



1 Identification of substance

Product details

Trade name: NO. 36 REFRACTORY CEMENT

Manufacturer/Supplier:

ANH Refractories Company
400 Fairway Drive
Moon Township, PA 15108

General Phone: (412)375-6600

Information department: MSDS Technical Information: (412)375-6837

Emergency information: CHEMTREC 24 HOUR EMERGENCY PHONE NUMBER: 1-800-424-9300.

2 Composition/Data on components

Chemical characterization

Description: Mixture of the substances listed below with nonhazardous additions.

Components:

Table with 3 columns: CAS number, chemical name, and percentage range. Rows include non-fibrous alumina (30-60%), Silicic acid, sodium salt (10-20%), hydrous alumina silicate (5-10%), alumina silicate (5-10%), silicon dioxide, chemically prepared (5-10%), crystalline silica (quartz) (2.5-5%), crystalline silica (cristobalite) (1-2.5%), titanium dioxide (1-2.5%), and iron oxide (1-2.5%).

3 Hazards identification

Hazard description:

Toxic

Medical conditions aggravated by exposure to the product: Asthma, chronic lung disease, and skin irritation.

Carcinogenicity Information:

Crystalline silica is listed by IARC as a Group 1 Carcinogen "sufficient evidence of carcinogenicity in humans", and is listed by NTP as K, "Known To Be A Human Carcinogen".

Information pertaining to particular dangers for man and environment:

May cause cancer by inhalation.
Irritating to eyes, respiratory system and skin.
Danger of serious damage to health by prolonged exposure.

PRODUCT CONTAINS CRYSTALLINE SILICA, "a chemical known to the State of California to cause cancer."
Prolonged or repeated inhalation of dust from products containing crystalline silica can cause silicosis or cancer.

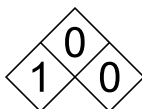
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· NFPA ratings (scale 0-4)



Health = 1
Fire = 0
Reactivity = 0

· HMIS Classification

HEALTH	*1
FIRE	0
REACTIVITY	0

Health: *1
Flammability: 0
Reactivity: 0

4 First aid measures

- **After inhalation:** Move to fresh air; consult doctor if needed.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Flush eyes with water for 15 minutes. If irritation persists, consult a doctor.
- **After swallowing:**
This product is intended for industrial applications; in the unlikely event that this product is swallowed, consult a physician if any adverse medical conditions occur.

5 Fire fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
Ensure good ventilation/exhaust at the workplace.
Prevent formation of dust.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Storage:**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store product inside, out of extreme weather conditions.

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A.P. Green, Harbison-Walker and NARCO

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- **Storage class:**
- **Class according to regulation on flammable liquids: Not applicable**

8 Exposure controls and personal protection

· **Components with limit values that require monitoring at the workplace:**

1344-28-1 non-fibrous alumina

PEL	15*, 5** mg/m ³ *Total dust **Respirable fraction
TLV	10 mg/m ³ (e)

1332-58-7 hydrous alumina silicate

PEL	15*, 5** mg/m ³ *Total dust **Respirable fraction
REL	10*, 5** mg/m ³ *Total dust **Respirable fraction
TLV	2 R mg/m ³ (e)

14808-60-7 crystalline silica (quartz)

REL	0.05* mg/m ³ *Respirable dust
TLV	0.05 R mg/m ³

14464-46-1 crystalline silica (cristobalite)

REL	0.05* mg/m ³ *Respirable dust
TLV	0.05 R mg/m ³

13463-67-7 titanium dioxide

PEL	15* mg/m ³ *Total dust
TLV	10 mg/m ³

1309-37-1 iron oxide

PEL	10 mg/m ³ as Fe; Iron oxide dust & fume (Fe ₂ O ₃)
REL	5 mg/m ³ as Fe; Iron dust & fume (Fe ₂ O ₃)
TLV	5 mg/m ³ as Fe

- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.

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Breathing equipment:



NIOSH approved respirators should be used if dust is present. A respiratory protection program should be implemented if exposures exceed OSHA PELs.

Protection of hands:



Protective gloves recommended

Eye protection: Safety glasses with side shields recommended

9 Physical and chemical properties

- Form: Solid
- Color: According to product specification
- Odor: No specific odor.

- Change in condition
 - Melting point/Melting range: Undetermined.
 - Boiling point/Boiling range: Undetermined.

- Flash point: Not applicable.
- Ignition temperature: 370.0°C (698°F)
- Auto igniting: Product is not selfigniting.
- Danger of explosion: Product does not present an explosion hazard.

- Vapor pressure at 20°C (68°F): 23.0 hPa
- Density: Not determined.

- Solubility in / Miscibility with Water: Insoluble.

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Dangerous reactions: No dangerous reactions known.
- Dangerous products of decomposition: Refractories containing crystalline silica may, after service, contain more or less crystalline silica. Care must be taken to avoid and/or control dust from demolition. If in doubt of the proper protection, seek advice from a safety professional.



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11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

7631-86-9 silicon dioxide, chemically prepared

Oral	LD50	10000 mg/kg (rat)
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13463-67-7 titanium dioxide

Oral	LD50	>20000 mg/kg (rat)
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Dermal	LD50	>10000 mg/kg (rbt)
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Inhalative	LC50/4 h	>6.82 mg/l (rat)
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1309-37-1 iron oxide

Oral	LD50	>5000 mg/kg (rat)
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· **Primary acute effects:**

· **Skin contact:** Irritant to skin and mucous membranes.

· **Eye contact:** Irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant.

Carcinogenic if inhaled.

12 Ecological information

· **General notes:** At present there are no ecotoxicological assessments.

13 Disposal considerations

· **Recommendation for Disposal of Product:**

As sold, this product is not RCRA hazardous. Final used condition must be evaluated prior to disposal. Dispose of waste product in accordance with Federal, State and Local regulations.

Dust created during demolition of used product may contain crystalline silica.

· **Recommendation for Disposal of Uncleaned Packaging:** Reuse, recycle or treat as industrial waste.

14 Transport information

· **Transport/Additional information:** Not dangerous according to available information.

15 Regulations

· **SARA 313 TOXIC CHEMICALS**

No material listed in the components in Section 2 of this MSDS is on the SARA 313 list.

· **SARA 302 EXTREMELY HAZARDOUS SUBSTANCES**

No material listed in the components in Section 2 of this MSDS is on the SARA 302 list.

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· **TSCA (Toxic Substances Control Act)**

This substance or all the ingredients of this product are on the Chemical Substances Inventory of the Toxic Substances Control Act (TSCA Inventory). The presence on this list does not require any legal reporting.

· **WHMIS Classification**

Class D - Division 2 - Sub Division A

Untested mixture containing a very toxic material

Class D - Division 2 - Sub Division B

Untested mixture containing a toxic material

Class E - Untested mixture containing corrosive material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

· **Carcinogenicity categories**

· **IARC (International Agency for Research on Cancer)**

14808-60-7	crystalline silica (quartz)	1
14464-46-1	crystalline silica (cristobalite)	1
13463-67-7	titanium dioxide	3
1309-37-1	iron oxide	3

· **NTP (National Toxicology Program)**

14808-60-7	crystalline silica (quartz)	R
14464-46-1	crystalline silica (cristobalite)	R

· **TLV (Threshold Limit Value established by ACGIH)**

1344-28-1	non-fibrous alumina	A4
1332-58-7	hydrous alumina silicate	A4
14808-60-7	crystalline silica (quartz)	A2
13463-67-7	titanium dioxide	A4
1309-37-1	iron oxide	A4

· **MAK (German Maximum Workplace Concentration)**

1344-28-1	non-fibrous alumina	2
14808-60-7	crystalline silica (quartz)	1
14464-46-1	crystalline silica (cristobalite)	1

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

14808-60-7	crystalline silica (quartz)
14464-46-1	crystalline silica (cristobalite)
13463-67-7	titanium dioxide

· **Classification according to EU-guidelines**

· **Hazard symbols:**

Toxic

· **Hazard-determining components of labeling:**

crystalline silica (quartz)

crystalline silica (cristobalite)

· **Risk phrases:**

May cause cancer by inhalation.

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*Irritating to eyes, respiratory system and skin.
Danger of serious damage to health by prolonged exposure.*

· Safety phrases:

*When using do not eat or drink.
Do not breathe dust.
Avoid contact with eyes.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
After contact with skin, wash immediately with plenty of soap and water
Wear suitable protective clothing and gloves.
In case of accident or if you feel unwell, seek medical advice immediately.*

· Special labeling of certain preparations:

*PRODUCT CONTAINS CRYSTALLINE SILICA, "a chemical known to the State of California to cause cancer."
Prolonged or repeated inhalation of dust from products containing crystalline silica can cause silicosis or cancer.*

· National regulations:

· The following ingredients are known in the state of California to be a cancer risk (Proposition 65):

14808-60-7	crystalline silica (quartz)
14464-46-1	crystalline silica (cristobalite)

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.

· Contact: Patricia A. Kott 412-375-6712

· Creation date: 05/24/2000