for

Grasimat artificial aggregate granulated ferrosilicomanganese slag

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

Number: KBU-006-EN Date of issue:

10 March 2025
Revision No.: 0
Revision Date: -

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

1.1 Product identifier

Trade name: Grasimat artificial aggregate – granulated ferrosilicomanganese slag

Chemical name: Slags from FeSiMn production

Synonyms: Artificial aggregate Grasimat, Grasimat

GRASIMAT	EC No.	CAS No.	REACH Registration No.	Index No.	
artificial aggregate	273-733-9	69012-33-5	01-2119440597-32-0003	Not applicable	

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

Relevant identified uses:

- for the construction of bedding and backfill for water supply, sewage, and other plastic pipelines,
- as an abrasive material for winter road maintenance,
- for land reclamation and terrain rehabilitation,
- in the cement industry for clinker production,
- as an abrasive material for mechanical surface treatment by sandblasting.

Non-recommended uses: Information not available.

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer: OFZ as

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

1.4 Emergency telephone number

The substance is not classified as hazardous, emergency call numbers are not required. However, in the event of an accident, call the local emergency line.

European emergency tel. number: 112

National Toxicological

Information Centre (Slovakia): +421 2 5477 4166 (24-hour consultation service)

Registration: Business Register, District Court of Žilina, Section: Sa, Insert No.: 10228/L

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2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No. 1272/2008 (CLP)

Not classified.

2.1.2 Additional information

Information not available.

2.2 Label elements

Labeling is not required.

2.3 Other hazards

The substance is not identified as a PBT (Persistent, Bioaccumulative and Toxic) or vPvB (very Persistent and very Bioaccumulative) substance according to the criteria set out in Annex VIII of the REACH regulation.

The substance does not contain any substances listed in the inventory compiled in accordance with Article 59(1) of the REACH Regulation that have endocrine-disrupting properties, nor is it identified as a substances with endocrine-disrupting properties according to the criteria established in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at concentrations of 0.1% or higher.

The substance is not classified as hazardous under the CLP Regulation (EC) No 1272/2008.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

UVCB substance containing metal oxides, obtained as a by-product of ferrosilicomanganese (FeSiMn) alloy production.

Purity: 100% (w/w)

Component	CAS No.	EC No.	Typical concentration	Concentration range	Notes
Silicon dioxide (SiO ₂)	7631-86-9	231-545-4	Not specified (UVCB)	30 – 50% w/w	-
Calcium oxide (CaO)	1305-78-8	215-138-9	Not specified (UVCB)	10 - 30% w/w	-
Aluminium oxide (Al ₂ O ₃)	1344-28-1	215-691-6	Not specified (UVCB)	5 – 25% w/w	-
Manganese (II) oxide (MnO)	1344-43-0	215-695-8	Not specified (UVCB)	5-20% w/w	-

It does not contain any impurities relevant for classification and labelling.

3.2 Mixtures

Not applicable.

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10 March 2025
Revision No.: 0
Revision Date: -

4. FIRST AID MEASURES

4.1 Description of first aid measures

General notes: In case of accidental exposure and symptoms, seek medical advice

immediately.

After inhalation: Mechanical irritation caused by dust in the respiratory tract. Remove the

affected person to fresh air. If the affected person is not breathing, provide

artificial respiration. Seek medical attention if any difficulties occur.

After skin contact: Wash the skin with water or mild soap.

After eye contact: Rinse eyes with water or physiological saline. If discomfort persists, seek

medical attention.

After ingestion: Unlikely. However, in case of ingestion, do not induce vomiting and seek

medical assistance immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any need for immediate medical attention and special treatment needed

No relevant information identified.

In case of doubt or if symptoms occur, seek medical advice.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

The substance is non-flammable, and its dust does not pose an explosion hazard.

Suitable extinguishing media: Not applicable. **Unsuitable extinguishing media:** Not applicable.

5.2 Special hazards arising from the substance or mixture

Not applicable.

5.3 Advice for firefighters

Not applicable.

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Number: KBU-006-EN
Date of issue:
10 March 2025
Revision No.: 0
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6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Isolate the hazardous area and prevent access.

Keep unprotected persons at a safe distance.

Wear appropriate PPE (see Section 8).

Ensure forced dust extraction and adequate ventilation.

In case of accidental release, leave the affected area and contact trained personnel.

6.1.2 For emergency personnel

Isolate the hazardous area and prevent access.

Keep unprotected persons at a safe distance.

Wear appropriate PPE (see Section 8).

Ensure forced dust extraction and adequate ventilation.

6.2 Environmental precautions

Based on available studies, the substance does not pose a threat to the environment.

Prevent dispersion into the environment and release of material into soil, waterways, and sewage systems.

6.3 Methods and material for containment and cleaning up

6.3.1 Containment

Handle the substance in a way that minimizes dust generation.

Prevent dust dispersion.

Ensure forced dust extraction and adequate ventilation.

6.3.2 Cleaning up

Collect dust into suitable closed containers.

Vacuuming is preferred over sweeping.

Thoroughly clean contaminated objects and surfaces in compliance with environmental regulations.

6.3.3 Other information

Information not available.

6.4 Reference to other sections

Handling information: see Section 7.

Information on combustion products: see Section 5. Information on incompatible materials: see Section 10.

Information on personal and environmental protection: see Sections 8, 12 and 13.

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7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Safety measures:

Ensure forced dust extraction and adequate ventilation.

Handle the substance in a way that minimizes dust generation.

Prevent accumulation and dispersion of dust during handling.

Wear protective clothing, gloves, and safety goggles, as well as appropriate respiratory protection (see Section 8).

Environmental protection measures:

Collect any spilled dust into closed containers.

Prevent dispersion into the environment and release of material into soil, waterways, and sewage systems.

Dispose of in accordance with locally approved regulations.

Hygiene measures:

Do not eat, drink, or smoke while handling the substance.

Wash thoroughly after handling.

Remove contaminated clothing and PPE before dining areas.

7.2 Conditions for safe storage including any incompatibility

Store on reinforced surfaces in uncovered piles, sorted by fraction.

7.3 Specific end use (s)

See identified uses of the substance – Section 16.5 of the Annex.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Users should always consult their national or regional regulatory authorities for advice on current legal limits applicable to them. They should also verify whether these limits are legally binding or only recommended guidelines.

Exposure limits	
OEL	10 mg/m ³ inhalable dust of the substance
DNEL	No derived no-effect levels available
PNEC	Not required for water, soil, or sediment. A solubility study of the substance showed that the concentration of manganese (Mn) released from the substance (1 μ g/L after 28 days from a load of 1 mg/L) is lower than the natural manganese concentrations in the European environment: (15.9 μ g/L surface water), (428.6 mg/kg soil), (452 mg/kg sediment).

Under normal conditions of use, the substance does not emit contaminants into the air. OEL/BLV values are not provided.

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Control banding approach

The control banding approach is not applied as a risk management measure for the uses of this substance listed in section 1.2 and in Table 1 of section 16.5 of the Annex.

8.2 Exposure controls

To control potential exposure, dust generation and dispersion must be prevented. The use of appropriate protective measures is recommended. If visible dust dispersion occurs, hygienic and safety measures should be applied to prevent fine dust concentration exceeding 10 mg/m³ in the workplace air.

8.2.1 Adequate technical control measures

Regularly measure the occupational exposure limit on-site. If dust is generated during material handling, maintain dust levels within limits by using forced ventilation, local exhaust ventilation, or other measures.

8.2.2 Individual protective measures, such as personal protective equipment

8.2.2.1 Information on the use of protective equipment

Personal protective equipment must comply with good occupational hygiene practices and be consistent with control measures including engineering controls, ventilation, and isolation.

8.2.2.2 Equipment to provide adequate and appropriate protection

a) Eye/face protection

Mandatory use of safety goggles.

b) Skin protection

Hand protection: Mandatory use of gloves resistant to mechanical damage and use of hand cream.

Other skin protection: Mandatory use of protective clothing and footwear.

c) Respiratory protection

Mandatory use of respirator at least of class FFP2/N95.

d) Thermal hazard

Information not available.

8.2.3 Environmental exposure controls

Dust emissions from ventilation systems or workplaces must be controlled to comply with environmental legislation requirements.

Limits for particulate matter (PM2.5 and PM10) in ambient air must be implemented (Directive 1999/30/EC and its subsequent amendments).

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Property	Information
Physical state	Solid (fine granules)
Color	Gray-green
Odor	Odorless, odor threshold: not relevant
Melting/freezing point	Expected >1000°C at 101.3 kPa
Boiling point	Not relevant (substance solid with melting point > 300 °C)
Flammability	Non-flammable (EU method A.10)
Lower and upper explosion limits	Not relevant (not applicable to inorganic substances)
Flash point	Not relevant (not applicable to inorganic substances)
Oxidizing properties	Non-oxidizing (EU method A.17)
Auto-ignition temperature	Not relevant
pH value	Not relevant (solid at ambient temperature)
Kinematic viscosity	Not relevant (solid at ambient temperature))
Water solubility	Not relevant
n-octanol/water partition coefficient	Not relevant
Dissociation constant	Substance does not dissociate due to absence of relevant functional groups
Stability in organic solvents	Not relevant (inorganic substance)
Vapor pressure	Not relevant (melting point > 300°C)
Surface tension	Substance is not surface-active
Bulk density	$635 \pm 100 \text{ kg/m}^3$
Activity concentration index	≤1.0

9.2 Other information

9.2.1 Information regarding physical hazard classes

No information available.

9.2.2 Other safety characteristics

No information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

The substance is stable under normal conditions of use, storage, and transport.

10.2 Chemical stability

The substance is chemically stable under normal conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions are expected during handling and storage according to recommended instructions.

10.4 Conditions to avoid

No information available.

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10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No information available.

11. TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

The substance is not classified as hazardous under the CLP Regulation (1272/2008/EC) or the Dangerous Substances Directive (67/548/EEC).

Hazard class	Information
Acute toxicity	Based on the available data, the classification criteria are not met.
Skin corrosion/irritation	Based on the available data, the classification criteria are not met.
Serious eye damage/irritation	Based on the available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on the available data, the classification criteria are not met.
Germ cell mutagenicity	Based on the available data, the classification criteria are not met.
Carcinogenicity	Based on the available data, the classification criteria are not met.
Reproductive toxicity	Based on the available data, the classification criteria are not met.
Specific target organ toxicity (STOT) - single exposure	Based on the available data, the classification criteria are not met.
Specific target organ toxicity (STOT) - repeated exposure	Based on the available data, the classification criteria are not met.
Aspiration hazard	Based on the available data, the classification criteria are not met.

11.2 Information on other hazards

11.2.1. Endocrine-disrupting properties

The substance does not contain any components at concentrations > 0.1 % that meet the definition of confirmed endocrine disruptors under any EU regulation.

11.2.2. Other information

Information not available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity data are not required due to minimal exposure. See section 8.

12.2 Persistence and degradability

Abiotic degradation: No relevant data available

Physical and photochemical elimination: No relevant data available

Biodegradation: Not applicable for inorganic substances.

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12.3 Bioaccumulative potential

Data on bioaccumulation are not required due to minimal exposure. See section 8.

12.4 Mobility in soil

A screening test for adsorption and desorption is not technically feasible due to the physical nature of the substance. See section 8.

12.5 Results of PBT and vPvB assessment

The substance is inorganic and cannot be classified as PBT/vPvB.

It is not known to contain any impurities >0.1 % or <0.1 % that would qualify as PBT/vPvB.

12.6 Properties of endocrine disruptors

The substance does not contain any components at concentrations >0.1 % that meet the definition of confirmed endocrine disruptors under any EU regulation.

12.7 Other adverse effects

No other adverse effects have been identified.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

The substance is not listed as hazardous waste in the European Waste Catalogue (Decision 2000/532/EC), nor under Directive 2008/98/EC on waste.

Unused product should be recycled in accordance with national legislation.

Disposal must comply with environmental protection and waste disposal regulations.

13.1.1 Disposal of the product/packaging

Information not available.

13.1.2 Information on waste treatment

For disposal within the EU, the appropriate code according to the European Waste Catalogue (EWC) should be used. It is the responsibility of the polluter to assign waste codes specific to industrial sectors and processes according to the European Waste Catalogue (EWC).

13.1.3 Information on waste water disposal

Do not discharge into drains or sewers.

13.1.4 Other disposal recommendations

Information not available.

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14. TRANSPORT INFORMATION

The substance is not classified as hazardous for transport. Transport is in accordance with ADR/TPED for road transport, RID for rail transport, IMDG for sea transport, ICAO/IATA for air transport, and ADN for inland waterways.

It is transported as bulk cargo in transport equipment designed for bulk materials.

14.1. UN number or Identification Number

Not applicable.

14.2. UN proper Shipping Name

Not applicable.

14.3. Transport Hazard Class(es)

Not applicable.

14.4. Packing Group

Not applicable.

14.5. Environment Hazards

Not classified as environmentally hazardous.

14.6 Special precautions for user

None.

14.7 Bulk Transport According to IMO Instruments

Not applicable.

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

EU regulations:

Regulation (EC) No 1907/2006 REACH

Regulation (EC) No 1272/2008 CLP

Commission Regulation (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 (REACH)

Dangerous Substances Directive 67/548/EEC

Dangerous Preparations Directive 1999/45/EC

Decision No. 2000/532/EC (European Waste Catalogue)

Directive 1999/30/EC relating to limit values for sulfur dioxide, nitrogen dioxide, nitrogen oxides, particulate matter and lead in ambient air

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Revision No.: 0

Revision Date: -

15.2 Chemical safety assessment

Chemical Safety Report issued on 24 March 2010.

16. OTHER INFORMATION

16.1 List of abbreviations used

Abbreviation	Meaning
ADR/RID	European Agreement concerning the International Carriage of Dangerous Goods by Road / Rail
BAT-AEL	Conclusions on Best Available Techniques – Associated Emission Levels
BC code	Code of Safe Practice for Solid Bulk Cargoes, International Maritime Organization (IMO)
CAS No.	Numerical identifier assigned to chemical substances by the Chemical Abstracts Service (CAS)
CLP	Classification, Labelling and Packaging of substances and mixtures (Regulation (EC) No 1272/2008)
DNEL	Derived no-effect level
EC No.	European Commission number assigned to a chemical substance
EU	European union
IATA	Dangerous Goods Regulations of the International Air Transport Association
IMDG	International Maritime Dangerous Goods Code
IMO	International Maritime Organization
NPEL	Maximum Permissible Exposure Limits for gases, vapours, and aerosols with predominantly toxic effects in workplace air
OEL	Occupational Exposure Limit
PBT	Persistent, Bioaccumulative and Toxic substances
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
UN No.	Four-digit number identifying hazardous goods, substances and articles (United Nations)
UVCB	Substances of Unknown or Variable composition, Complex reaction products or Biological materials
vPvB	Very persistent and Very bioaccumulative substances

16.2 List of changes compared to the previous revision

Replaces document: KBU-OFZ-04-EN, Rev.7 issued on 12 December 2022.

16.3 Key Resources

- 1. Chemical Safety Report issued on 24 March 2010.
- 2. Technical Data Sheet (TDS) for Grasimat artificial aggregate granular ferrosilicomanganese slag TL-006-EN issued on 24 February 2025, Rev. 0
- 3. BAT-AEL
- 4. Regulation (EC) No 1907/2006 (REACH)
- 5. Regulation (EC) No 1272/2008 (CLP)
- 6. Regulation (EU) 2020/878 (Annex II to REACH Regulation)

16.4 Other information

The information contained in this document corresponds to our current knowledge and complies with applicable legal requirements concerning information, packaging, and labelling of hazardous chemical substances. Compliance with the data contained in this Safety Data Sheet is the responsibility of the product user and does not exempt them from respecting all legislative, regulatory, and administrative texts concerning the product, safety, hygiene, and environmental protection.

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Revision No.: 0 **Revision Date: -**

16.5 Annex

Table No. 1: Identified Uses of the Substance

Identified Use	Process Category (PROC)	Product Category (PC)	Environmental Release Category (ERC)	Use Sector (SU)	Article Category (AC)
Backfill material for the construction of bedding and surround for water supply, sewage, and other plastic pipelines	8a, 8b	1	10a	19	0: C18.2
Spreading material for winter maintenance of roads	8a, 8b	1	10a	19	0: C18.2
Land reclamation works	8a, 8b	1	10a	19	0: C18.2
Abrasive material	2	20	2	9	-
For the production of clinker	3, 4, 5, 8a, 8b, 9	0	3, 5	13,0 Other: NACE code: C23	0

Approved by: Edited by:

Milan Harcek Zuzana Bohúňová

technical director - signed QHSE manager - signed