



1 Identification of substance

· **Product details**

· **Trade name:** *ON-LINE THOR AZS*

· **Manufacturer/Supplier:**

ANH Refractories Company
400 Fairway Drive
Moon Township, PA 15108

General Phone: (412)375-6600

· **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:**

1302-93-8	alumina silicate		30-60%
1314-23-4	zirconia		10-20%
1344-28-1	non-fibrous alumina	Warning: 3.2/2, 3.3/2A, 3.8/3	5-10%
7631-86-9	silicon dioxide, chemically prepared		5-10%
1302-76-7	alumina silicate (kyanite)		5-10%
14808-60-7	crystalline silica (quartz)	Danger: 3.6/1B	5-10%
69012-64-2	amorphous silica		5-10%
	organic fibers		0.1-0.5%
14464-46-1	crystalline silica (cristobalite)	Danger: 3.6/1B	0.1-0.5%

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:**

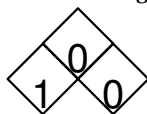
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

May cause cancer by inhalation.

Irritating to eyes, respiratory system and skin.

Danger of serious damage to health by prolonged exposure.

· **NFPA ratings (scale 0-4)**



Health = 1

Fire = 0

Reactivity = 0



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· HMIS Classification

HEALTH	*1	Health: *1
FIRE	0	Flammability: 0
REACTIVITY	0	Reactivity: 0

· GHS label elements

Health hazard **Danger**

3.6/1B - May cause cancer.

Exclamation mark **Warning**

3.2/2 - Causes skin irritation.

3.3/2A - Causes serious eye irritation.

· Prevention:

Wear protective gloves/protective clothing/eye protection/face protection.

Use personal protective equipment as required.

· Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see on this label).

· Storage:

Store locked up.

· Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

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:** Do not allow to enter sewers/ surface or ground water.

· **Measures for cleaning/collecting:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.



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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.

8 Exposure controls and personal protection

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

1314-23-4 zirconia

PEL	5 mg/m ³ as Zr
REL	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
TLV	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr

1344-28-1 non-fibrous alumina

PEL	15* 5** mg/m ³ *total dust **respirable fraction
REL	Short-term value: 1.5* mg/m ³ *as resprable fraction
TLV	1* mg/m ³ *as respirable fraction

14808-60-7 crystalline silica (quartz)

PEL	see Quartz listing
REL	0.05* mg/m ³ *respirable dust
TLV	0.025* mg/m ³ *as respirable fraction

69012-64-2 amorphous silica

TLV	TLV withdrawn
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14464-46-1 crystalline silica (cristobalite)

PEL	1/2 value from respirable dust formulae for Quartz
REL	0.05* mg/m ³ *respirable dust
TLV	0.025* mg/m ³ *as respirable fraction

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Additional information:

The zirconia addition in this product by nature has trace amounts of uranium and thorium, typically less than 500ppm. For more information, review NRC regulations 10CFR40.22 and 10 CFR40.41.

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.

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

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Safety glasses with side shields recommended

9 Physical and chemical properties

General Information

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.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

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· **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.*
- **Materials to be avoided:**
- **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.

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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· **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

· **Additional ecological information:**

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
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.

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· **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**

1344-28-1 non-fibrous alumina

· **SARA 302 EXTREMELY HAZARDOUS SUBSTANCES**

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

· **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

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**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

7631-86-9	silicon dioxide, chemically prepared	3
14808-60-7	crystalline silica (quartz)	1
69012-64-2	amorphous silica	3
14464-46-1	crystalline silica (cristobalite)	1

· **NTP (National Toxicology Program)**

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

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

1314-23-4	zirconia	A4
1344-28-1	non-fibrous alumina	A4
14808-60-7	crystalline silica (quartz)	A2
14464-46-1	crystalline silica (cristobalite)	A2

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

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

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14464-46-1	crystalline silica (cristobalite)	I
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· NIOSH-Ca (National Institute for Occupational Safety and Health)

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

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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

· Safety phrases:

Avoid exposure - obtain special instructions before use.
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.

· 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: Dylan L. Miller 412-375-6712

· Creation date: 02/27/2009

· Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)

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MATERIAL SAFETY DATA SHEET

A.P. Green, Harbison-Walker and NARCO

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Trade name: ON-LINE THOR AZS

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MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

** Data compared to the previous version altered.*

USA