



MATERIAL SAFETY DATA SHEET (EC) Nr. 1907/2006

SILICON CARBIDE

Date: 23.02.2021
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Valid since: 27.09.2023
Version: 2.0 previous version: 1.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name: Silicon Carbide (SiC)
Index-Nr.: 014-048-00-5
EC / List No.: 209-991-8
CAS Nr.: 409-21-2
REACH Registration no.: A registration number for this substance is not available as the substance or its use is exempted from registration, the annual tonnage does not require registration or registration is foreseen for a later date.
Other naming: -

1.2 Relevant identified uses of the substance or mixture and uses advised against

Application: Industrial application in SiC crystal growth
Uses advised against: No specific uses advised against are identified.

1.3 Details of the supplier of the safety data sheet

Name : Zadient Technologies SAS
Address : 354 Voie Magellan, 73800 Hélène-du-Lac, France
Contact : +33 4 79 26 67 55 – info@zadient.com

1.4 Emergency phone Number

Contact : +33 4 79 26 67 55

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

According to (EC) Nr. 1272/2008 the product is not classified.

2.2 Label elements

Label elements according to (EC) Nr. 1272/2008

The substance/mixture does not meet the criteria for classification and labelling as hazardous material.

2.3 Other Hazards:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Main component of substance

Material name : Silicon Carbide (SiC) 40.1g/mol
Index-Nr.: 014-048-00-5
EC-Nr.: 206-991-8
CAS-Nr.: 409-21-2

Impurities, stabilizing additives and individual components

Substance name:---

Index No.: ---

EC No.: ---

CAS No.: ---

(The wording of the listed hazard statements can be found in section 15)

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General instructions Consult a doctor. Show this safety data sheet to the attending physician.

Inhalation If inhaled, remove affected person to fresh air. If breathing stops, give artificial respiration. Consult a doctor.

Skin contact Remove contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take patient to hospital immediately. Consult a doctor.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a doctor.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in chapter 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing agent

Suitable: Water, dry chemical powder, alcohol-resistant foam, carbon dioxide

Unsuitable: ---

5.2 Special hazards arising from the substance or mixture

Release of carbon monoxide, carbon dioxide, silicon oxides

In the event of sudden release and dispersion of large quantities of dust, take cover immediately.

Remove container from danger zone if possible.

Eliminate sources of ignition.

5.3 Advice for firefighters

In case of fire, wear self-contained breathing apparatus if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use dust mask.

Pick up dust-free.

Then ventilate room and clean contaminated objects and floor

6.2 Environmental precautions

There is no danger of the product entering waterways, sewers or soil.

6.3 Methods and material for containment and cleaning up

Pick up the spilled material with a spark-proof vacuum cleaner or sweep up with a damp cloth and place in containers for disposal in accordance with local regulations.

6.4 Reference to other sections

For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Coordinate ventilation measures with the other substances used.
If there is a possibility of dust being released, provide ventilation in the work area.
Use closed equipment if possible.
Extract dusts at the point of release if necessary.
Observe emission limit values, provide exhaust air purification if necessary.

Measures to protect against fire and explosions

Substance is flammable.
Fire extinguishing equipment must be provided.
If there is a possibility of a dust explosion due to the dust-like distribution and the quantities used, measures in accordance with TRGS 722 (prevention of formation), TRGS 723 (prevention of ignition) and TRGS 724 (constructive explosion protection) may be necessary.
Areas in which the substance can occur in dust form in such quantities that there is a possibility of a dust explosion are considered to be potentially explosive.
Keep away from ignition sources (e.g. open flames, heat sources and sparks).

Measures to prevent dust and aerosols

Avoid dust formation. Unavoidable dust deposits must be picked up regularly.
Use approved industrial vacuum cleaners or suction systems for potentially explosive atmospheres.
Do not stir up dust unnecessarily during cleaning work.
Blowing off for cleaning purposes is not permitted.
Alternatively: Damp clean.
Measures to protect the environment ---

General hygiene measures

Observe the usual hygiene measures for handling chemical substances, in particular clean skin with soap and water before breaks and at the end of work and use greasy skin care products after cleaning. Avoid inhalation of dust.

7.2 Conditions for safe storage, including any incompatibilities

Information on storage conditions Store in closed original container in a dry place.
Storage together with the following substances is prohibited:
- Medicines, foodstuffs and animal feed including additives.
- Infectious, radioactive and explosive substances (storage classes 1, 6.2 & 7).
- Strongly oxidizing substances of storage class 5.1A.

Requirements for storage rooms and containers

Do not use food containers - risk of confusion!
Containers must be clearly and permanently labeled.
Keep containers tightly closed in a cool, dry, well-ventilated place

Storage class: 11 Combustible solids that cannot be assigned to any of the aforementioned LGK.

7.3 Specific end use(s)

Industry and sector specific guidelines
Apart from the uses mentioned in section 1.2, no other specific uses are foreseen.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits and/or biological limit values

Occupational exposure limit values (OEL) Germany

10 mg/m³
related to the inhalable fraction
Duration 15 min, mean value; 4 times per shift; distance 1 h
Category II - Resorptive substances.
General dust limit values according to TRGS 900

8.2 Limitation and monitoring of exposure

Suitable technical control equipment ---

Individual protective measures / Personal protective equipment

Eye / face protection	Use goggles with side shields.
Skin protection Gloves	Coordinate hand protection with the other substances used.
Other skin protection	---
Respiratory protection	Use FFP2 half masks when working with dust. In exceptional situations (e.g. unintentional release of substance, workplace limit value exceeded), respiratory protection must be worn. Observe wearing time limits. Respiratory protection device: Particle filter P1, color code white.

Limitation and monitoring of environmental exposure

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	
Aggregate state:	Solid
Color :	Grey
Odour & Odour threshold :	---
pH :	No data available
Melting/freezing point:	>2500 °C (decomposition)
Initial boiling point and boiling range:	---
Flash point:	No data available
Evaporation rate :	No data available
Flammability (solid,gas) :	No data available
Explosive limits	No data available
Vapour pressure:	78.6 kPa at 25 °C
Vapour density:	4.68 - (air = 1.0)
Relative density :	1.342 g/cm³ at 25 °C
Solubility :	0.01 g/L
Partition coefficient (n- octanol/water)	No data available
Auto-ignition temperature (°C):	No data available
Decomposition temperature	>2500 °C
Viscosity	---
Explosive properties	No data available
Oxidizing properties	---

9.2 Other Information

SECTION 10: STABILITY AND REACTIVITY

10.1	Reactivity	---
10.2	Chemical stability	Stable under described storage conditions.
10.3	Possibility of hazardous reactions	---
10.4	Conditions to avoid	---
10.5	Incompatible materials	Strong oxidizing agents
10.6	Hazardous decomposition products	Silicon monoxide, carbon monoxide, carbon dioxide In case of fire: see chapter 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

For substances belonging to the following hazard classes (incl. brief summary of available test results and indication of methods)

Acute toxicity	Not classified.
Skin corrosion/irritation	No data available.
Serious eye damage/irritation	No hazard identified.
Respiratory or skin sensitization	No data available.
Germ cell mutagenicity	No data available.
Carcinogenicity	IARC: No component of this product present at a concentration equal to or greater than 0.1% is identified by IARC as a probable, possible or confirmed human carcinogen.
Reproductive toxicity	No data available.
Specific target organ toxicity (single exposure)	No data available.
Specific target organ toxicity - repeated exposure	No data available.
Aspiration hazard	No data available.
Additional information	---

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

A PBT/ vPvB assessment is not available as a chemical safety assessment is not required / has not been carried out.

12.6 Other adverse effects

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

No hazardous waste according to the Waste Catalogue Ordinance (AVV).
If recycling is not possible, waste must be disposed of in accordance with local regulations.

Treatment of contaminated packaging

Dispose of as unused product.

Waste disposal code in accordance with European Waste Catalogue (EWC)

06 08 99

Special Precautions

Relevant EU or other regulations

SECTION 14: TRANSPORT INFORMATION

14.1 UN-Number

The substance is not subject to the transport regulations for dangerous goods (ADR/RID).

14.6 Special precautions for user

No data available.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulation

Regulation (EC) Nr. 2037/2000 (Substances that deplete the ozone layer):	Not applicable
Regulation (EC) Nr. 850/2004 (Persistent organic pollutants):	Not applicable
Regulation (EC) Nr. 648/2004 (detergent regulation):	Not applicable
Restrictions under Title VIII of the Regulation (EC) Nr. 1907/2006	Not applicable

National Regulation

Water hazard class	Substance not hazardous to water (nwg) Identification number: 8277
Solvent Ordinance (31. BImSchV)	Not applicable
Accident Ordinance (12. BImSchV)	Annex I, No. 10a Not applicable
Technical guidance air (TA-Luft)	Chapter 5.2.1 Total dust, including fine dust The dust emissions contained in the exhaust gas must not exceed the following values: Mass flow: 0.20 kg/h or Mass concentration: 20 mg/m ³ Even if a mass flow rate of 0.20 kg/h is maintained or fallen short of, the mass concentration of 0.15 g/m ³ must not be exceeded in the exhaust gas.

Other relevant regulations Not applicable

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

SECTION 16: OTHER INFORMATION

Changes since the last version

- 1.0 New creation
- 2.0 Revision based on GESTIS data

Abbreviations ---

Literature references and data sources ---

Methods according to Article 9 of Regulation (EC) No 1272/2008 used to assess the information for the purpose of classification ---

Training for workers Laboratory guideline (BGI/GUV-I 850)

Other Information ---

Disclaimer

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