SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Trade name Gallium(II) telluride

Stock number: 41881
CAS Number: 12024-14-5
EC number: 234-690-1

1.2 Relevant identified uses of the substance or mixture and uses advised against.
Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Alfa Aesar
Avocado Research Chemicals, Ltd.
Shore Road
Port of Heysham Industrial Park
Heysham Lancashire LA3 2XY
United Kingdom
Office Tel: +44 (0) 1524 850506
Office Fax: +44 (0) 1524 850608
Email: uktech@alfa.com
www.alfa.com
Informing department: Product safety department.

1.4 Emergency telephone number:
Call Carechem 24 at +44 (0) 1865 407333 (English only); +44 (0) 1235 239670 (Multi-language)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
GHS07
Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H332 Harmful if inhaled.

Other hazards that do not result in classification No information known.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.

Hazard pictograms
GHS07

Signal word Warning
Hazard statements
H302 Harmful if swallowed.
H332 Harmful if inhaled.

Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351 IF INGESTED: Call a POISON CENTER/doctor if you feel unwell.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P306 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/Information on ingredients

3.1 Substances
CAS# Designation:
12024-14-5 Gallium(II) telluride
Identification number(s):
EC number: 234-690-1

SECTION 4: First aid measures

4.1 Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.

After skin contact
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

After eye contact
Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing
Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed
Harmful if swallowed.
Harmful if inhaled.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents Product is not flammable. Use fire-fighting measures that suit the surrounding fire.

5.2 Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Tellurium dioxide (TeO2)
Gallium oxide
Trade name **Gallium(II) telluride**

5.3 Advice for firefighters
Protective equipment:
- Wear self-contained breathing apparatus.
- Wear full protective suit.

**SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.

6.2 Environmental precautions:
Do not allow product to reach sewage system or water bodies.

6.3 Methods and material for containment and cleaning up:
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.

Prevention of secondary hazards:
No special measures required.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

**SECTION 7: Handling and storage**

7.1 Precautions for safe handling
Handle under dry protective gas.
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure adequate ventilation.

Information about protection against explosions and fires:
The product is not flammable.

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and containers:
- No special requirements.

Information about storage in one common storage facility:
- Store away from water.
- Store away from oxidising agents.

Further information about storage conditions:
- Store under dry inert gas.
- This product is moisture sensitive.
- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed containers.
- Protect from humidity and keep away from water.

7.3 Specific end use(s)
No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

Additional information about design of technical systems:
- Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters

Components with critical values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: No data.

8.2 Exposure controls

Personal protective equipment
General protective and hygienic measures
- The usual precautionary measures should be adhered to in handling the chemicals.
- Keep away from foodstuffs, beverages and food.
- Instantly remove any soiled and impregnated garments.
- Wash hands during breaks and at the end of the work.
- Maintain an ergonomically appropriate working environment.
- Breathing equipment: Use breathing protection with high concentrations.

Recommended filter device for short term use:
- Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:
Check protective gloves prior to each use for their proper condition.

Material of gloves: Impervious gloves
Eye protection: Safety glasses
Body protection: Protective work clothing.

**SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

**General Information**

**Appearance:**
- Chunks

**Odour:**
- Odourless

**Odour threshold:**
- Not determined

**pH-value:**
- Not applicable

**Change in condition**

**Melting point/Melting range:**
- Not determined

**Boiling point/Boiling range:**
- Not determined

**Sublimation temperature / start:**
- Not determined

**Inflammability (solid, gaseous):**
- Not determined

**Ignition temperature:**
- Not determined

**Decomposition temperature:**
- Not determined

**Self-inflammability:**
- Not determined

**Danger of explosion:**
- Not determined

**Critical values for explosion:**
- Lower:
- Not determined
- Upper:
- Not determined

**Steam pressure:**
- Not applicable

**Density:**
- Not determined

**Relative density:**
- Not determined

**Vapour density:**
- Not applicable

**Evaporation rate:**
- Not applicable

**Solubility in / Miscibility with**

**Water:**
- Insoluble
SECTION 10: Stability and reactivity

10.1 Reactivity No information known.
10.2 Chemical stability Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions Reacts with strong oxidising agents
10.4 Conditions to avoid No further relevant information available.
10.5 Incompatible materials:
Water/moisture
Oxidising agents
10.6 Hazardous decomposition products:
Tellurium dioxide (TeO2)
Gallium oxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity:
Harmful if inhaled.
Harmful if swallowed.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion: May cause irritation
Eye irritation or corrosion: May cause irritation
Sensitization: No sensitizing effect known.
Germ cell mutagenicity: No effects known.
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity: No effects known.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Subacute to chronic toxicity: No effects known.
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
Additional ecological information:
General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.
Avoid transfer into the environment.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation
Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN Number
ADR, ADN, IMDG, IATA: Not applicable
14.2 UN proper shipping name
ADR, ADN, IMDG, IATA: Not applicable
14.3 Transport hazard class(es)
ADR, ADN, IMDG, IATA: Not applicable
Class: Not applicable
14.4 Environmental hazards:
Not applicable
14.5 Special precautions for user
Not applicable
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC
Code: Not applicable.
UN “Model Regulation”: -

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Australian Inventory of Chemical Substances Substance is listed.
Standard for the Uniform Scheduling of Medicines and Poisons Substance is not listed.
National regulations Information about limitation of use:
Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.
Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
Trade name **Gallium(II) telluride**

### Other regulations, limitations and prohibitive regulations

#### ELINCS (European List of Notified Chemical Substances)
Substance is not listed.

#### Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006
Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

#### Annex XIV of the REACH Regulations (requiring Authorisation for use)
Substance is not listed.

#### 15.2 Chemical safety assessment
A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing SDS:** Global Marketing Department

**Abbreviations and acronyms:**
- **ADR:** Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- **GHS:** Globally Harmonized System of Classification and Labelling of Chemicals
- **EINECS:** European Inventory of Existing Commercial Chemical Substances
- **CAS:** Chemical Abstracts Service (division of the American Chemical Society)
- **LC50:** Lethal concentration, 50 percent
- **LD50:** Lethal dose, 50 percent
- **vPvB:** very Persistent and very Bioaccumulative
- **ACGIH:** American Conference of Governmental Industrial Hygienists (USA)
- **OSHA:** Occupational Safety and Health Administration (USA)
- **NTP:** National Toxicology Program (USA)
- **IARC:** International Agency for Research on Cancer
- **EPA:** Environmental Protection Agency (USA)
- **Acute Tox. 4:** Acute toxicity, Hazard Category 4