

## GHS Safety Data Sheet

SDS No. : GEE01GAEG

Date Issued: 2008/02/19

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### Section 1. Identification of the substance or mixture and of the supplier

#### 1.1 Product Information

Product name: **Ge Germanium**

| Product number: | Purity      | Form                  | Size (mm) or Shape |
|-----------------|-------------|-----------------------|--------------------|
| GEE05GB         | 99.99%(4N)  | lumps                 | 7~10               |
| GEE07GB         | 4N          | grains                | 2~5                |
| GEE06GB         | 99.999%(5N) | lumps                 | 7~10               |
| GEE08GB         | 5N          | grains                | 2~5                |
| GEE09CB         | 5N          | chips                 | 5×5×1              |
| GEE02CB         | —           | chips                 | 10×10×1            |
| GEE10CB         | 5N          | chips                 | 10×10×1            |
| —               | —           | tablet & rod / target | Various sizes      |

#### 1.2 Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd.

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### Section 2. Hazards identification

#### GHS Classification

| Health Hazards    | Environmental Hazards | Physical Hazards  |
|-------------------|-----------------------|---|
| No data available | No data available     | <b>Flammable solids : Not classified</b><br><b>Pyrophoric solids : Not classified</b><br><b>Self-heating substances and mixtures : Not classified</b><br><b>Substances and mixtures which, in contact with water, emit flammable gases : Not classified</b> |

#### GHS Label:

Pictograms or symbols: Not applicable

Warning word: Not applicable

| Hazard information | Description of precaution   |
|--------------------|---|
| Not applicable     | Wear protective gloves/protective clothing/eye protection/respiratory protection/face protection during handling.<br>Avoid release to the environment and collect spillage.<br>Protect from sunlight. Store in a cool, dry and well-ventilated place.<br>Keep container tightly closed. |

#### Additional hazard information :

With respect to additional hazard information, see Section 11.

### Section 3. Composition / information on ingredients

|                              |                  |
|------------------------------|------------------|
| Chemical or common name:     | Germanium        |
| Chemical formula:            | Ge               |
| Single Substance or Mixture: | Single substance |
| Composition:                 | 100%             |
| CAS #:                       | 7440-56-4        |
| RTECS#:                      | LY5200000        |
| TSCA inventory :             | listed           |
| EINECS:                      | 2311643          |

### Section 4. First aid measures

|               |  |
|---------------|--|
| Eye contact:  | Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention. |
| Skin contact: | Promptly flush contaminated skin with soap or mild detergent and water.<br>Contact physician if irritation continues.                    |
| Inhalation:   | Remove the exposed person immediately and provide fresh air.<br>Get medical attention.   |
| Ingestion:    | Rinse mouth and throat with water. Get medical attention immediately.  |

### Section 5. Fire fighting measures

|                      |  |
|----------------------|--|
| Extinguishing media: | This product cannot catch fire. Use media appropriate for surrounding fire.  |
| Fire fighting        | Self-contained breathing apparatus and full protective clothing should be used, if this product is involved in fire. |

### Section 6. Accidental release measures

|   |  |
|---|--|
| Personal Precautions:                   | Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its vapor/dusts.  |
| Environmental hazard precautions:       | Shut off leak if without risk.<br>Prevent flow out to river, etc. so as not to badly affect.   |
| Method for containment and cleaning up: | Indoor leakage: Ventilate as much as possible until the cleaning is completed.<br>Outdoor leakage: Work from the windward and evacuate the leeward crowd.<br>Gather up, pack in closed container as much as possible.<br>Carefully collect remnant and move to a safe place. |

### Section 7. Handling and storage

#### Precautions to be taken in handling:

|                |  |
|----------------|--|
| Safe handling: | Use protective wears and local ventilation equipment, if inhalation or skin contact is foreseen. |
|----------------|--|

**Precautions to be taken in storage:**

General precautions: Store the material in a sealed container.  
Store in a cool, dry, well ventilated and dark place away from incompatible materials.

**Section 8. Exposure controls / personal protection**

Exposure guideline: ACGIH (2013): No data available  
OSHA (2006) : No data available

Facility measures: Local ventilation of closed work room or total proper ventilation to prevent inhalation.

Protective ware: Wear appropriate NIOSH/MSHA-approved respirator, safety goggles, impervious gloves, protective wear, protective boots.

**Section 9. Physical and chemical properties**

Color and Form: Lustrous greyish-white metal, odorless.

Chemical formula: Ge

Formula weight: 72.64

Melting point: 937.4 °C

Boiling point: 2830 °C

Density: 5.323 g/cm<sup>3</sup>

Water solubility: Insoluble

Flammable: Non-flammable substance

Oxidation: None

**Section10. Stability and reactivity**

Stability: Stable in closed container at room temperature.

Reactivity

Incompatibility: Strong oxidizing agents, halogens

**Section11. Toxicological information**

Acute toxicity: GHS ; No data available

Skin corrosive / irritation: GHS ; No data available

Serious eye damage / irritation: GHS ; No data available

Respiratory/ skin sensitization: GHS ; No data available

Germ cell mutagenicity: GHS ; No data available

Carcinogenicity: GHS ; No data available

Reproductive toxicity: GHS ; No data available

Specific target organ toxicity

—single exposure: GHS ; No data available

Specific target organ toxicity

—repeated exposure: GHS ; No data available

Other cautions: Mechanical stimulation by dust affects eyes, skin and respiratory system.

## Section 12. Ecological information

Ecotoxicity:

Hazardous to the aquatic environment

– acute toxicity: GHS ; No data available

– chronic toxicity: GHS ; No data available

Hazardous to the ozone layer

GHS ; No data available

No Freon or Halon

Degradability:

No data available

Bioaccumulative potential:

| Ingredients<br>Name | Biological half-life<br>( day ) | Rate of absorption |                   |
|---------------------|---------------------------------|--------------------|-------------------|
|                     |                                 | oral               | respiratory tract |
| Ge                  | 1                               | 0.01               | 0.26              |

Fish toxicity:

No data available

Mobility in soil:

No data available

## Section 13. Disposal considerations

Disposal method: User of the product should contract with the local government or licensed 'Industrial Waste Haulers' for disposal of waste.

## Section 14. Transport information

UN classification: Not hazardous

UN number: None

HS code: 8112.99

Marine pollution: None

Precautions: Container should be transported in a secure position, in a well-ventilated vehicle.

## Section 15. Regulatory information

TSCA inventory :listed

Please refer to any other local / national measures that may be relevant.

## Section 16. Other information

The information described above is believed to be correct. However, Kojundo Chemical Lab. makes no representation, warranty nor guarantee of any kind with respect to the information on this data sheet or any use of the product based upon this information.