

# SAFETY DATA SHEET

## 1. Identification

**Product identifier** GIGSGEIBAI Powder

**Other means of identification**

SDS number 2KU

Materion Code 2KU

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company name** Materion Advanced Chemicals Inc.

**Address** 407 N 13th Street  
1316 W. St. Paul Avenue  
Milwaukee, WI 53233  
United States

**Telephone** 414.212.0290

**E-mail** advancedmaterials@materion.com

**Contact person** Laura Hamilton

**Emergency phone number** Chemtrec 800.424.9300

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards**

Acute toxicity, oral	Category 3
Acute toxicity, inhalation	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1
Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Specific target organ toxicity, repeated exposure	Category 1

**Environmental hazards**

Hazardous to the aquatic environment, acute hazard	Category 1
Hazardous to the aquatic environment, long-term hazard	Category 1

**OSHA defined hazards** Not classified.

### Label elements



**Signal word** Danger

**Hazard statement** Toxic if swallowed. Causes skin irritation. Causes serious eye irritation. Toxic if inhaled. May cause respiratory irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

**Precautionary statement**

**Prevention** Avoid breathing dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves.

<b>Response</b>	If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Arsenic		7440-38-2	
Indium		7440-74-6	
Selenium		7782-49-2	
Silicon		7440-21-3	

#### Additional components

Chemical name	Common name and synonyms	CAS number	%
Germanium		7440-56-4	

### 4. First-aid measures

#### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor/physician.

#### Skin contact

Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

#### Eye contact

Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

#### Ingestion

Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

#### Most important symptoms/effects, acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

#### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

#### General information

If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance.

### 5. Fire-fighting measures

#### Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

#### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

#### Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Prevent product from entering drains. Stop the flow of material, if this is without risk.  Large Spills: Wet down with water and dike for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Shovel the material into waste container. Following product recovery, flush area with water.  Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Minimize dust generation and accumulation. Do not taste or swallow. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Arsenic (CAS 7440-38-2)	TWA	0.01 mg/m <sup>3</sup>

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Selenium (CAS 7782-49-2)	PEL	0.2 mg/m <sup>3</sup>	
Silicon (CAS 7440-21-3)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Arsenic (CAS 7440-38-2)	TWA	0.01 mg/m <sup>3</sup>
Indium (CAS 7440-74-6)	TWA	0.1 mg/m <sup>3</sup>
Selenium (CAS 7782-49-2)	TWA	0.2 mg/m <sup>3</sup>

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Arsenic (CAS 7440-38-2)	Ceiling	0.002 mg/m3	
Indium (CAS 7440-74-6)	TWA	0.1 mg/m3	
Selenium (CAS 7782-49-2)	TWA	0.2 mg/m3	
Silicon (CAS 7440-21-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total

**US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants**

Components	Type	Value
Arsenic (CAS 7440-38-2)	PEL	0.01 mg/m3
	TWA	0.005 mg/m3
Indium (CAS 7440-74-6)	PEL	0.1 mg/m3
Selenium (CAS 7782-49-2)	PEL	0.2 mg/m3

**Biological limit values****ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Arsenic (CAS 7440-38-2)	35 µg/l	Inorganic arsenic, plus methylated metabolites, as As	Urine	*

\* - For sampling details, please see the source document.

**Exposure guidelines****US NIOSH Pocket Guide to Chemical Hazards: Skin designation**

Arsenic (CAS 7440-38-2) Can be absorbed through the skin.

**Appropriate engineering controls** Provide eyewash station and safety shower.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Chemical goggles are recommended.

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** Dust & vapor respirator.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Wash hands after handling and before eating. Keep away from food and drink.

**9. Physical and chemical properties****Appearance**

**Physical state** Solid.

**Form** Powder

**Color** Not available.

**Odor** Not available.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** 313.88 °F (156.6 °C) estimated

**Initial boiling point and boiling range** 1265 °F (685 °C) estimated

**Flash point** Not available.

Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
<b>Upper/lower flammability or explosive limits</b>	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	3847.77 hPa estimated
Vapor density	Not available.
Relative density	Not available.
<b>Solubility(ies)</b>	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
<b>Other information</b>	
Density	5.44 g/cm3 estimated
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	5.44 estimated

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	Toxic if inhaled.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Toxic if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

### Information on toxicological effects

**Acute toxicity** Toxic if inhaled. Toxic if swallowed.

Components	Species	Test Results
Arsenic (CAS 7440-38-2)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Mouse	145 mg/kg
	Rat	763 mg/kg
<b>Other</b>		
LD50	Mouse	46.2 mg/kg
	Rat	13.39 mg/kg
Additional components	Species	Test Results

Germanium (CAS 7440-56-4)

**Acute**

**Oral**

LD50 Rat 104 mg/kg

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** Not classifiable as to carcinogenicity to humans.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Arsenic (CAS 7440-38-2) 1 Carcinogenic to humans.

Selenium (CAS 7782-49-2) 3 Not classifiable as to carcinogenicity to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Arsenic (CAS 7440-38-2) Cancer

**US. National Toxicology Program (NTP) Report on Carcinogens**

Arsenic (CAS 7440-38-2) Known To Be Human Carcinogen.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**12. Ecological information**

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Product	Species	Test Results
GIGSGEIBAI Powder		
<b>Aquatic</b>		
Fish	LC50 Fish	24.75 mg/l, 96 hours
<b>Acute</b>		
Fish	LC50 Fish	24.75 mg/l, 96 hours estimated

Components	Species	Test Results
Arsenic (CAS 7440-38-2)		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 9.9 mg/l, 96 hours
<b>Persistence and degradability</b>	No data is available on the degradability of this substance.	
<b>Bioaccumulative potential</b>	No data available.	
<b>Mobility in soil</b>	No data available.	
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	
<b>13. Disposal considerations</b>		
<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.	
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.	
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.	
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).	
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.	
<b>14. Transport information</b>		
<b>DOT</b>		
<b>UN number</b>	UN3288	
<b>UN proper shipping name</b>	Toxic solid, inorganic, n.o.s. (Arsenic, Tellurium)	
<b>Transport hazard class(es)</b>		
<b>Class</b>	6.1	
<b>Subsidiary risk</b>	-	
<b>Packing group</b>	II	
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.	
<b>IATA</b>		
<b>UN number</b>	UN3288	
<b>UN proper shipping name</b>	Toxic solid, inorganic, n.o.s. (Arsenic, selenium)	
<b>Transport hazard class(es)</b>		
<b>Class</b>	6.1	
<b>Subsidiary risk</b>	-	
<b>Packing group</b>	II	
<b>Environmental hazards</b>	No.	
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.	
<b>IMDG</b>		
<b>UN number</b>	UN3288	
<b>UN proper shipping name</b>	Tox solid, inorganic, n.o.s. (Arsenic, Selenium)	
<b>Transport hazard class(es)</b>		
<b>Class</b>	6.1	
<b>Subsidiary risk</b>	-	
<b>Packing group</b>	II	
<b>Environmental hazards</b>		
<b>Marine pollutant</b>	No.	

EmS

Not available.

Special precautions for user

Read safety instructions, SDS and emergency procedures before handling.

DOT; IATA; IMDG



### 15. Regulatory information

**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Toxic Substances Control Act (TSCA)**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Arsenic (CAS 7440-38-2) Listed.

Selenium (CAS 7782-49-2) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Arsenic (CAS 7440-38-2)

- Cancer
- Liver
- Skin
- Respiratory irritation
- Nervous system
- Acute toxicity

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical**

Yes

**Classified hazard categories**

- Acute toxicity (any route of exposure)
- Skin corrosion or irritation
- Serious eye damage or eye irritation
- Germ cell mutagenicity
- Carcinogenicity
- Specific target organ toxicity (single or repeated exposure)

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Arsenic	7440-38-2	
Selenium	7782-49-2	

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Arsenic (CAS 7440-38-2)

Selenium (CAS 7782-49-2)



**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations**

**California Proposition 65**



**WARNING:** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Arsenic (CAS 7440-38-2)

Listed: February 27, 1987

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Arsenic (CAS 7440-38-2)

Selenium (CAS 7782-49-2)

**16. Other information, including date of preparation or last revision**

**Issue date** 06-07-2019

**Revision date** 04-29-2021

**Version #** 03

**Disclaimer**

Materion Advanced Chemicals Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. This document has been prepared using data from sources considered to be technically reliable and the information is believed to be correct. Materion makes no warranties, expressed or implied, as to the accuracy of the information contained herein. Materion cannot anticipate all conditions under which this information and its products may be used and the actual conditions of use are beyond its control. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.