

	<h2 style="margin: 0;">Safety Data Sheet</h2> <p style="margin: 0;">(in accordance with Regulation (EC) No 1907/2006 and Regulation (EC) 2020/878)</p>	<p style="margin: 0;">Updated:</p> <p style="margin: 0; text-align: center;">26/03/2024 Ed. 1 Rev. 13</p>
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1. Identification of the substance/preparation and the company

1.1 Product identifier

Product Name:

DUNITE

Other names:

DUNITA- DUNIT@ – PASEKTAP – PASEKFLUX – PASEKBLAST –
SLAGDOOR - PASEK SLAGDOOR – DUNITE FINES – DUNITE COARSE

REACH – Registration number:

Exempt in accordance with Annex V.7

1.2 Relevant identified uses of the substance and uses advised against

Industrial use:

- Converter and Blast Furnace flux
- EF Taphole Filler
- Slagdoor filler
- Refractory mixes
- Ceramic raw material
- Raw material for fertilizer industry
- Rockwool
- CO₂ sequestration
- Concrete Filler
- Blasting sand

Uses advised against

Not applicable

1.3 Details of supplier of the safety data sheet

Pasek Minerales, S.A.U.

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Spain

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1.4 Emergency telephone number

Emergency Phone No: +34 915 620 420

2. Hazards Identification**2.1 Classification of the substance**

Product definition:

Classification in accordance with Regulation (EC) No 1272/2008: Unclassified

Classification in accordance with Directive 67/548/EEC: Unclassified

REACH – Registration number: Exempt in accordance with Annex V.7

2.2 Label elements

In accordance with Regulation (EC) N° 1272/2008: No pictogram is necessary

The substance is no classified as hazardous in accordance with the Directive 1999/45/CE and its amendments.

2.3 Other hazards

This product is an inorganic substance and does not meet the criteria for classification as PBT or vPvB in accordance with Annex XIII of the REACH Regulation.

3. Composition / Information on ingredients**3.1 Substances**

Product name	Chemical Formula	EINECS-No	CAS-No	Chemical Concentration
Magnesium and iron silicate mineral	$(\text{Mg,Fe})_2\text{SiO}_4$	215-281-7	1317-71-1	90-100%
Chemically coordinated water*				0-10%

* Dunite is a mineral with chemically coordinate water inside the structure. This water corresponds to OH groups present in mineral phases and is stable below 1000°C.

3.2 Impurities

None.

4. First Aid Measures**4.1 Description of first aid measures**

- Eye contact:** Make sure to remove any contact lenses from the eyes before rinsing. Rinse eye with water immediately. Get medical attention if any discomfort continues.
- Ingestion:** Rinse mouth thoroughly. Get medical attention if any discomfort continues.
- Inhalation:** Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Skin contact: Wash skin with soap and water. Get medical attention if irritation persists after washing.

Safety and security of first aiders: No special first aid measures required. Transport affected people in a ventilated location and seek medical advice if symptoms persist.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: No specific symptoms noted.

Ingestion: No specific symptoms noted.

Skin contact: No specific symptoms noted.

Eye contact: No specific symptoms noted.

4.3 Indication of any immediate medical attention and special treatment needed

If large amounts have been ingested, contact a specialist for necessary treatment.

5. FireFighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Special extinguishing media are not necessary. Use media appropriate for surrounding fire.

Unsuitable extinguishing media

None

5.2 Special hazards arising from the substance or mixture

Not combustible and there is no inherent risk of explosion. No dangerous decomposition. No special protection is required. Use media appropriate for surrounding fire.

5.3 Advice for firefighters

No special protective equipment is required.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

- Avoid dust generation.
- Use personal protective equipment according to national laws and section 8 of this SDS, with the objective to prevent any contamination of skin, eyes and personal clothing.

6.1.2 For emergency personnel

- Avoid dust generation.
- Ensure adequate ventilation. Use the obligatory individual protection equipment

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- Prevent generation of electrostatic charges. Evacuate staff to safe areas. Keep people away and upwind of a leak or spill.

6.2 Environmental precautions

No special precautions are required. Avoid the dispersion of the spilled material, its flow and all contact with the ground, aquatic environment and sewers.

6.3 Methods and material for containment and cleaning up

- If uncontaminated, sweep up and reuse the product.
- If contaminated with other pollutants, collect into suitable containers for disposal.
- Use personal protective equipments according to national laws.

6.4 References to other sections

- Section 1: Emergency Contact Information.
- Section 8: Information concerning to appropriate personal protective equipment.
- Section 13: Information concerning waste treatment.

7. Handling and Storage

7.1 Precautions for safe handling

- Handle in accordance with good industrial hygiene and safety practice.
- Wear appropriate personal protective equipments.
- Avoid dust generation.
- Handle packaged products carefully to prevent accidental breakages.
- Hands and face washing before eating, drinking or smoking.
- If you need advice on safe handling techniques, please, contact your supplier.

7.2 Conditions for safe storage, including any incompatibilities

- Store in dry conditions and ventilated area.
- Avoid dust generation.
- Keep containers tightly closed to avoid accidental breakages.
- Section 8: Information related to appropriate personal protective equipments.

7.3 Specific end uses

Section 1.2

If information relating to specific uses is needed, please, contact your supplier.

8. Exposure Controls/ Personal Protection

8.1 Control parameters

The customer must compare existing national legislation to set the limits. If necessary, consult a specialist in Industrial Hygiene to prepare the necessary controls in the workplace.

According to "Occupational Exposure Limits for Chemical Agents in Spain" (National Institute for Safety and Health at Work, 2022), the VLA-ED values for Particles (insoluble) not otherwise classified; and the Complementary Technical Instruction 02.0.02 (BOE of July 9, 2021), of the General Regulation of Basic Mining Safety Standards (RGNBSM). The VLA-ED values for Dunite are indicated below:

Substance	CAS N°/ EINECS N°	VLA-ED (mg/m ³)
Insoluble particles not otherwise classified	1317-71-1/215-281-7	10
Respirable crystalline silica fraction*	14808-60-7/238-878-4	< 0,05*

*fraction not detected by current techniques, with 0.05 mg/m³ being the detection limit of measurement equipment.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Avoid inhalation of dust.

If operation generate dust, ensure adequate ventilation during use to compliance with the applicable occupational exposure limit values.

8.2.2 Individual protection measures, such as personal protective equipment



- Eye/face protection: Wear dust resistant safety goggles where this is a danger of eye contact.
- Skin protection: No special protective equipment required.
- Hand protection: No specific hand protection noted, but gloves may still be advisable.
- Respiratory protection: No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit:
- Body protection: No special protective equipment required.

8.2.3 Environmental exposure controls:

Avoid creating dust and prevent dispersion caused by wind

9. Physical and Chemical Properties**9.1 Information on basic physical and chemical properties**

Appearance	Solid, granular material	pH	7-8 (5% of fines in distilled water)
Colour	Grey	Solubility (Water)	Insoluble
Odour	Odourless	Bulk Density	1,3 – 1,5 g/cm ³
Melting Point	1450 °C	Specific Gravity	2,8 g/cm ³
Freezing point	Not applicable	Particle characteristics	0 – 180 mm
Boiling Point	Not applicable	Flammability	Not applicable
Boiling point range	Not applicable	Auto-ignition temperature	Not applicable

9.2 Other Information

No data available

10. Stability and Reactivity**10.1 Reactivity**

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

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, no hazardous reactions known.

10.4 Conditions to avoid

Avoid dust formation.

10.5 Incompatible materials

None.

10.6 Hazardous decomposition products

None.

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

Acute toxicity:	No relevant
Skin corrosion/ Irritation:	No known significant effects.
Serious eye damage/irritation:	Particles of powder in the eyes may cause irritation and smarting
Respiratory or skin sensitisation:	No known significant effects.
Germ cell mutagenicity:	No mutagenic effect.
Carcinogenicity:	No systemic carcinogenic effect.
Reproductive toxicity:	Is considered to be non-toxic to the reproduction system.
STOT– single exposure	Not applicable.
STOT – repeated exposure	Not applicable.
Aspiration hazard	Possible irritation of the respiratory tract

11.2 Information on other hazards

Endocrine disrupting properties: this product does not contain any known or suspected endocrine disruptors

12. Ecological Information**12.1 Toxicity**

Non relevant.

12.2 Persistence and degradability

Non relevant.

12.3 Bioaccumulative potential

Non relevant.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Not PBT, vPvB substance.

12.6 Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors

12.7 Other adverse effects

This substance does not contain any components known or suspected to be persistent organic pollutants or potential depletion of the ozone layer.

13. Disposal Considerations

13.1 Waste treatment methods

- If it is possible reuse or recycle. Avoid or minimize the generation of waste wherever possible. The waste can be handled according to the local laws.
- This material is not classified as hazardous waste according to EU Directive 91/689 / EC.
- Recycling and disposal of packaging should be carried out in accordance with local and national legislation.

14. Transport Information

14.1 UN number

Non relevant.

14.2 UN proper shipping name

Non relevant.

14.3 Transport hazard class

- ADR: Not subject to classification.
- IMDG: Not subject to classification.
- ICAO/ IATA: Not subject to classification.
- RID: Not subject to classification.

14.4 Packing group

Non hazardous material

14.5 Environmental hazards

Non hazardous material

14.6 Special precautions for users

Non hazardous material

14.7 Maritime transport in bulk in according to IMO instruments

- Dunite fines (<10mm): Grupo A
- Dunite coarse (>10mm): Grupo C

14.8 Transport densities and stowage factor

Grain size (mm)	Density (mT/m ³)	Angle of repose (°)	Stowage factor (m ³ /Ton)
10/40	1,39	37,0	0,72
10/17	1,34	37,0	0,75
1/10	1,38	39,0	0,72
0/10	1,38	39,0	0,72
0/3	1,43	39,0	0,70

15. Regulatory Information**15.1 Safety, health and environmental regulations/legislation specific for the substance**

- The substance is not classified as dangerous so no labeling required.
- The substance under REACH is not classified in accordance with Annex V.7.
- Comply with the limits established for dust (total and respirable).

15.2 Chemical safety assessment

The product is chemically stable. No specific chemical safety studies have been performed.

16. Other Information

This Safety Data Sheet is prepared in compliance with:

- *Commission Directive of the European Communities 91/155/EEC.*
- *Commission Directive of the European Communities 2001/58/EEC.*
- *Royal Decree 1154/2020, of December 22, which modifies Royal Decree 665/1997, of May 12, on the protection of workers against risks related to exposure to carcinogenic agents during work.*
- *Order TED/723/2021, of July 1, approving Complementary Technical Instruction (ITC) 02.0.02 "Protection of workers against the risk of inhalation of dust and respirable crystalline silica", of the General Regulation of Standards Basics of Mining Safety.*
- *Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).*
- *New Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures - amending and repealing Directive 67/548/EEC and 1999/45/EC, and Regulation (EC) No 1907/2006.*

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- Commission Regulation (EU) No 2020/878 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

The information given in this sheet is based on the current state of the art about the product on the indicated date of revision. The data collected in the same form are only a guide for safe handling, use, storage, transport and disposal, and should not be considered warranty or quality specification.

It is the responsibility of the end user to ensure that the product is suitable for the particular purpose for which it is intended and that their operation is performed according to both the local and national legislation applicable. This document is applicable to the substance alone. When the substance is mixed with other products, the information in the Safety Data Sheet does not apply.