

PRODUCT SAFETY DATA SHEET
(Prepared according to Annex II of the EP and Council Regulation 1907/2006/EC and Commission Regulation (EU) 2020/878)

Number: KBU-OFZ-06-EN
Rev. No. 7
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PRODUCT SAFETY DATA SHEET

for

CaSi fume

(Prepared according to Annex II of the EP and Council Regulation 1907/2006/EC and Commission Regulation (EU) 2020/878)

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
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1.1 Product identifier

Name of substance:	CaSi fume
Synonyms:	Fume from FeSiCa manufacturing
Trade name:	CaSi fume
REACH registration number Calcium:	01-2119516038-45-0009
REACH registration number Silicon:	01-2119480401-47-0050
REACH registration number Iron:	01-2119462838-24-0093

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

Brief description of the uses of the substance:

See the identified ways of using the substance/preparation in Table 1 of the Annex to the Safety Data Sheet.

Uses not recommended:

For backfilling and reconstruction of the landslide zone

1.3 Details of the supplier of the safety data sheet

Name:	OFZ, a.s.
Address:	Široká 381, 027 41 Oravský Podzámok, Slovakia
Phone number:	+421/43/5804 111
Fax number:	+421/43/5804 320
E-mail:	ofz@ofz.sk

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1.4 Emergency telephone number

European emergency tel. number: 112

Emergency phone number
company: +421/43/5804 111

National toxicological
information center: +421 2 5477 4166

2. HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

2.1.1 Classification of the substance according to the CLP / GHS regulation

The substance does not meet the criteria for classification in accordance with Regulation EC 1272/2008.

2.2 Label elements

2.2.1 Labeling according to the CLP / GHS regulation

The substance does not meet the criteria for classification in accordance with Regulation EC 1272/2008.

Signal word: None

2.3 Other hazards

Data on the classification of the substance as PBT or vPvB are not available.

Under unusual storage conditions in the presence of water, it can irritate the skin. Avoid contact with water.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Description: CaSi fume is a fume captured from the production of FeSiCa.

3.1 Constituents

Constituents	Concentration range	Notes
SiO ₂ (silicon dioxide) CAS: 7631-86-9 EINECS: 231-545-4	≥ 60.0 % (w/w)	
CaO (calcium oxide) CAS: 1305-78-8 EINECS: 215-138-9	≤ 25.0 % (w/w)	

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Al ₂ O ₃ (aluminium (III) oxide) CAS: 1344-28-1 EINECS: 215-691-6	≤ 2.0 % (w/w)	
MgO (magnesium oxide) CAS: 1309-48-4 EINECS: 215-171-9	≤ 6.0 % (w/w)	
Na ₂ O (sodium oxide) CAS: 1313-59-3 EINECS: 215-208-9	≤ 3.0 [% w/w]	
K ₂ O (potassium oxide) CAS: 12136-45-7 EINECS: 235-227-6	≤ 6.0 [% w/w]	
SO ₃ (sulphur trioxide) CAS: 7446-11-9 EINECS: 231-197-3	≤ 2.0 [% w/w]	
FeO (iron oxide) CAS: 1345-25-1 EINECS: 215-721-8	≤ 5.0 [% w/w]	

3.2 Admixtures

The substance does not contain any additives necessary for classification and labeling.

4. FIRST AID MEASURES

In the event of an accident or if you feel unwell, seek medical attention immediately. (show the product label wherever possible). The use of protective equipment is required for the first aid worker.

4.1 Description of first aid measures

General information:

In contact with clothes, skin and eyes, no damage to health is expected. However, in the event of an accident or persistent discomfort, seek medical attention immediately.

Inhalation:

Move the person out of the danger area to a fresh air. If symptoms persist, seek medical attention.

Skin contact:

Before washing with water, use a dry brush to remove dust from the skin. Rinse immediately with soap and plenty of water. Remove all contaminated clothes or footwear.

Eye contact:

Immediately flush the eyes with a sufficient amount of water, also under the lids, for at least 15 minutes. If you wear contact lenses, remove them. Seek the attention of an ophthalmologist immediately.

Ingestion:

Not likely. In case of ingestion, do not give liquids to unconscious persons and do not induce vomiting, seek medical help immediately.

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4.2 Most important symptoms and effects, both acute and delayed

Redness, itching, irritation of the eyes, skin and mucous membranes, abdominal pain.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable:

Special powder for extinguishing metal fires, dry chemicals, lime, sand, dry sodium carbonate.

Unsuitable:

Do not extinguish with water or foam.

5.2 Special hazards arising from the substance or mixture

In contact with water or moisture, the resulting mixture can irritate the skin.

5.3 Advice for firefighters

Secure an unsecured area. Evacuate personnel to a safe area. Avoid stirring up and formation of dust.

Contaminated water or soil during firefighting shall be disposed of in accordance with official regulations.

Do not flush into surface water or sewage system.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Wear suitable protective equipment (see section 8).

6.1.2 For emergency personnel

Eliminate all sources of ignition. Keep away from sparks or flames. Avoid stirring up the dust. Do not allow unprotected persons to approach the exposed area. Avoid contact with skin, eyes and clothing. Wear suitable protective equipment (see section 8). Never extinguish with water. Ensure sufficient ventilation.

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6.2 Environmental precautions

Based on the available studies, the given substance does not endanger the environment. Do not flush into surface water or sewage system.

6.3 Methods and material for containment and cleaning up

If it is safe to do so, prevent further leakage or spillage. Extinguish the product immediately by taking appropriate steps. Protect from water.

Keep away from sources of ignition. NO SMOKING. Wipe off the material to prevent dust build-up and follow the waste law. Keep the material for disposal in suitable closed containers. Prevent water from entering the containers.

Small amounts of spilled or leaked material are absorbed by non-combustible absorbent materials (sand, soil, diatomaceous earth) and placed in containers. Immediately remove contaminated material from the work area and store in closed containers. Do not rinse with water.

6.4 Reference to other sections

For more detailed information regarding residual waste, see section 13 and exposure controls and personal protective equipment, see section 8.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Instructions for safe handling

Handle in accordance with proper hygiene and safety practices. Close the package tightly. Avoid stirring up the dust. Keep containers in a dry place away from heat sources and tightly closed to prevent moisture absorption.

Instructions for protection against fire and explosion

Avoid sources of heat and ignition. Do not smoke. Use of non-sparking tools.

Additional information on handling

CaSi fume is delivered in bulk form (natural state or densified) in tanks, containers or on tarpaulin trucks, railway wagons, tanks, or in large-capacity bags (big-bags) according to work procedure PVP-02/2018. Delivery in the form of briquettes is possible upon request.

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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

The product is stored in closed packaging (big bags , sacks, barrels), in silos, in closed containers or closed covered warehouses.

Instructions for storage

Do not store with flammable or highly flammable materials. Store away from acids, oxidizing or reducing agents and water.

Additional information on storage conditions

Under unusual storage conditions in the presence of water, the material could irritate the skin. Avoid contact with water.

7.3 Specific end use(s)

No information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limit values

Occupational Exposure Limit (OEL): 0.5 mg/m³ inhaled dust from CaSi fume

Derived No Effect Limit (DNEL) for long-term exposure: is achieved by keeping the OEL below the exposure limit.

8.2 Exposure controls

The producer and the consumer monitor and measure the values of harmful factors in their own workplace in order to meet the exposure limit values and take measures, especially of a technical nature, to reduce the risk of damage to human health and the environment.

8.2.1 Workplace exposure control

Measure the occupational exposure limit regularly. If dust is generated during the handling of the material, use an exhaustion or ventilation system or other means to maintain the limit values of dust in the air.

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8.2.2 Personal protective equipment

8.2.2.1 Eye/face protection

Wear tight-fitting safety goggles. (EN 166)

8.2.2.2 Skin protection

Wear tight-fitting protective clothes, gloves and use protective hand cream.

8.2.2.3 Protection of the respiratory system

Do not inhale the dust. Use a respirator when exposed to dust. (respirator with P2 filter).

8.2.3 Control of environmental exposure

Dust emissions from the ventilation system or workplace must be checked to see if they meet the requirements of environmental protection legislation. A concentration below 0.5 mg/m³ does not endanger the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	gray-white, solid substance
Odor:	none
Odor threshold:	none, the substance is odorless
pH:	not determined
Boiling point:	not determined (substance in solid state with melting point > 300°C)
Melting/solidification temperature:	approx. 1,200 - 1,550 °C
Flash point:	not determined (substance is inorganic)
Annealing losses	< 5% by mass .
Non-flammable:	non-flammable
Explosive properties:	not explosive
Oxidizing properties:	does not oxidize
Vapor pressure:	not determined (melting temperature > 300°C)
Moisture	< 2.0% by mass .
Bulk weight:	150.0 - 900.0 kg/m ³

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Mass activity index	≤ 1
Solubility in water:	insoluble
Distribution coefficient n-octanol/water (log. value):	not determined (substance is inorganic)
Viscosity:	not determined (at normal ambient temperature, the substance is solid and not liquid)
Auto-ignition temperature:	non-flammable
Dissociation constant:	the substance does not decompose due to the lack of appropriate functional groups
Surface tension:	the substance is not active on the surface
Stability in organic solvents:	not determined (substance is inorganic)

9.2 Other information

Formation of gases: in contact with water

10. STABILITY AND REACTIVITY

10.1 Reactivity

CaSi fume is not reactive under normal conditions.

10.2 Chemical stability

Under normal temperature, storage and use, the given substance is stable.

10.3 Possibility of hazardous reactions

If the material is handled and stored according to the instructions, there is no risk of dangerous reactions.

10.4 Conditions to avoid

Avoid contact with water and air humidity.

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10.5 Incompatible Materials

Store away from moist air and away from water, acids, bases and oxidizing agents.

10.6 Hazardous decomposition products

They are not, if the preparation is used in accordance with the intended use.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

End points	The result of the impact assessment
Acute toxicity	Lack of data
Skin corrosion/Skin irritation	Decompensation of the substance through moisture in the tissues. The product irritates the skin and mucous membranes in contact with water.
Serious eye damage/Eye irritation	Decompensation of the substance through moisture in the tissues. The product irritates the eyes and mucous membranes in contact with water.
Germ cell mutagenicity	It is not established
Carcinogenicity	It is not known
Reproductive toxicity	It is not known
Specific target organ toxicity (STOT) - single exposure	Based on the available data, the criteria for inclusion of the substance are not met.
Specific target organ toxicity (STOT) - repeated exposure	Lack of data
Risk of aspiration	Lack of data.

12. ECOLOGICAL INFORMATION

No data are available regarding toxicity, persistence and degradability, bioaccumulation potential, soil mobility and PBT and vPvB classification.

More details

Under unusual storage conditions in the presence of water, a resulting mixture can irritate the skin.

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13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal instructions

Disposal of CaSi fume must be in accordance with local and national legislation. Prefer recycling to disposal or incineration of the material when possible. Contact waste disposal companies.

Waste/unused product disposal code

060499 WASTES FROM INORGANIC CHEMICAL OPERATIONS; waste containing metals other than specified in 06 03; unspecified waste

Waste disposal code of the used product

060499 WASTES FROM INORGANIC CHEMICAL OPERATIONS; waste containing metals other than specified in 06 03; unspecified waste

Disposal of CaSi fume must be in accordance with local and national legislation.

14. TRANSPORT INFORMATION

14.1 Basic information about transportation

CaSi fume is not subject to the regulations regarding the transport of dangerous goods in the framework of road transport (ADR) and rail transport (RID). CaSi fume is classified as dangerous for maritime transport (IMDG).

During transport, avoid wetting of the material. Avoid contact with water.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legal regulations concerning the substance

GHS - UN Globally Harmonized System of Classification and Labeling of Chemical Substances (GHS):

According to Chapter 1.5.2 of the UN Globally Harmonized System of Classification and Labeling of Chemical Substances (GHS), safety data sheets (SDS) are required only for substances and mixtures that meet the harmonized criteria for endangering safety, health and the environment. This product does not meet these criteria.

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ANNEX

Table 1 Ways of using the substance or mixture

Identified method of use	Process category (PROC)	Chemical Product Category (PC)	Environmental release category (ERC)	Sector of Use (SU)	Product category (AC)
As a secondary raw material (original uncompacted, micropelletized, briquettes) for the production of ferroalloys	PROC 8a, 8b		ERC 6a		
As a secondary raw material in the production of ferrous and non-ferrous metals	PROC 8a, 8b		ERC 6a		
As a secondary raw material in the original powder form or processed into CaSi briquette flyover at secondary production of ferroalloys ;	PROC 8a, 8b		ERC 6a		
For casting powders LP 31.K/ LP 32.BA	PROC 8a, 8b		ERC 6a		
Clinker firing	PROC 3, 4, 5, 8a, 8b, 9	PC 0	ERC 3, 5	SU 13 SU 0: Other: NACE code: C23	AC 0

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