

**SAFETY DATA SHEET - SDS****ABNT NBR 14725 – Chemical Products: Health, Safety and Environmental Information****1. PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT:** Portland Cement  
**COMPANY:** Cimento Nacional  
**ADRESSES:**

<b>Arcos Plant</b> MG 170, km 4 - Boca da Mata Arcos, MG +55 (37) 3359-7500	<b>Pitimbu Plant</b> PB 044, km 18,5 – Fazenda CCP Pitimbu, PB +55 (83) 3565-4000
<b>Cantagalo Plant</b> RJ 166, km 2,5 Cantagalo, RJ +55 (22) 2555-0222	<b>Santa Luzia Plant</b> Rua Lafarge, n° 100 - Santa Rita Santa Luzia, MG +55 (31) 3649-1521
<b>Matozinhos Plant</b> MG 424, km 31 - Bom Jardim Matozinhos, MG +55 (31) 3712-9224	<b>Sete Lagoas Plant</b> BR 040, km 474 – Zona Rural Sete Lagoas, MG +55 (31) 2107-0100

**EMERGENCY NUMBER:** 0800 201 0021

**CONTACT NUMBER:** 0800 201 0021

**E-MAIL:** [crc@cimentonacional.com.br](mailto:crc@cimentonacional.com.br)

**2. HAZARD IDENTIFICATION****2.1. Classification of the Substance or Mixture**

Hazard Class	Classification	Hazard Statements
· Skin irritation.	2	H315 – Causes skin irritation.
· Serious eye damage/eye irritation.	1	H318 – Causes serious eye damage.
· Skin sensitization.	18	H317 – May cause an allergic skin reaction.
· Single exposure - respiratory tract irritation and target organ toxicity.	3	H335 – May cause respiratory irritation.

**2.2. GHS Label Elements****Hazard Statements**

H315 – Causes skin irritation.  
H317 – May cause an allergic skin reaction.  
H318 – Causes serious eye damage.





H335 – May cause respiratory irritation.

### Precautionary Statements

P102 – Keep out of reach of children.

P261+P304+P340+P312 – Avoid breathing dust. IF INHALED: Remove people to fresh air and keep them comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

P305+P351+P338+P310 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor.

P302+P352+P333+P313 – IF ON SKIN: Wash with plenty of water and soap. If skin irritation or rash occurs: Get medical advice.

P501 – Dispose of contents/container in accordance with local regulations.

### 2.3. Other Hazards

When cement is added excessively to water, it can form an alkaline solution that may be irritating to the skin and eyes. Avoid ingesting this solution.

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

CAS	Ingredient name	Concentration (%)
12168-85-3	Tricalcium silicate	20 - 70
10034-77-2	Dicalcium silicate	10 - 60
12068-35-8	Calcium ferroaluminate	5 - 15
13397-24-5	Calcium sulfate	2 - 8
12042-78-3	Tricalcium aluminate	1 - 15
1317-65-3	Calcium carbonate	0 - 25
1309-48-4	Magnesium oxide (free)	0 - 6
1305-78-8	Calcium oxide (free)	0 - 2
14808-60-7	Crystalline Silica	0 - 30

## 4. FIRST AID MEASURES

### 4.1. Most important symptoms and effects, both acute and delayed.

**General Information:** No personal protective equipment is required to provide first aid involving accidents with this substance.

**Eye Contact:** Do not allow victims to rub their eyes to avoid mechanical stress damage. Remove contact lenses if worn. Tilt the victim's head, open the eyelids widely and rinse the eyes thoroughly with clean water for 10 to 20 minutes to remove all particles. Avoid particles from entering the unaffected or previously rinsed eye. If available, use isotonic saline (0.9% NaCl). Seek ophthalmologic assistance in case of irritation.

**Skin Contact:** For dry cement, brush off and rinse the skin thoroughly with water. For wet cement, wash the skin with plenty of water. Remove contaminated clothing, shoes, watches, etc., and clean thoroughly before reusing. Seek medical attention in all cases of irritation or burns.



**Inhalation:** Move the person to an open and ventilated area and allow them to breathe fresh air. Dust deposited in the throat and nasal passages should clear spontaneously. If irritation, breathing discomfort, coughing, or other symptoms occur, seek medical attention immediately.

**Ingestion:** Do not induce vomiting. If the person is conscious, rinse their mouth thoroughly with water and drink generous amounts of water. Seek immediate medical attention.

**Most relevant symptoms and effects, both acute and delayed:**

**Eyes** – Do not rub the eyes to avoid corneal damage from mechanical stress. Remove contact lenses if present. Tilt the head of the injured person, open the eyelids, and immediately flush the eyes with clean water for at least 20 minutes. Avoid flushing particles into the unaffected eye. Use isotonic saline (0.9% NaCl) if available. Consult an occupational health specialist or ophthalmologist.

**Skin** - For dry cement, remove and wash thoroughly with water. For wet cement, rinse skin with plenty of water. Remove contaminated clothing, footwear, watches, etc., and clean carefully before reusing. Seek medical attention in all cases of irritation or burns.

**Inhalation** - Move the person to fresh air. Dust in the throat and nasal passages should clear spontaneously. Seek medical attention if irritation persists or other symptoms (discomfort, coughing) develop.

**Ingestion** - Do not induce vomiting. If the person is conscious, rinse the mouth and drink generous amounts of water. Seek medical advice if irritation occurs.

## 5. FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

The mixture is not flammable.

### 5.2. Specific Hazards Arising from the Substance or Mixture

Cement is neither explosive nor combustible and will not sustain or support the combustion of other materials.

### 5.3. Special Protective Equipment and Precautions for Firefighters

No specific protective equipment is required when fighting fires near cement storage areas or where the product might be affected.

## 6. ACCIDENTAL RELEASE MEASURES

Clean up all spills of this material to avoid dust generation and collect it in appropriate containers. Hardened cement can be disposed of as inert waste. Avoid runoff of the product in rainwater to prevent it from reaching water bodies.

### 6.1. Personal precautions, protective equipment, and emergency procedures

#### 6.1.1. For non-emergency personnel



Use protective equipment as described in Section 8 and follow the advice for safe handling and use as outlined in Section 7.

### **6.1.2 For emergency responders**

Emergency procedures are generally not required. However, respiratory protection is necessary in situations with high levels of dust.

### **6.2 Environmental precautions**

Do not wash cement into drains, sewer systems, or water bodies (e.g., streams).

### **6.3 Methods and materials for containment and cleaning up.**

Collect the spilled product in its dry state, if possible.

## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Handle with care to avoid breaking the packaging. Avoid dust dispersion. Use protective gloves to prevent direct skin contact. Use safety goggles when working in dusty environments.

### **7.2 Conditions for safe storage**

Store in dry locations, protected from the elements, so the product does not alter rainwater and contaminates rivers, lakes, and other water sources. Keep containers tightly closed and protected from damage.

## **8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

### **8.1 Control parameters**

Inhalable –  $10\text{mg}/\text{m}^3$

Respirable fraction –  $5\text{ mg}/\text{m}^3$

### **8.2 Engineering control measures**

Measures to reduce dust generation and prevent its spread in the environment, such as dust suppression, exhaust ventilation, and dry-cleaning methods that do not cause dust dispersion.

### **8.3 Personal protective measures**

Avoid direct contact with mortar or fresh concrete whenever possible. If not possible, do not eat, drink, or smoke while handling cement to prevent contact with skin or mouth. Remove contaminated clothing, footwear, watches, etc., and clean thoroughly before reuse.



<b>Respiratory Protection</b>	<b>Eye Protection</b>	<b>Skin Protection</b>
Under normal conditions, no respiratory protection is required. Use respiratory protection in conditions with high dust concentration.	Use standard safety glasses or protective goggles to prevent contact with eyes. Contact lenses are not recommended when handling this product under high dust concentration.	Use waterproof gloves, boots, and protective clothing to avoid skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	Solid	<b>Evaporation rate</b>	Not Applicable
<b>Form</b>	Powder	<b>Flash point</b>	Not Applicable
<b>Color</b>	Gray	<b>Auto-ignition temperature</b>	Not Applicable
<b>Odor</b>	Characteristic	<b>Upper explosive limit</b>	Not Applicable
<b>pH in aqueous solution</b>	11 - 13	<b>Lower explosive limit</b>	Not Applicable
<b>Boiling point</b>	Not Applicable	<b>Vapor pressure</b>	Not Applicable
<b>Boiling temperature range</b>	Not Applicable	<b>Bulk density</b>	1,2 g/cm <sup>3</sup>
<b>Distillation range</b>	Not Applicable	<b>Density</b>	2,99 g/cm <sup>3</sup>
<b>Melting point</b>	Not Applicable	<b>Solubility in hydrochloric acid</b>	99%l
<b>Decomposition temperature</b>	Not Applicable	<b>Water solubility</b>	1,5 g/l

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

When mixed with water, the product hardens into a stable mass that does not react under normal environmental conditions.

### 10.2. Chemical Stability

Cement is stable when properly stored (see section 7). Mixing with water may alter the pH of the solution.

### 10.3. Possibility of Hazardous Reactions

Cement does not cause hazardous reactions.

### 10.4. Conditions to Avoid

Moisture during storage may lead to lump formation and loss of product quality.

### 10.5. Incompatible Materials



Acids, ammonia salts, aluminum, or other non-noble metals may solubilize the product. Uncontrolled use of aluminum powder in wet cement should be avoided due to hydrogen gas generation.

#### **10.6. Hazardous Decomposition Products**

Cement does not decompose into any hazardous products.

## **11. TOXICOLOGICAL INFORMATION**

There is no scientific evidence of toxic effects caused by cement. However, when the product comes into contact with water, it may cause allergic reactions as described in other sections of this SDS (Safety Data Sheet).

## **12. ECOLOGICAL INFORMATION**

### **12.1. Ecotoxicity**

The product is not hazardous to the environment. Ecotoxicological tests with Portland cement on *Daphnia magna* and *Selenastrum coli* have shown little toxic impact. Therefore, LC50 and EC50 values could not be determined. There is no indication of sediment-phase toxicity. However, adding large amounts of cement to water may increase the pH and, under certain conditions, be harmful to aquatic life.

### **12.2. Bioaccumulative Potential**

The product does not exhibit characteristics associated with bioaccumulation. The components of the mixture do not have bioaccumulative properties.

### **12.3. Other Adverse Effects**

Not relevant.

### **12.4. Degradability**

The components of hardened cement are insoluble.

### **12.5. Mobility**

All measures must be taken in accordance with environmental regulations.

### **12.6. Expected Behavior**

In case of spillage in moist environments, a slight increase in water and soil alkalinity may occur.

## **13. DISPOSAL CONSIDERATIONS**

Small amounts of material may be disposed of as common waste or returned to the container for later use, provided it is not contaminated. Once hardened, cement may be disposed of as inert waste. Dispose of packaging and concrete or mortar residues in accordance with environmental



regulations. They may be sent to a sanitary landfill or incinerated. If specific regulations apply in the region, they must be followed. Do not discard sewage systems or surface water.

#### 14. TRANSPORT INFORMATION

Portland cement is not considered a hazardous chemical product; therefore, codes and classifications for land, river, sea, or air transport do not apply.

#### 15. REGULATORY INFORMATION

As it is not a hazardous or toxic chemical product, no specific regulations apply.

#### 16. OTHER INFORMATION

- It is important to differentiate cement from concrete, which is a mixture of cement, sand, and other materials. Always use Personal Protective Equipment (PPE) according to occupational safety legislation.
- The information provided herein was obtained from sources we believe to be reliable and reflects our current knowledge of the product. However, it should not be regarded as definitive. To ensure safe use of the product, it is recommended that customers review this SDS carefully, clarify any doubts with us, and provide guidance to their employees accordingly.

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