

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product name	Silicon Carbide (SiC) Substrate
Use of the substance / preparation	Electronic industry material.
Manufacture	SICOXS CORPORATION

2. HAZARDS IDENTIFICATION

GHS classification

Physical hazards:

Explosives	Not applicable
Flammable gases	Not applicable
Flammable aerosols	Not applicable
Oxidizing gases	Not applicable
High Pressure Gases	Not applicable
Flammable liquids	Not applicable
Flammable solids	Not classified
Self-reactive substances and mixtures	Not applicable
Pyrophoric liquids	Not applicable
Pyrophoric solids	Not classified
Self-heating substances and mixtures	Not classified
Substances and mixtures which, in contact with water, emit flammable gases	Not classified
Oxidizing liquids	Not applicable
Oxidizing solids	Not applicable
Organic peroxides	Not applicable
Corrosive to metals	Classification not possible
Desensitized Explosives	Not applicable

Health hazards:

Acute toxicity – oral	Classification not possible
Acute toxicity – dermal	Classification not possible
Acute toxicity – inhalation (gases)	Not applicable
Acute toxicity – inhalation (vapors)	Classification not possible
Acute toxicity – inhalation (dust)	Classification not possible
Acute toxicity – inhalation (mist)	Not applicable
Skin corrosion/irritation	Classification not possible
Serious eye damage/eye irritation	Classification not possible

Sensitization – respiratory	Classification not possible
Sensitization – skin	Classification not possible
Germ cell mutagenicity	Classification not possible
Carcinogenicity	Category 1B
Reproductive toxicity	Classification not possible
Specific target organ toxicity (Single exposure)	Category 1A (lung)
Specific target organ toxicity (Repeated exposure)	Category 1A (lung)
Aspiration hazard	Classification not possible
Environmental hazards:	
Hazardous to the aquatic environment	
- acute hazard	Classification not possible
Hazardous to the aquatic environment	
- chronic hazard	Classification not possible
Hazardous to the ozone layer	Classification not possible

PICTOGRAM**SIGNAL WORD**

Danger

HAZARD STATEMENT

Carcinogenic fear
 Respiratory damages
 Obstacle of the lungs

PRECAUTIONARY STATEMENTS

Broken wafer has sharp edge, caution for cutting hands, face. Do not put into mouth.
 Using individual protection and ventilating, avoid exposure
 Do not eating and smoking when using this product
 Washing hand well after work

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	Silicon Carbide
CAS No.	409-21-2
EC No.	206-991-8
wt.%	100%

4. FIRST AID MEASURES

First aid procedures

Inhalation

Remove the inhaled person to fresh air. Keep the inhaled person at rest in a position comfortable for breathing and warm by blanket. If vomiting, turn head sideways. Get immediate medical attention.

Eye contact

Immediately hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Remove contact lenses if worn and easily to do so. Get medical attention.

Skin contact

Remove contaminated clothes and shoes. Wash skin with soap and plenty of water immediately. Get medical attention if irritation develops or persists.

Ingestion

Immediately rinse mouth with plenty of water. Get immediate medical attention.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

This product is incombustible.

Hazardous decomposition /
combustion products

Not available.

Special Protective equipment
for fire-fighters

Wear self-contained breathing apparatus and full protective clothing. Fight fire from safe distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions

Keep out of drains, sewers, ditches and waterways. Minimize use of flushing water to prevent environmental contamination.

Methods for clean up of spill
and leaks

Vacuum or sweep material and place in a disposal container.

7. HANDLING AND STORAGE

Handling

Use only outdoors or in a well-ventilated area. Keep unnecessary and unprotected personnel from entering. Do not breathe dust. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Wear approved respirator, protective clothing, safety goggles and chemically impervious gloves. Wash contaminated clothing before reuse. Minimize dust generation and accumulation.

Storage	Store in cool place, well-ventilated place away from direct sunlight. Keep container tightly closed to avoid humidity.
---------	------------------------------------------------------------------------------------------------------------------------

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure limit values	<ACGIH> TLV-TWA : 10 mg/m ³ (Inhalable) Nonfibrillar TLV-TWA : 3 mg/m ³ (Respirable) Fibrillar TLV-TWA : 0.1 f/cc
-----------------------	--------------------------------------------------------------------------------------------------------------------------------------------------

Exposure controls	
Occupational exposure controls	Use sealed apparatus, measurement or local ventilation, if possible. Use adequate ventilation to keep airborne concentrations below exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Respiratory protection	Wear a dust-protective mask.
Hand protection	Wear protective gloves.
Eye protection	Wear safety spectacles (normal spectacles, glasses with sidepieces, goggle).
Skin protection	Wear protective clothing and safety boots.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Solid
Color	Clear and colorless. ¹⁾
Odor	Odorless.
pH	Not applicable.
Flash point	Not flammable.
Boiling point	2210°C decomposition
Melting point	2600°C sublimation
Auto-ignition point	Incombustible
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	3.23 ³⁾
Explosive range	Not explosive.
Decomposition temperature	2210°C
Solubility in water	Insoluble
Solubility in organic solvent	Insoluble
Octanol Water Partition Coefficient	Not available.

10. STABILITY AND REACTIVITY

Conditions to avoid	Contact with strong oxidizing agent
Materials to avoid	Strong oxidizing agent (Mixture of potassium dichromate and lead chromate)

Hazardous decomposition products	Silicon dioxide Carbon dioxide Carbon monoxide
----------------------------------	------------------------------------------------------

11. TOXICOLOGICAL INFORMATION

Acute toxicity	No data available.
Skin corrosion/irritation	No data available.
Serious eye damage/irritation	No data available.
Respiratory or skin sensitization	No data available.
Germ cell mutagenicity	No data available.
Carcinogenicity	1B due to A2 on ACGIH ⁴⁾
Reproductive toxicity	No data available.
Specific target organ toxicity (Single exposure)	Category 1 due to lung edema, pulmonary apoplexy and so on at rats. (respiratory system) ⁴⁾
Specific target organ toxicity (Repeated exposure)	Category 1 due to pneumoconiosis, pulmonary silicosis and so on human lung. (lung) ³⁾⁴⁾
Aspiration toxicity	No data available.

12. ECOLOGICAL INFORMATION

Toxicity	No data available.
Persistence and degradability	No data available.
Bio-accumulative potential	No data available.
Mobility in soil	No data available.
Results of PBT and vPvB assessment	No data available.

13. DISPOSAL CONSIDERATIONS

Disposal of wastes and used containers must be in accordance with applicable federal, state and local regulations. Ensure disposal in compliance with government requirements. Do not contaminate surface water or sanitary sewer system.

14. TRANSPORT INFORMATION (not meant to be all-inclusive)

International regulations	
Maritime regulation information	Not a dangerous material
Aeronautical regulation information	Not a dangerous material
UN no.	Not regulated
UN classification	Not regulated
Proper shipping name	Not regulated

15. REGULATORY INFORMATION (not meant to be all-inclusive)

Follow all regulations in your country.

16. OTHER INFORMATION

- 1) ICSC (2004)
- 2) Sax (2004)
- 3) HSDB (2005)
- 4) ACGIH (2003)

This information only concerns the above-mentioned product and does not need to be valid if used with other(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

Published and Issued as (Ver.2) following Japanese version SDS. (29th Jan. 2021)

Published and Issued as (Ver.3) due to GHS updated. (30th June 2021)

(This is the last page of this SDS.)