

Safety Data Sheet

Section 1. Identification

Product Name: VitaCrop B

Recommended use: Plant Nutrient

Restrictions on use: Use only as directed

Company Name - Address:

Innvictis Crop Care, LLC
1880 Fall River Drive, Suite 100
Loveland, CO 80538

Emergency phone number: Call CHEMTREC Day or Night 1-800-424-9300

Section 2. Hazard(s) Identification

Classification:

Physical	Health
Not Classified	Carcinogen Category 1 Eye Irritant Category 2A Toxic to Reproduction Category 2

Danger!



Hazard statement(s)

H319 Causes serious eye irritation.
H350 May cause cancer by inhalation.
H361 Suspected of damaging fertility or the unborn child by ingestion.

Precautionary statement(s)

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash thoroughly after handling.
P280 Wear eye protection and protective gloves.
P308 + P313 If exposed or concerned: Get medical attention.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical attention.
P405 Store locked up.

P501 Dispose of contents and container in accordance with local and national regulations.

Section 3. Composition / Information on Ingredients

Chemical name	CAS No.	Concentration
Disodium Octaborate Tetrahydrate	12280-03-4	75-85%
Metalloid Oxide	Proprietary	<10%
Boric Acid	10043-35-3	<10%
Zinc Oxide	1314-13-2	<5%
Zinc Sulfate	7446-19-7	<3%
Crystalline Silica-Quartz	14808-60-7	<0.5%

The exact concentration is being withheld as a trade secret.

Section 4. First-Aid Measures

Inhalation: Remove to fresh air. If breathing is difficult, administer oxygen. Get medical attention if irritation persists.

Skin contact: No first aid should be needed. Remove contaminated clothing and launder before reuse. Wash skin with soap and water. Get medical attention if irritation develops or persists.

Eye contact: Immediately flush eyes with large quantities of water for several minutes, while holding the eyelids apart. Remove contact lenses if easy to do so. Continue rinsing. Get medical attention if irritation persists.

Ingestion: Rinse out mouth with water. Get medical attention.

Most important symptoms/effects, acute and delayed: Contact with dust may cause moderate eye irritation and mechanical skin irritation. Inhalation of dust may cause respiratory irritation, coughing and difficulty in breathing. This product contains components that may cause reproductive and developmental effects based on animal data. Prolonged inhalation of respirable crystalline silica may cause lung disease (silicosis) and increase the risk of lung cancer. Risk of cancer depends on duration and level of exposure.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is not required.

Section 5. Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media: Use media appropriate for the surrounding environment.

Specific hazards arising from the chemical: Not flammable or combustible. Minimize the generation and accumulation of dust. Dry powders may accumulate static charge in handling which can be a source of ignition for flammable atmospheres. Thermal decomposition may produce oxides of carbon, boron, and zinc compounds.

Special protective equipment and precautions for fire-fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Powders that become wet may cause surfaces to be extremely slippery and cause a slip hazard. Contain water used in firefighting from entering sewers or natural waterways.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Avoid contact with eyes and skin. Avoid generating air-born dust. Wear appropriate protective clothing as described in Section 8. Ventilate area.

Environmental precautions: Avoid releases to the environment. Report spills and releases as required to appropriate authorities.

Methods and materials for containment and cleaning up: Scoop or shovel up using methods that minimize the generation of airborne dust. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Place dry material into an appropriate container for disposal. Wipe spill area with a damp cloth. Do not flush to the sewer.

Section 7. Handling and Storage

Precautions for safe handling: Avoid contact with eyes, skin and clothing. Avoid generating or breathing dust. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation and proper dust collection methods to keep exposure level below occupational exposure limits. Wash thoroughly with soap and water after use. Do not eat, drink or smoke in the work area. Keep containers closed when not in use. Follow good housekeeping practices to keep surfaces, including areas overhead such as piping, drop ceilings, ductwork, etc. free from settled dust.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated location away from incompatible materials. Keep containers closed when not in use. Protect from physical damage.

Section 8. Exposure Controls / Personal Protection

Exposure guidelines:

Disodium Octaborate Tetrahydrate (as borate compounds, inorganic)	2 mg/m ³ TWA, 6 mg/m ³ STEL ACGIH TLV (inhalable)
Metalloid Oxide	20 mppcf OSHA PEL
Boric Acid (as borate compounds, inorganic)	2 mg/m ³ TWA, 6 mg/m ³ STEL (inhalable) ACGIH TLV
Zinc Oxide	2 mg/m ³ TWA, 10 mg/m ³ STEL ACGIH TLV (Respirable) 5 mg/m ³ (respirable fraction), 15 mg/m ³ (total dust) TWA OSHA PEL
Zinc Sulfate	None Established
Crystalline Silica-Quartz	0.025 mg/m ³ TWA ACGIH TLV (Respirable) 0.05 mg/m ³ TWA OSHA PEL (respirable dust)

Appropriate engineering controls: General exhaust ventilation should be adequate to maintain exposures below the occupational exposure limits.

Personal Protective Equipment:

Respiratory protection: If occupational exposure limits are exceeded, a dust filtering mask, an approved respirator with a dust/mist cartridge, or a supplied air respirator may be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

Skin protection: Suitable gloves are recommended as needed to avoid skin contact.

Eye protection: Chemical safety goggles or dust goggles are recommended if contact is possible.

Other: Eye wash should be available if contact may occur. Wear protective clothing as needed to prevent contact and contamination of personal clothing.

Section 9. Physical and Chemical Properties

Appearance: White powder

Odor: Odorless

Odor threshold: Not available	pH: Not applicable
Melting point/freezing point: Not available	Boiling Point: Not applicable
Flash point: Not applicable	Evaporation rate: Not applicable
Flammability (solid, gas): Not available	
Flammable limits: LEL: Not applicable	UEL: Not applicable
Vapor pressure: Not applicable	Vapor density: Not applicable
Relative density: Not available	Solubility(ies): Not available
Partition coefficient: n-octanol/water: Not applicable	Auto-ignition temperature: Not available
Decomposition temperature: Not available	Viscosity: Not applicable

Section 10. Stability and Reactivity

Reactivity: Not reactive under normal conditions of use.

Chemical stability: Stable under normal storage and handling conditions.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Avoid hygroscopic conditions and dust formation.

Incompatible materials: Strong oxidizing agents, acids, and reducing agents.

Hazardous decomposition products: Thermal decomposition may release oxides of carbon, boron, and zinc compounds.

Section 11. Toxicological Information

Acute effects of exposure:

Inhalation: Dust may cause upper respiratory irritation with sneezing and coughing.

Ingestion: Swallowing large amounts may cause gastrointestinal irritation, nausea and diarrhea.

Skin contact: Contact with dust may cause skin irritation.

Eye contact: Direct contact with dust may cause moderate eye irritation, redness and tearing. May cause mechanical (abrasive) irritation.

Chronic effects: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function.

Germ Cell Mutagenicity: None of the components have been shown to cause germ cell mutagenicity.

Reproductive Toxicity: Boric acid and inorganic borates have been shown to cause damage to fertility and developmental effects based on animal studies

Carcinogenicity: Crystalline silica quartz is listed as "Carcinogenic to Humans" (Group 1) by IARC and "Known to be a Human Carcinogen" by NTP. None of the other components of this product are listed as carcinogens or suspected carcinogens by IARC, NTP, OSHA or ACGIH.

Acute toxicity values:

Disodium Octaborate Tetrahydrate: Oral rat LD50: >2550 mg/kg, Inhalation rat LC50: >2.04 mg/L/4 hr, Dermal rat LD50: >2000 mg/kg
 Metalloid Oxide: Oral rat LD50: >5000 mg/kg, Inhalation rat LC50: 0.69 mg/L/4hr (no mortality), Skin rabbit LD50: >5000 mg/kg
 Boric Acid: Oral rat LD50-3450 mg/kg, Inhalation rat LC50->2.03 mg/L/4hr (no mortality), Skin rabbit LD50->2000 mg/kg
 Zinc Oxide: Oral rat LD50: >5000 mg/kg, Inhalation rat LC50: >5700 mg/m³/4hr (no mortality), Skin rat LD50: >2000 mg/kg
 Zinc Sulfate: Oral rat LD50: 1710 mg/kg, Dermal rat LD50: >2000 mg/kg
 Crystalline Silica-Quartz: Oral rat LD50: >22,500 mg/kg

Section 12. Ecological Information

Ecotoxicity Data:

Disodium Octaborate Tetrahydrate: 96 hr LC50 Limanda 74 mg/L, 48 hr LC50 Ceriodaphnia dubia 93 mg/L, 72 hr EC50 Phaeodactylum tricornutum 66 mg/L
 Metalloid Oxide: 96 hr LC50 Brachydanio rerio >100 mg/L, 24 hr EC50 Daphnia magna >100 mg/L
 Boric Acid: 96hr LC50 Fathead minnow- 79.7 mg/L, 72hr EC50 Pseudokirchneriella subcapitata- 52.4 mg/L
 Zinc Oxide: 96 hr LC50 Oncorhynchus kisutch 727 ug/L, 48 hr EC50 daphnia magna 860 ug/L, 72 hr NOEC Pseudokirchneriella subcapitata 5.4 ug/L
 Zinc Sulfate: 96 hr LC50 Oncorhynchus kisutch 727 ug/L, 48 hr EC50 daphnia magna 860 ug/L, 72 hr NOEC Pseudokirchneriella subcapitata 5.4 ug/L
 Crystalline Silica-Quartz: 72 hr LC50 carp >10,000 mg/L

This product is expected to be toxic to the aquatic environment. Releases to the environment should be avoided.

Persistence and degradability: Biodegradation is not applicable to inorganic compounds.

Bioaccumulative potential: Not data available.

Mobility in soil: No data available.

Other adverse effects: None known.

Section 13. Disposal Considerations

Dispose in accordance with all local, state and federal regulations.

Section 14. Transport Information

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
US DOT		Not Regulated			
Canadian TDG		Not Regulated			
EU ADR/RID	UN3077	Environmentally hazardous substance, solid, n.o.s (Zinc Oxide, Zinc sulfate)	9	PG III	Yes
IMDG*	UN3077	Environmentally hazardous substance, solid, n.o.s (Zinc Oxide, Zinc sulfate)	9	PG III	Yes
IATA/ICAO*	UN3077	Environmentally hazardous substance,	9	PG III	Yes

		solid, n.o.s (Zinc Oxide, Zinc sulfate)			
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*This product is classified as a Marine Pollutant (Environmentally Hazardous Substance) in accordance with the IMDG Code and the UN Model Regulations. However, if it is packaged in either single packages or inner containers (packagings) in combination packages containing net quantities of less than 5 kg/5 L, the Marine Pollutant does not apply (IMDG Code 2.10.2.7).

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable

Special precautions: None known

Section 15. Regulatory Information

CERCLA Hazardous Substances (Section 103)/RQ: This product has a Reportable Quantity (RQ) of 33,333 lbs. (based on the RQ for Zinc Sulfate of 1,000 lbs). Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA Hazard Category (311/312): Refer to Section 2 for OSHA Hazard Classification

SARA 313 Information: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

California Proposition 65:

This product can expose you to chemicals including Naphthalene and Crystalline Silica-Quartz, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

US EPA TSCA Inventory: All of the ingredients in this product are listed on the EPA TSCA Inventory or exempt.

Section 16. Other Information

SDS Revision History: New SDS

Date of preparation: February 20, 2020

Date of last revision: N/A