

## 1. Identification of the substance/mixture and of the company/undertaking

- **Product identifier:**
  - **Trade name:** [Kelnor 450HTPE](#)
  - **Relevant identified uses of the product and uses advised against:**
    - **Application of the product:** Refractory material.
- **Details of the supplier of the safety data sheet:**
  - **Manufacturer/Supplier:**

Refractarios kelsen, S.A.  
Belen Industrigunea 1,  
20150 Aduna (Gipuzkoa)  
España  
Tel :+34 943 696 099  
[kelsen@calciner.com](mailto:kelsen@calciner.com)
  - **Emergency telephone number:** +34 943 696 099 **Office Hours:** 8:00-13:00/14:30-17:30

## 2. Hazards identification



- **Classification of the product:**
  - **Classification according to Regulation (EC) No 1272/2008:** The article does not meet the classification requirements of the Regulation (EC) No 1272/2008, CLP, however, is supplied with the MSDS as it may contain the components for which there is limited exposure.
- **Label elements:**
  - **Labelling according to Regulation (EC) n° 1272/2008**
    - **Pictograms:** Not applicable.
    - **Hazard Statements:** Not applicable.
    - **Precautionary Statements:**
      - P280: Wear protective gloves/protective clothing/eye protection/face protection.
      - P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
      - P302+P352: IF ON SKIN: Wash with plenty of water.
      - P261: Avoid breathing dust/spray.
      - P273: Avoid release to the environment.
      - P308+P313: IF exposed: Call a POISON CENTER or doctor/physician.
      - P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
      - P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
      - P370+P378: In case of fire: Use CO<sub>2</sub>, sand, extinguishing spray to extinguish.
      - P403+P233: Store in a well ventilated place. Keep container tightly closed.
      - P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
      - P501: Dispose of contents/container to local/regional/national/ international regulations (2008/98/CE).
- **Other hazards:** The product contains Polycyclic Aromatic Hydrocarbons (PAH's) that could be liberated at high temperatures (>300°C) and in the powder.

### 3. First aid measures

- **Description of first aid measures:**
  - **After excessive inhalation:** Supply fresh air. In case of unconsciousness place patient in a stable laying down side position for transportation. Consult a doctor in case of complaints.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
  - **After swallowing:** If symptoms persist consult a doctor.
- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
  - **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

### 4. Composition/information on ingredients

- **Description:** Thermally treated, shaped, refractory brick. Consisting of the following components:

CAS: 37247-91-9	Calcium magnesium oxide – CaO.MgO	35-85%
	Eye Dam. 1, H318;  	
	Skin Irrit. 2, H315; STOT SE 3, H335	
CAS: 1309-48-4	Magnesium oxide	10-50%
CAS: 7782-42-5	Graphite	2-10%

- **Additional information:** The binder is a complex organic mixture of polycyclic, aromatic and heterocyclic hydrocarbons.

### 5. Firefighting measures

- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing spray. Fight larger fires with water spray or alcohol resistant foam. Do not use water.
- **Special hazards arising from the substance or mixture:**
  - **Can be realized in case of fire:** Carbon Monoxide (CO), Nitrogen Oxides (NO<sub>x</sub>).
- **Advice for firefighters**
  - **Protective equipment:** Wear self-contained breathing apparatus.

## 6. Accidental release measures

- **General information:** The product is solid and no spills or leakage can occur. Dust can be formed during handling, dismantling and disposal of the bricks. Contact with skin, eyes and personal clothing has to be avoided and suitable personal protective equipment has to be used as indicated in Section 8.
- **Personal precautions, protective equipment and emergency procedures:** See other sections.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Ensure adequate ventilation.
- **Reference to other sections:**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protective equipment.
  - See Section 13 for disposal information.

## 7. Handling and storage

- **Handling:**
  - **Precautions for safe handling:** In case of dust formation, provide proper protective gear for handling dusty materials. Mechanical resistant gloves have to be used. Avoid formation of dust and aerosol.
  - **Information about fire - and explosion protection:** The product is not flammable.
- **Conditions for safe storage, including any incompatibilities:**
  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in dry conditions. Keep container tightly sealed.

## 8. Exposure controls/personal protection

- **Control parameters:**

### Ingredients with limit values that require monitoring at the workplace:

**37247-91-9: Dolomite:**

**1305-78-8: Calcium oxide**

VLA-ED:	2 mg/m <sup>3</sup>
PEL:	2 mg/m <sup>3</sup>

**1309-48-4: Magnesium oxide**

VLA-ED:	10 mg/m <sup>3</sup>
PEL:	10 mg/m <sup>3</sup>

**7782-42-5: Graphite:**

VLA-ED:	2 mg/m <sup>3</sup>
PEL: (respirable dust)	2.5 mg/m <sup>3</sup>

- **Additional information:** As a basis for the production of this document, the most current valid lists were used.

- **Exposure controls:**

- **Personal protective equipment:**

- **General protective and hygienic measures:** Keep away from food, beverages and pet food. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid all contact with the skin. Avoid contact with the eyes and skin.

- **Respiratory protection:** In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

- **Gloves material:** The selection of suitable gloves does not only depend on the material, but also on further marks of quality which may vary from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked before use.

- **Eye protection:**



Tightly sealed goggles

## 9. Physical and chemical properties

<ul style="list-style-type: none"><li>• <b>Information on basic physical and chemical properties:</b><ul style="list-style-type: none"><li>▪ <b>General information:</b><ul style="list-style-type: none"><li>▪ <b>Appearance:</b><ul style="list-style-type: none"><li>• <b>Form:</b> Solid.</li><li>• <b>Colour:</b> Brown/Black.</li></ul></li><li>▪ <b>Odour:</b> Characteristic.</li><li>▪ <b>Odour threshold:</b> Not determined.</li></ul></li></ul></li></ul>
<ul style="list-style-type: none"><li>• <b>pH value:</b> Not applicable.</li></ul>
<ul style="list-style-type: none"><li>• <b>Change in condition:</b><ul style="list-style-type: none"><li>▪ <b>Melting point/Melting range:</b> Undetermined.</li><li>▪ <b>Boiling point/Boiling range:</b> Undetermined.</li><li>▪</li></ul></li></ul>
<ul style="list-style-type: none"><li>• <b>Flash point:</b> Not applicable.</li></ul>
<ul style="list-style-type: none"><li>• <b>Flammability (solid, gaseous):</b> Not determined.</li></ul>
<ul style="list-style-type: none"><li>• <b>Ignition temperature:</b> Not applicable.</li></ul>
<ul style="list-style-type: none"><li>• <b>Decomposition temperature:</b> Not determined.</li></ul>
<ul style="list-style-type: none"><li>• <b>Self-igniting:</b> Product is not self-igniting.</li></ul>
<ul style="list-style-type: none"><li>• <b>Danger of explosion:</b> Product does not present an explosion hazard.</li></ul>
<ul style="list-style-type: none"><li>• <b>Explosion limits:</b><ul style="list-style-type: none"><li>▪ <b>Lower:</b> Not determined.</li><li>▪ <b>Upper:</b> Not determined.</li></ul></li></ul>
<ul style="list-style-type: none"><li>• <b>Vapour pressure:</b> Not applicable.</li></ul>
<ul style="list-style-type: none"><li>• <b>Density:</b><ul style="list-style-type: none"><li>▪ <b>Relative density:</b> According to the product data sheet.</li><li>▪ <b>Apparent density at 20°C:</b> According to the product data sheet.</li><li>▪ <b>Evaporation rate:</b> Not applicable.</li></ul></li></ul>
<ul style="list-style-type: none"><li>• <b>Solubility in / Miscibility with water:</b> Slightly soluble.</li></ul>
<ul style="list-style-type: none"><li>• <b>Segregation coefficient (n-octanol/water):</b> Not determined.</li></ul>
<ul style="list-style-type: none"><li>• <b>Viscosity:</b> Not applicable.</li></ul>
<ul style="list-style-type: none"><li>• <b>Apparent porosity:</b> According to the product data sheet.</li></ul>
<ul style="list-style-type: none"><li>• <b>Cold crushing strength:</b> According to the product data sheet.</li></ul>

## 10. Stability and reactivity

- **Reactivity:**
  - **Chemical stability:** The product is chemically stable under recommended storage conditions.
- **Possibility of hazardous reactions:** The product may react with strong oxidizers. It is recommended to avoid the contact with these substances.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** Reacts with water and acids.
- **Hazardous decomposition products:** The product contains Polycyclic Aromatic Hydrocarbons (PAH's) that could be liberated at high temperatures (>300°C).

## 11. Toxicological information

- **Information on toxicological effects:**
  - **Acute toxicity:**
    - **Primary irritant effect:**
      - **On the skin:** Irritant to skin and mucous membranes.
      - **On the eyes:** Strong irritant with the danger of severe eye injury.
    - **Sensitization:** No sensitizing effects known.
  - **Additional toxicological information:** According to the calculation method of the General EU Classification Guidelines for Preparations the product does not require a labelling.

## 12. Ecological information

- **Toxicity:**
  - **Acute toxicity:** No further relevant information available.
  - **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential:** No further relevant information available.
  - **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
  - **General notes:** Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
  - **Other adverse effects:** No further relevant information available.

## 13. Disposal considerations

- **Waste treatment methods:**
  - **Recommendation:**



Must not be disposed of together with household garbage. Do not allow product to reach sewage system

- **According to use:** In the course of utilization waste characteristics may change.
- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.

## 14. Transport information

- |  |
|--|
| <ul style="list-style-type: none"><li>• <b>UN number:</b><ul style="list-style-type: none"><li>▪ <b>ADR, ADN, IMDG, IATA:</b> Void</li></ul></li></ul>   |
| <ul style="list-style-type: none"><li>• <b>Transport hazard class(es):</b><ul style="list-style-type: none"><li>▪ <b>ADR, ADN, IMDG, IATA:</b><ul style="list-style-type: none"><li>▪ <b>Class:</b> Void</li></ul></li></ul></li></ul> |
| <ul style="list-style-type: none"><li>• <b>Packing group:</b><ul style="list-style-type: none"><li>▪ <b>ADR, IMDG, IATA:</b> Void</li></ul></li></ul>  |
| <ul style="list-style-type: none"><li>• <b>Environmental hazards:</b><ul style="list-style-type: none"><li>▪ <b>Marine pollutant:</b> No</li></ul></li></ul>   |
| <ul style="list-style-type: none"><li>• <b>Special precautions for user:</b> Not applicable.</li></ul>   |
| <ul style="list-style-type: none"><li>• <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:</b> Not applicable.</li></ul>  |
| <ul style="list-style-type: none"><li>• <b>" UN "Model Regulation":</b> -</li></ul>  |

## 15. Regulatory information

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases:**
  - H315: Causes skin irritation.
  - H318: Causes serious skin damage.
  - H335: May cause respiratory irritation.
- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

IMDG: International Maritime Code for Dangerous Goods.

IATA: International Air Transport Association.