances (RoHS)	(2012/18/EC) - Qualifying Quantities for Major Accident Notification	(2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Water	7732-18-5	Listed	Not applicable	Not applicable	Not applicable
Hydrochloric acid	7647-01-0	Listed	Not applicable	25 tonne	250 tonne

**Authorisation/Restrictions according to EU REACH**

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Hydrochloric acid	-	Use restricted. See item 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

## Section 16 - Other Information

### Legend

<b>AICS</b> - Australian Inventory of Chemical Substances	<b>NZIoC</b> - New Zealand Inventory of Chemicals
<b>TSCA</b> - United States Toxic Substances Control Act Section 8(b) Inventory	<b>EINECS/ELINCS</b> - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
<b>DSL/NDL</b> - Canadian Domestic Substances List/Non-Domestic Substances List	<b>ENCS</b> - Japanese Existing and New Chemical Substances
<b>IECSC</b> - Chinese Inventory of Existing Chemical Substances	<b>KECL</b> - Korean Existing and Evaluated Chemical Substances
<b>PICCS</b> - Philippines Inventory of Chemicals and Chemical Substances	<b>CAS</b> - Chemical Abstracts Service
<b>TWA</b> - Time Weighted Average	<b>ACGIH</b> - American Conference of Governmental Industrial Hygienists
<b>IARC</b> - International Agency for Research on Cancer	Predicted No Effect Concentration (PNEC)
<b>ICAO/IATA</b> - International Civil Aviation Organization/International Air Transport Association	<b>IMO/IMDG</b> - International Maritime Organization/International Maritime Dangerous Goods Code
<b>MARPOL</b> - International Convention for the Prevention of Pollution from Ships	<b>ADG</b> - Australian Code for the Transport of Dangerous Goods by Road and Rail
<b>NZS 5433:2020</b> - Transport of Dangerous Goods on Land	<b>OECD</b> - Organisation for Economic Co-operation and Development
<b>LD50</b> - Lethal Dose 50%	<b>LC50</b> - Lethal Concentration 50%
<b>EC50</b> - Effective Concentration 50%	<b>ATE</b> - Acute Toxicity Estimate
<b>WEL</b> - Workplace Exposure Limit	<b>RPE</b> - Respiratory Protective Equipment
<b>DNEL</b> - Derived No Effect Level	<b>NOEC</b> - No Observed Effect Concentration
<b>POW</b> - Partition coefficient Octanol:Water	<b>BCF</b> - Bioconcentration factor
<b>vPvB</b> - very Persistent, very Bioaccumulative	<b>PBT</b> - Persistent, Bioaccumulative, Toxic
<b>VOC</b> - (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

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

<b>Physical hazards</b>	On basis of test data
<b>Health Hazards</b>	Calculation method
<b>Environmental hazards</b>	Calculation method

**Training Advice**

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

<b>Revision Date</b>	30-Aug-2023
<b>Revision Summary</b>	SDS sections updated.

**This Safety Data Sheet (SDS) is prepared in accordance to and complies with the requirements of Safe Work Australia - Work Health and Safety Regulations (WHS Regulations).**

**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**