

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 02/10/2017

Reviewed on 02/10/2017

* 1 Identification

- **Product Identifier**
- **Trade name:** 8.5-31-2+2%Boron
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description** PC12 Fertilizers
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
 Florikan ESA, LLC
 6801 Energy Ct. Suite 100
 Sarasota, FL 34234
 Ph: 941-379-4048 ext 332
 Fax: 941-377-3633
 Email product info: Doug Cabe; dcabe@florikan.com
- **Emergency telephone number:** Chemtrec 1-800-424-9300 or outside USA 1-703-527-3887

www.Florikan.com

* 2 Hazard(s) Identification

- **Classification of the substance or mixture:**



GHS08 Health hazard

Carc. 1A H350 May cause cancer.

STOT RE 1 H372-H373 Causes damage to organs through prolonged or repeated exposure. May cause damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2B H320 Causes eye irritation.

- **Label elements:**
- **GHS label elements**
 The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**



GHS07 GHS08

- **Signal word:** Danger
- **Hazard-determining components of labeling:**
 Quartz (SiO₂)
- **Hazard statements:**
 H315+H320 Causes skin and eye irritation.
 H350 May cause cancer.
 H372-H373 Causes damage to organs through prolonged or repeated exposure. May cause damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.

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Precautionary statements:

- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P314 Get medical advice/attention if you feel unwell.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Unknown acute toxicity:

This value refers to knowledge of known, established toxicological or ecotoxicological values.
 0 % of the mixture consists of component(s) of unknown toxicity.

Classification system: NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

NFPA ratings (scale 0 - 4)



HMIS-ratings (scale 0 - 4)



Hazard(s) not otherwise classified (HNOC): None known

* 3 Composition/Information on Ingredients

Chemical characterization: Mixtures

Description: Mixture of substances listed below with non-hazardous additions.

Dangerous Components:

CAS: 7722-76-1	Ammonium phosphate monobasic	40-60%
	☞ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	
CAS: 7440-42-8	Boron	15-35%
RTECS: ED 7350000	☞ Acute Tox. 4, H302	
CAS: 14808-60-7	Quartz (SiO ₂)	≤ 2.5%
RTECS: VV 7330000	☞ Carc. 1A, H350; STOT RE 1, H372; ☞ Acute Tox. 4, H332; STOT SE 3, H335; Eye Irrit. 2B, H320	

Additional information:

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

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* 4 First-Aid Measures

- **Description of first aid measures:**
- **General information:**
Symptoms of poisoning may occur after exposure to dust, fumes or particulates; seek medical attention if feeling unwell.
- **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation occurs, consult a doctor.
- **After eye contact:**
Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.
If easy to do so, remove contact lenses if worn.
If eye irritation occurs, consult a doctor.
- **After swallowing:** If swallowed and symptoms occur, consult a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed:**
Quartz: Can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death; inhaled from occupational sources is classified as carcinogenic to humans. Some studies show in workers exposed to respirable quartz excess numbers of cases of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases and end-stage kidney disease, chronic bronchitis and emphysema.
- **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5 Fire-Fighting Measures

- **Extinguishing media:**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Advice for firefighters:**
- **Protective equipment:**
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

* 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Dispose of the collected material according to regulations.
- **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.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

7722-76-1	Ammonium phosphate monobasic	17 mg/m3
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7440-42-8	Boron	1.9 mg/m3
14808-60-7	Quartz (SiO ₂)	0.075 mg/m3
· PAC-2:		
7722-76-1	Ammonium phosphate monobasic	190 mg/m3
7440-42-8	Boron	21 mg/m3
14808-60-7	Quartz (SiO ₂)	33 mg/m3
· PAC-3:		
7722-76-1	Ammonium phosphate monobasic	1,100 mg/m3
7440-42-8	Boron	130 mg/m3
14808-60-7	Quartz (SiO ₂)	200 mg/m3

7 Handling and Storage

- **Handling**
- **Precautions for safe handling:** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **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:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s):** No further relevant information available.

* 8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**
- **Components with occupational exposure limits:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

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
TLV	Long-term value: 0.025* mg/m ³ *as respirable fraction

- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls:**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.

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· **Protection of hands:**

S Protective gloves

· **Eye protection:**

R Tightly sealed goggles

* 9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Granulate

Color: Grey

· **Odor:** Slight

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: Not determined.

Boiling point/Boiling range: 2.230 °C (36 °F)

· **Flash point:** None

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:** 700 °C (1292 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

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

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapor pressure:** Not applicable.

· **Density:**

Relative density: Not determined.

Vapor density: Not applicable.

Evaporation rate: Not applicable.

· **Solubility in / Miscibility with:**

Water: Insoluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic: Not applicable.

Kinematic: Not applicable.

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- **Solvent content:**
- Organic solvents:** 0.0 %
- **Other information:** No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** Contact with fluorine, oxygen difluoride, and chlorine trifluoride will cause fire.
- **Hazardous decomposition products:** No dangerous decomposition products known.

***11 Toxicological Information**

- **Information on toxicological effects:**
- **Acute toxicity:**

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

7722-76-1 Ammonium phosphate monobasic

Oral	LD50	5750 mg/kg (Rat)
Dermal	LD50	7640 mg/kg (Rabbit)

7440-42-8 Boron

Oral	LD50	650 mg/kg (Rat)
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14808-60-7 Quartz (SiO₂)

Oral	LD50	> 22500 mg/kg (Rat)
Inhalative	LC50/96 hours	1033 mg/l (Trout)

- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
- **Carcinogenic categories:**
- **IARC (International Agency for Research on Cancer):**

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"In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicate dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. May cause cancer. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled"

Group 1 - Carcinogenic to humans

Group 2A - Probably carcinogenic to humans

Group 2B - Possibly carcinogenic to humans

Group 3 - Not classifiable as to its carcinogenicity to humans

Group 4 - Probably not carcinogenic to humans

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 are listed.		

* 12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:**

7440-42-8 Boron

EC50 1 mg/l (Daphnia)

14808-60-7 Quartz (SiO₂)

EC50 218 mg/l (Green algae)

· **Persistence and degradability:** No further relevant information available.· **Behavior in environmental systems:**· **Bioaccumulative potential:** No further relevant information available.· **Mobility in soil:** No further relevant information available.· **Additional ecological information:**· **General notes:** Generally not hazardous for water.· **Results of PBT and vPvB assessment:**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Other adverse effects:** No further relevant information available.

* 13 Disposal Considerations

· **Waste treatment methods:**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Observe all federal, state and local environmental regulations when disposing of this material.

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- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport Information

- **UN-Number:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es):**
- **DOT, ADR/ADN, ADN, IMDG, IATA**
- **Class:** Non-Regulated Material
- **Packing group:**
- **DOT, ADR/ADN, IMDG, IATA** Non-Regulated Material
- **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.
- **UN "Model Regulation":** Non-Regulated Material

* 15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

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

7722-76-1 Ammonium phosphate monobasic

7440-42-8 Boron

25791-96-2 Poly(oxypropylene) triol

14808-60-7 Quartz (SiO₂)

1332-58-7 Trade Secret

- **California Proposition 65:**

- **Chemicals known to cause cancer:**

14808-60-7 Quartz (SiO₂)

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

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

- **New Jersey Right-to-Know List:**

7440-42-8 Boron

14808-60-7 Quartz (SiO₂)

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1332-58-7	Trade Secret	
· New Jersey Special Hazardous Substance List:		
14808-60-7	Quartz (SiO ₂)	CA
· Pennsylvania Right-to-Know List:		
14808-60-7	Quartz (SiO ₂)	
1332-58-7	Trade Secret	
· Pennsylvania Special Hazardous Substance List:		
None of the ingredients are listed.		
· Carcinogenic categories:		
· EPA (Environmental Protection Agency):		
7440-42-8	Boron	I (oral)
· TLV (Threshold Limit Value established by ACGIH):		
14808-60-7	Quartz (SiO ₂)	A2
1332-58-7	Trade Secret	2 mg/m ³
· NIOSH-Ca (National Institute for Occupational Safety and Health):		
14808-60-7	Quartz (SiO ₂)	

· GHS label elements

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

· Hazard pictograms:

GHS07 GHS08

· Signal word: Danger

· Hazard-determining components of labeling:

Quartz (SiO₂)

· Hazard statements:

H315+H320 Causes skin and eye irritation.

H350 May cause cancer.

H372-H373 Causes damage to organs through prolonged or repeated exposure. May cause damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.

· Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

P308+P313 IF exposed or concerned: Get medical advice/attention.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

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Trade name: 8.5-31-2+2%Boron

P302+P352	IF ON SKIN: Wash with plenty of water.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

• **National regulations:**

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

• **Date of preparation / last revision:** 02/10/2017 / 2

• **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 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
 NIOSH: National Institute for Occupational Safety and Health
 OSHA: Occupational Safety & Health Administration
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 Acute: Acute toxicity – Category 4
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B
 Carc. 1A: Carcinogenicity – Category 1A
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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

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