

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/07/2015

Version: 2.3

Reviewed on 08/07/2015

1 Identification

- **Product identifier**
- **Trade name: POWERPOZZ METAKAOLIN**
- **Application of the substance / the preparation:** Concrete Additive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Advanced Cement Technologies
435 Martin Street ; Ste 2040
Blaine, WA 98230, USA
- **Information department:**
Health and Safety (9 AM to 5 PM PST) 360-332-7060
Sales@Metakaolin.com
- **Emergency telephone number:**
Chemtrec North America: +1-800-424-9300
Chemtrec International: +1-703-527-3887
Other Emergencies (24hr): 360-220-1785

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS08

- **Signal word** Danger

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

quartz (SiO₂)

- **Hazard statements**

Causes damage to organs through prolonged or repeated exposure.

- **Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Get medical advice/attention if you feel unwell.

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

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

(Contd. on page 2)

USA

Safety Data Sheet
 acc. to OSHA HCS

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Version: 2.3

Reviewed on 08/07/2015

Trade name: **POWERPOZZ METAKAOLIN**

(Contd. of page 1)

 · **HMIS-ratings (scale 0 - 4)**

| | | |
|------------|---|----------------|
| HEALTH | 1 | Health = *1 |
| FIRE | 0 | Fire = 0 |
| REACTIVITY | 0 | Reactivity = 0 |

* Product presents long-term adverse effects.

 · **Hazard not otherwise classified**

WARNING. Contains a substance known to the State of California to cause cancer. Quartz is classified by IARC (International Agency for Research on Cancer) as carcinogenic to humans by inhalation (Group I). Furthermore, quartz can cause silicosis, lung cancer and other lung diseases on prolonged exposure.

Kaolin clay may contain up to 2% quartz which is part of the natural raw material as mined.

Contains ~1% naturally occurring quartz that is bound in the product matrix reducing free respirable crystalline silica to <0.1%.

Occupational exposure limits to respirable crystalline silica are not expected to be exceeded during normal, foreseeable conditions of fresh product use, as recommended by GRACE. Exposure to respirable dust and respirable crystalline silica should be monitored and controlled during other conditions.

 * **3 Composition/information on ingredients**

 · **Chemical characterization: Mixtures**

 · **Description:**

 · **CAS No. and description:**

| | | |
|-----------|----------------------------------|-----------|
| 1332-58-7 | natural aluminosilicate (Kaolin) | 97.5-100% |
|-----------|----------------------------------|-----------|

 · **List of Dangerous Components**

| | | |
|------------|---|--------|
| 14808-60-7 | quartz (SiO ₂) | ≤ 2.5% |
| | ⚠ STOT RE 1, H372 | |
| | Silica, crystalline (airborne particles of respirable size) | <0.1% |
| | ⚠ Carc. 1A, H350 | |

 · **Impurities and stabilizing additives:**

| | | |
|------------|---|------------------|
| 14808-60-7 | quartz (SiO ₂) | |
| | Silica, crystalline (airborne particles of respirable size) | ⚠ Carc. 1A, H350 |

4 First-aid measures

 · **After inhalation:** Supply fresh air; consult doctor in case of complaints.

 · **After skin contact:**

Generally the product does not irritate the skin.

Immediately wash with water at least for 30 minutes and rinse thoroughly.

If skin irritation occur, consult a doctor.

 · **After eye contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Then consult a doctor.

 · **After swallowing:** Seek medical attention. Do not induce vomiting.

 · **Information for doctor:**

 · **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

(Contd. on page 3)

USA

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/07/2015

Version: 2.3

Reviewed on 08/07/2015

Trade name: POWERPOZZ METAKAOLIN

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Hazardous combustion products** No dangerous substances are released.
- **Protective equipment:** Wear personal protective equipment.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Vacuuming or wet sweeping may be used to avoid dust dispersal.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Prevent formation of dust.
Keep receptacles tightly sealed.
Provide suction extractors if dust is formed.
Use appropriate industrial vacuum cleaners or central vacuum systems for dust removal.
Take precautionary measures against static discharges.
- **Information about protection against explosions and fires:**
Protect against electrostatic charges.
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:** Store away from foodstuffs.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in dry conditions.
This product is hygroscopic.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

(Contd. on page 4)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 08/07/2015

Version: 2.3

Reviewed on 08/07/2015

Trade name: **POWERPOZZ METAKAOLIN**

(Contd. of page 3)

| · Components with limit values that require monitoring at the workplace: | |
|--|---|
| 1332-58-7 natural aluminosilicate (Kaolin) | |
| PEL | Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction |
| REL | Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction |
| TLV | Long-term value: 2* mg/m ³ E; as respirable fraction |
| 14808-60-7 quartz (SiO₂) | |
| PEL | see Quartz listing |
| REL | Long-term value: 0.05* mg/m ³ *respirable dust; See Pocket Guide App. A |

- **Additional information:** Valid lists at time of creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Protection of hands:**



Protective gloves

Wear gloves for the protection against mechanical hazards.

- **Material of gloves**
Butyl rubber, BR
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.35 mm
- **For the permanent contact gloves made of the following materials are suitable:**
Butyl rubber, BR
Nitrile rubber, NBR
- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing

9 Physical and chemical properties

| | |
|---|----------------------------|
| · Information on basic physical and chemical properties | |
| · General Information | |
| · Appearance: | |
| Form: | Powder |
| Color: | White |
| · Odor: | |
| Odour threshold: | Odorless Not available. |
| · pH-value at 20 °C (68 °F): | 4 - 8 |

(Contd. on page 5)

-USA-

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/07/2015

Version: 2.3

Reviewed on 08/07/2015

Trade name: **POWERPOZZ METAKAOLIN**

(Contd. of page 4)

| | |
|---|--|
| · Change in condition | |
| · Melting point/Melting range: | 1400-1800 °C (2552-3272 °F) |
| · Boiling point/Boiling range: | Not determined. |
| · Conditions of flammability | |
| · Flash point: | Not available. |
| · Flammability (solid, gaseous): | Product is not flammable. |
| · Ignition temperature: | Not available. |
| · Decomposition temperature: | 400-550 °C (752-1022 °F) (structural decomp.) |
| · Auto igniting: | Product is not self-igniting. |
| · Danger of explosion: | Product does not present an explosion hazard. |
| · Explosion limits: | |
| Lower: | - Vol % |
| Upper: | - Vol % |
| · Vapor pressure at 20 °C (68 °F): | -- hPa |
| · Density at 20 °C (68 °F): | 2.1 - 2.6 g/cm ³ (17.525 - 21.69 lbs/gal) |
| · Bulk density at 20 °C (68 °F): | 200 - 600 kg/m ³ |
| · Vapour density | Not applicable. |
| · Evaporation rate | Not applicable. |
| · Solubility in / Miscibility with | |
| Water: | Insoluble. |
| · Coefficient of water/oil distribution: | Not available. |
| · Viscosity: | |
| Dynamic at 20 °C (68 °F): | -- mPas |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**
In case of thermal decomposition caused by smouldering and incomplete combustion toxic fumes may be developed.
- **Incompatible materials:** Protect from contamination.
- **Hazardous decomposition products:** No dangerous decomposition products known.

USA

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/07/2015

Version: 2.3

Reviewed on 08/07/2015

Trade name: **POWERPOZZ METAKAOLIN**

(Contd. of page 5)

11 Toxicological information

- Information on the likely routes of exposure
- Delayed and immediate effects and chronic effects from short or long term exposure
- Information on toxicological effects

- **Acute toxicity:**

| | | |
|---|------|--|
| · LD/LC50 values that are relevant for classification: | | |
| 1332-58-7 natural aluminosilicate (Kaolin) | | |
| Oral | LD50 | >5000 mg/kg (rat) TAP Review Agricultural Marketing Service 8/16/2002 |
| Dermal | LD50 | >5000 mg/kg (rat) TAP Review Agricultural Marketing Service 8/16/2002 |
| Inhalative | LC0 | >2.18 mg/l/4h (rat) 40 CFR 160 comparable substance |

- **Primary irritant effect:**

| | | |
|---|----|--|
| · on the skin: | | |
| 1332-58-7 natural aluminosilicate (Kaolin) | | |
| Irritation of skin | IS | 0 (rabbit) 40 CFR 160 comparable substance |

- **on the eye:**

| | | |
|---|----|---|
| · 1332-58-7 natural aluminosilicate (Kaolin) | | |
| Irritation of eyes | IS | 4.7 (rat) 40 CFR 160 comparable substance |

- **Skin sensitization** No further relevant information available.

- **Additional toxicological information:**

- **Carcinogenic categories**

| | | |
|---|----------------------------|---|
| · IARC (International Agency for Research on Cancer) | | |
| 14808-60-7 | quartz (SiO ₂) | 1 |

| | | |
|--|----------------------------|---|
| · NTP (National Toxicology Program) | | |
| 14808-60-7 | quartz (SiO ₂) | K |

| | | |
|--|--|--|
| · OSHA-Ca (Occupational Safety & Health Administration) | | |
| None of the ingredients is listed. | | |

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Carcinogenicity** No further relevant information available.
- **Mutagenicity** No further relevant information available.
- **Reproductive toxicity** No further relevant information available.
- **Specific target organ toxicity (single exposure)** No further relevant information available.
- **Specific target organ toxicity (repeated exposure)** No further relevant information available.

— USA —

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/07/2015

Version: 2.3

Reviewed on 08/07/2015

Trade name: **POWERPOZZ METAKAOLIN**

(Contd. of page 6)

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

| | |
|---|--|
| · Water flea toxicity | |
| 1332-58-7 natural aluminosilicate (Kaolin) | |
| EC50 (48 h) | >1100 mg/l (Daphnia magna) Environmental Health Criteria (WHO 2005) |

- **Persistence and degradability** No further relevant information available.

- **Other information:**

By the insolubility in water there is a separation at every filtration and sedimentation process.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Recommendation:**

Disposal must be made according to official regulations.

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State/provincial and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state/provincial and local requirements.

14 Transport information

| | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | None |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | None |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | None |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | None |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

(Contd. on page 8)

-USA

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/07/2015

Version: 2.3

Reviewed on 08/07/2015

Trade name: **POWERPOZZ METAKAOLIN**

(Contd. of page 7)

· **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulatory information

· **SARA**

· **SARA 302/304**

None of the ingredients is listed.

· **SARA 313**

None of the ingredients is listed.

· **SARA 311/312** Delayed (Chronic) Health Hazard.

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

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

| | |
|------------|----------------------------|
| 14808-60-7 | quartz (SiO ₂) |
|------------|----------------------------|

| | |
|--|---|
| | Silica, crystalline (airborne particles of respirable size) |
|--|---|

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

All ingredients are listed.

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

| | |
|------------|----------------------------|
| 14808-60-7 | quartz (SiO ₂) |
|------------|----------------------------|

· **Canadian DSL**

| | |
|-----------|----------------------------------|
| 1332-58-7 | natural aluminosilicate (Kaolin) |
|-----------|----------------------------------|

| | |
|------------|----------------------------|
| 14808-60-7 | quartz (SiO ₂) |
|------------|----------------------------|

| | |
|--|---|
| | Silica, crystalline (airborne particles of respirable size) |
|--|---|

· **Canadian NDSL**

All substances are listed or exempt from listing.

· **European EINECS**

All ingredients are listed.

· **Philippines Inventory of Chemicals and Chemical Substances PICCS**

All ingredients are listed.

· **Inventory of the Existing Chemical Substances manufactured or imported in China IECSC**

All ingredients are listed.

· **Australian Inventory of Chemical Substances AICS**

All ingredients are listed.

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/07/2015

Version: 2.3

Reviewed on 08/07/2015

Trade name: **POWERPOZZ METAKAOLIN**

(Contd. of page 8)

| · Existing and New Chemical Substance List ENCS | | |
|---|---|----------|
| 1332-58-7 | natural aluminosilicate (Kaolin) | |
| 14808-60-7 | quartz (SiO ₂) | 1-548 |
| | Silica, crystalline (airborne particles of respirable size) | |
| · Korean Existing Chemical Inventory KECI | | |
| 1332-58-7 | natural aluminosilicate (Kaolin) | KE-21772 |
| 14808-60-7 | quartz (SiO ₂) | KE-29983 |
| | Silica, crystalline (airborne particles of respirable size) | * |

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

GHS08

· **Signal word** Danger· **Hazard-determining components of labeling:**quartz (SiO₂)· **Hazard statements**

Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Get medical advice/attention if you feel unwell.

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

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**

H350 May cause cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

· **Department issuing SDS:** Advanced Cement Technologies· **Contact:**

SALES OFFICES

USA:

Advanced Cement Technologies

435 Martin Street ; Ste 2040

Blaine, WA 98230, USA

Tel: +1 360-332-7060

Em: Sales@Metakaolin.com

(Contd. on page 10)

USA

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/07/2015

Version: 2.3

Reviewed on 08/07/2015

Trade name: POWERPOZZ METAKAOLIN

(Contd. of page 9)

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- **Date of preparation / last revision** 08/07/2015 / 2.2
- **The first date of preparation** 01/23/2001
- **Number of revision times and the latest revision date** 2.3 / 08/07/2015
- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Carc. 1A: Carcinogenicity, Hazard Category 1A
STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

- *** Data compared to the previous version altered.**

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