



**Calcinor**  
QUÍMICA NATURAL

**Kelsen**

## HEALTH AND SAFETY INFORMATION SHEET

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REV. N°: 00

**GRADE:**

**KELNOR SHTR**

### 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY

- **TRADE NAME:** KELNOR SHTR
- **SYNONYMOUS:** Resin bonded enriqueed and tempered dolomite brick.
- **SUPPLIER:** Refractarios Kelsen S. A.
- **ADDRESS:** Belen Industrigunea 1, Aduna-Guipúzcoa-Spain.
- **TELEPHONE NUMBER:** 34-943-69 60 99
- **FAX NUMBER:** 34-943-69 17 77
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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS N°	DESIGNATION	RANGES (%)	SYMBOL	RISK PHRASES	SECURITY PHRASES
9003-35-4	Phenolic resin	>2,5 ≤ 5			
100-97-0	Hexamethylenetetramine	>0,2 ≤ 0,5	Xn	R11, R42/43	S16, S22, S24, S37
37247-91-9	Dolomite	>50 ≤ 100	Xi	R37, R38, R41	S2, S25, S26, S37, S39

### 3. HAZARDS IDENTIFICATION

In the form supplied this product is not hazardous.

As shown in section 2 this product contains a phenolic resin. Phenolic resins are obtained by the reaction of phenol and formaldehyde. Curing of the resin is achieved by heating the product in a tempering furnace and this process removes the main part of the volatile fraction of the resin.

The incomplete combustion of the fumes generated in the heating process, in combination with poor air conditions, could result in the emission of some contaminants listed below.

AGENT	CAS NUMBER	NOTE	R PHRASES	S PHRASES
Phenol	108-95-2	Group 3, dermal	23/24/25, 34, 48/20/21/22, 68	1/2, 28, 45
Formaldehyde	50-00-0	Group 1, sen	23/24/25, 34, 40, 43	1/2, 26, 36/37/39, 45, 51

**Notes:**

**Group 3:** *Not classifiable as to its carcinogenicity to humans* by the International Agency for Research on Cancer, IARC.

**Group 1:** *Carcinogenic to humans*

**Dermal:** *May be absorbed through the skin*

**Sen:** *Can cause sensibilization in contact with skin*

Risk phrases description:

**R11:** Highly flammable

**R42/R43:** May cause sensitization by inhalation and skin contact  
**R37:** Irritating to respiratory system  
**R38:** Irritating to skin  
**R41:** Risk of serious damage to eyes  
**R23/24/25:** Toxic by inhalation, in contact with skin and if swallowed  
**R34:** Causes burns  
**R48/20/21/22:** Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed  
**R68:** Possible risk of irreversible effects  
**R40:** Limited evidence of a carcinogenic effect  
**R43:** May cause sensitisation by skin contact

Security phrases description:

**S16:** Keep away from sources of ignition - No smoking  
**S22:** Do not breathe dust  
**S24:** Avoid contact with skin  
**S37:** Wear suitable gloves  
**S2:** Keep out of the reach of children  
**S25:** Avoid contact with eyes  
**S26:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
**S39:** Wear eye/face protection  
**S1/2:** Keep locked up and out of the reach of children  
**S28:** After contact with skin, wash immediately with plenty of water  
**S45:** In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)  
**S36/37/39:** Wear suitable protective clothing, gloves and eye/face protection  
**S51:** Use only in well-ventilated areas

#### 4. FIRST AID MEASURES

##### In all cases seek medical attention

- **INHALATION:** If fumes or volatiles evolved during preheat are inhaled, remove to fresh air.
- **SKIN CONTACT:** Wash off any dust with warm soapy water.
- **EYE CONTACT:** If dust/chipping generated during handling, cutting or breaking operations enter eyes, flush with cool clean water.

#### 5. FIRE FIGHTING MEASURES

Refractory products are heat resistant and not themselves combustible although decomposition products formed during heating to high temperatures are combustible.  
Extinguisher type: General Purpose - for packaging material only.  
Special Procedures: Non required.

#### 6. ACCIDENTAL RELEASE MEASURES

There are no known risk associated with C-Bond products even if they are exposed to soil or surface water contact.  
No special measures are required.

#### 7. HANDLING AND STORAGE

A small amount of dust may be generated during handling. This may be classed as a nuisance particulate consisting of dolomite and magnesia.  
Store in dry area away from fierce heat that may cause damage to packaging materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with limit value that require monitoring at the workplace

#### **90003-35-4 Phenolic resin**

108-95-2 Phenol

PEL: 19 mg/m<sup>3</sup> (Limit value - Eight hours)

VLA-ED: 8 mg/m<sup>3</sup> (Limit value - Eight hours)

50-00-0 Formaldehyde

PEL: 0,75 ppm (Limit value - Eight hours) 0,1 ppm (Limit value - Short term→15min)

VLA-EC: 0,3 ppm (Limit value - Short term→15min)

#### **37247-91-9 Dolomite**

Dust, inhalable

PEL: 15 mg/m<sup>3</sup> (Limit value - Eight hours)

VLA-ED: 10 mg/m<sup>3</sup> (Limit value - Eight hours)

Dust, respirable

PEL: 5 mg/m<sup>3</sup> (Limit value - Eight hours)

VLA-ED: 3 mg/m<sup>3</sup> (Limit value - Eight hours)

- VENTILATION: Maintain good ventilation/extraction during preheat on newly constructed linings, during cutting/grinding and wrecking operations.
- RESPIRATORY: Use approved equipment if conditions so require and an adequate dust mask during wrecking operations.
- HAND PROTECTION: Wear non-porous anti-slip gloves.
- EDGE PROTECTION: Use protective glasses when cutting or drilling is necessary.
- SKIN PROTECTION: Use working clothes.
- FEET PROTECTION: Use safety shoes.
- HYGIENE MEASURES: Maintain good ventilation/extraction during preheat of newly installed linings, during cutting, grinding and wrecking operations.
- SPECIFIC CENTRAL PARAMETERS FOR PERSONAL PROTECTION: Customers are advised to check national regulations for limit values and their period of reference.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- APPEARANCE: Solid.
- SHAPE: Brick, standard shapes.
- COLOUR: Brown.
- ODOUR: Phenolic resin.
- MELTING POINT: > 1.700 °C
- BULK DENSITY AT 25 °C: > 2,84 g/cm<sup>3</sup>.
- SOLUBILITY IN WATER: Slightly soluble.

## 10. STABILITY AND REACTIVITY

- CONDITIONS TO AVOID: Temperatures above 300 °C.
- MATERIALS TO AVOID: Moisture and water.
- HAZARDOUS DECOMPOSITION: None other than fume/volatile emission evolved during preheat as described on item 3.

#### **11.-TOXICOLOGICAL INFORMATION**

There are no known health effects that can arise from the product on delivery, but short term exposure to volatiles driven off during preheat operations may cause temporary sensitisation of the eyes, nose and throat. Over-exposure to fumes due to poor ventilation may lead to nausea or dizziness.

#### **12. ECOLOGICAL INFORMATION**

C-bond products are inert in the form supplied. Dolomite will eventually degrade after a prolonged period of contact with moisture/water to form a hydrate which is slightly alkaline. There is not bioaccumulation potential or aquatic toxicity associated with the products.

#### **13. DISPOSAL CONSIDERATIONS**

Before undertaking the wrecking of used carbon refractory linings, customer are advised to evaluate any changes to the product that may be induced by the introduction of substances and operating conditions not under the control of the vendor.

The unused and used product can be recycled or dumped in special refuse sites according to national laws.

The slow hydration of the dolomite and magnesia in the product makes it unsuitable for potential construction purposes.

#### **14. TRANSPORT INFORMATION**

No special labelling or transport measures have been identified for C-Bond products.

#### **15. REGULATORY INFORMATION**

The product in the as received form is not hazardous and does not need special labelling.

During initial heating up with incomplete combustion volatiles may occur as described on chapter 3.

#### **16. OTHER INFORMATIONS**

The information included in this safety data sheet is based on our knowledge on the product. However, they cannot be considered a warranty and exclude us of any liability.

If you need further information about the product please address to Refractorios Kelsen S.A.