

## GHS Safety Data Sheet

SDS No. : ZNF03PAEG

Date Issued : 2024/10/04

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

#### Product Information

Product name: ZnAl<sub>2</sub>O<sub>4</sub> Zirconium silicide

Product	Purity	Form	Size or Shape
ZNF01PB	99.9%(3N)	Powder	—
ZNF02GB	99.9%(3N)	Grains	—
—	99.9%(3N)	Target	Various size, Various shape

(Example) ZnAl<sub>2</sub>O<sub>x</sub>

#### Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd.

1-28, 5-chome, Chiyoda, Sakado-shi, Saitama Japan 350-0284

Phone: +81-49-284-1511 Fax: +81-49-284-1351

Emergency Phone : +81-49-284-1511

**Recommended uses and restrictions on use:** For research purposes

### Section 2. Hazards identification

#### GHS Classification

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

#### 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. Avoid release to the environment and collect spillage. Protect from sunlight. Store in a cool, dry and well-ventilated place. Keep container tightly closed. Dispose of contents/ container in accordance with local/national regulations.

### Section 3. Composition / information on ingredients

Chemical or common name: Zinc aluminate, Dialuminium zinc tetraoxide

Chemical formula: ZnAl<sub>2</sub>O<sub>4</sub>

Single Substance or Compound: Single substance

Composition: 100%

CAS #: 12068-53-0

RTECS#: Not listed

TSCA inventory : Listed

EINECS: 2351010



High Purity Materials

KOJUNDO CHEMICAL LABORATORY CO.,LTD.

---

## 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.  
Contact physician if irritation continues.
- Inhalation: Remove the exposed person immediately and provide fresh air.  
Get medical attention.
- Ingestion: Rinse mouth and throat with water. Get medical attention immediately.
- 

## Section 5. Fire fighting measures

- Extinguishing media: Use media appropriate for surrounding fire.
- Fire fighting: The product is not combustible.  
Self-contained breathing apparatus and full protective clothing should be used, if the material 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.  
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.  
Outdoor leakage: Work from the windward and evacuate the leeward crowd.  
Gather up, pack in closed DOT-approved waste container as much as possible.  
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.  
Avoid prolonged or repeated exposure.

### 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(2024)		OSHA(2006)
	Chemical Name	TLV-TWA mg/m <sup>3</sup>	TLV-STEL mg/m <sup>3</sup>
	Aluminum insoluble compounds	1(R)	—

(R):respirable particles

- 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 etc.



## Section 9. Physical and chemical properties

Appearance:	Solid
Chemical formula:	ZnAl <sub>2</sub> O <sub>4</sub>
Formula weight:	183.4
Melting point:	No data available
Boiling point:	No data available
Density:	No data available
Solubility:	No data available
Flammability:	Non-combustible substance
Oxidation:	None

## Section10. Stability and reactivity

Stability:	Stable in closed container.
Reactivity:	
Incompatibility:	No data available
Condition to avoid:	No data available

## 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 sensitization:	GHS : No data available
Skin sensitization:	GHS : No data available
Germ cell mutagenicity:	GHS : No data available
Carcinogenicity:	GHS : No data available

Chemical Name	ACGIH (2024)	IARC (2024)	NTP (2021)
Aluminum insoluble compounds	A4	—	—

ACGIH A4 Not classifiable as a Human Carcinogen

Reproductive toxicity:	GHS : No data available
Specific target organ toxicity	
—single exposure:	GHS : No data available
—repeated exposure:	GHS : No data available
Aspiration hazard:	GHS : No data available

## Section12. Ecological information

Ecotoxicity:	
Hazardous to the aquatic environment	
short-term (acute) hazard:	GHS : No data available
long-term (chronic) hazard:	GHS : No data available
Hazardous to the ozone layer	GHS : No data available
	No Freon or Halon
Fish toxicity:	No data available
Degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available

## Section13. Disposal considerations

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



High Purity Materials

KOJUNDO CHEMICAL LABORATORY CO.,LTD.

---

**Section 14. Transport information**

UN classification:	Non-hazards
UN number:	None
HS code:	2841.90
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**

This SDS is for provision of information, and it does not represent a guarantee the properties or safeties of the product.

The information herein is based on the references we could obtained and the present state of our knowledge, however, this SDS does not always cover all information about the product. Some new information or amendments may be added afterwards.

Prior to use, please investigate the laws and regulations of the organization, area and country where the product is to be used. The information is intended to ordinary usage, in case of special handling, sufficient care should be taken.



High Purity Materials

---

KOJUNDO CHEMICAL LABORATORY CO.,LTD.