

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 03/26/2007

Reviewed on 01/29/2007

1 Identification of substance:

Product details:

Product name: Tellurium pieces

Stock number: 11076

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company
 Johnson Matthey Catalog Company, Inc.
 30 Bond Street
 Ward Hill, MA 01835-8099
 Emergency Phone: (978) 521-6300
 CHEMTREC: (800) 424-9300
 Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency information:

During normal hours the Health, Safety and Environmental Department.
 After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

Tellurium (CAS# 13494-80-9): 100%

Identification number(s):

EINECS Number: 236-813-4

3 Hazards identification

Hazard description:



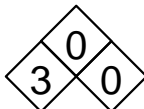
T Toxic

Information pertaining to particular dangers for man and environment

R 25 Toxic if swallowed.

Classification system

NFPA Ratings (scale 0-4)



Health = 3

Fire = 0

Reactivity = 0

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	1
FIRE	0
REACTIVITY	0

Health (acute effects) = 1

Flammability = 0

Reactivity = 0

4 First aid measures

General information

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

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After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately 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 a doctor.

After swallowing

Do not induce vomiting; immediately call for medical help.

Seek immediate medical advice.

5 Fire fighting measures**Suitable extinguishing agents**

Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents Water

Special hazards caused by the material, its products of combustion or resulting gases:

In case of fire, the following can be released:

Metal oxide fume

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures**Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Additional information:

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage**Handling****Information for safe handling:**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires:

Keep ignition sources away.

Storage**Requirements to be met by storerooms and receptacles:**

No special requirements.

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Information about storage in one common storage facility:

Store away from oxidizing agents.

Reacts with certain metals.

Store away from halogens.

Do not store with interhalogens.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

8 Exposure controls and 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.

Components with limit values that require monitoring at the workplace:

Tellurium and tellurium compounds (as Te)

	mg(Te)/m3
ACGIH TLV	0.1
Austria MAK	0.1
Belgium TWA	0.1
Denmark TWA	0.1
Finland TWA	0.1; 0.3-STEEL
France VME	0.1
Germany MAK	0.1
Korea TLV	0.1
Netherlands MAC-TGG	0.1
Norway TWA	0.1
Poland TWA	0.01; 0.03-STEEL
Sweden NGV	0.1
Switzerland MAK-W	0.1; 0.5-KZG-W
United Kingdom TWA	0.1
USA PEL	0.1

Additional information: No data**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Protection of hands:

Check protective gloves prior to each use for their proper condition.

Impervious gloves

Material of gloves

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses

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Product name: Tellurium pieces**Body protection:** Protective work clothing.

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9 Physical and chemical properties:**General Information**

Form:	Pieces
Color:	Silver grey
Odor:	Odorless

Change in condition

Melting point/Melting range:	449.5°C (841°F)
Boiling point/Boiling range:	989.8°C (1814°F)
Sublimation temperature / start:	Not determined

Flash point: Not applicable**Ignition temperature:** Not determined**Decomposition temperature:** Not determined**Danger of explosion:** Product does not present an explosion hazard.**Explosion limits:**

Lower:	Not determined
Upper:	Not determined

Vapor pressure: Not determined**Density at 20°C (68°F):** 6.24 g/cm³**Solubility in / Miscibility with Water:** Insoluble**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

Materials to be avoided:

Oxidizing agents

Halogens

Interhalogens

Dangerous reactions Reacts with certain metals.**Dangerous products of decomposition:** Metal oxide fume**11 Toxicological information****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	45 mg/kg (gpg)
		20 mg/kg (mus)
		83 mg/kg (rat)
		67 mg/kg (rbt)
Inhalative	LC50/4H	>2420 mg/m ³ /4H (rat)

Primary irritant effect:**on the skin:** Powder: irritant effect

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on the eye: Powder: irritant effect**Sensitization:** No sensitizing effects known.**Other information (about experimental toxicology):**

Reproductive effects have been observed on tests with laboratory animals.

Subacute to chronic toxicity:

Tellurium is converted in the body to dimethyl telluride which imparts a garlic-like odor to the breath and sweat. Heavy exposure may result in headache, drowsiness, metallic taste, loss of appetite, nausea, tremors, convulsions, and respiratory arrest.

Subacute to chronic toxicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals:

Behavioral - somnolence (general depressed activity).

Behavioral - anorexia (human).

Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - multiple enzyme effects.

Lungs, Thorax, or Respiration - other changes.

Lungs, Thorax, or Respiration - fibrosis (interstitial)

Lung, Thorax, or Respiration - structural or functional change in trachea or bronchi.

Nutritional and Gross Metabolic - weight loss or decreased weight gain.

Liver - other changes.

Liver - fatty liver degeneration.

Kidney, Ureter, Bladder - other changes.

Reproductive - Specific Developmental Abnormalities - Central Nervous System.

Reproductive - Specific Developmental Abnormalities - craniofacial (including nose and tongue).

Reproductive - Specific Developmental Abnormalities - musculoskeletal system.

Reproductive - Effects on Embryo or Fetus - fetotoxicity (except death, e.g., stunted fetus).

Reproductive - Effects on Newborn - other neonatal measures or effects.

Reproductive - Fertility - post-implantation mortality (e.g. dead/or resorbed implants per total number of implants).

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:**General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations**Product:****Recommendation**

Consult state, local or national regulations to ensure proper disposal.

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Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**14 Transport information**

Not a hazardous material for transportation.

DOT regulations:**Hazard class:** None**Label** 6.1**Land transport ADR/RID (cross-border)****ADR/RID class:** None**Maritime transport IMDG:****IMDG Class:** None**UN Number:****Label** 6.1**Air transport ICAO-TI and IATA-DGR:****ICAO/IATA Class:** None**UN/ID Number:****Label** 6.1**Transport/Additional information:**

Not dangerous according to the above specifications.

15 Regulations**Product related hazard informations:****Hazard symbols:**

T Toxic

Risk phrases:

25 Toxic if swallowed.

Safety phrases:

20 When using do not eat or drink.

36 Wear suitable protective clothing.

45 In case of accident or if you feel unwell, seek medical advice immediately.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

Information about limitation of use:

For use only by technically qualified individuals.

USA

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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 MSDS: Health, Safety and Environmental Department.

Contact: Darrell R. Sanders

USA