SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	**Wolf Trax Cropmix DDP**
Other means of identification	Not available
Recommended use	Plant Food
Recommended restrictions	None known.
Manufacturer information	Compass Minerals USA Inc. 9900 West 109th Street, Suite 100 Overland Park, KS 66210 US Phone (913) 344-9200
Supplier	Compass Minerals Manitoba Inc. 6700 Century Avenue Mississauga L5N 6A4 CA http://www. compassminerals.com/ Phone (905) 567-0231 techservicesrequests @compassminerals.com
CHEMTREC	1-800-424-9300
CANUTEC	1-613-996-6666

2. Hazards Identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 1
	Reproductive toxicity	Category 1
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Not classified.	
WHMIS 2015 defined hazards	Not classified	

Label elements

Signal word	Danger
Hazard statement	Harmful if swallowed. Causes serious eye damage. May damage fertility or the unborn child. May cause cancer. May cause damage to organs through prolonged or repeated exposure.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF exposed or concerned: Get medical advice/attention.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known

WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Manganese (II) sulfate		7785-87-7	15 - 40
Manganese Chloride		7773-01-5	15 - 40
Zinc oxide		1314-13-2	15 - 40
Boron sodium oxide (B8Na2O13)		12008-41-2	5 - 10
Zinc sulfate, monohydrate		7446-19-7	5 - 10
Boric acid		10043-35-3	1 - 5
Boron Potassium Oxide (b4k2o7), Tetrahydrate		12045-78-2	1 - 5
Copper oxide		1317-38-0	1 - 5
Ferric oxide		1309-37-1	1 - 5
Silica		7631-86-9	1 - 5
Calcium oxide		1305-78-8	0.1 - 1
Copper (II) sulfate pentahydrate		7758-99-8	0.1 - 1
Crystalline silica		14808-60-7	0.1 - 1
Cuprous Oxide		1317-39-1	0.1 - 1

All concentrations are in percent by weight (kg) unless ingredient is a gas. Gas concentrations are in percent by volume (l).

4. First Aid Measures

Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Ingestion	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Avoid contact with eyes, skin and clothing. Wear suitable protective clothing. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In the event of fire, cool tanks with water spray. Cool containers with flooding quantities of water until well after fire is out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	Not available

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Provide adequate ventilation.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

8. Exposure Controls/Personal Protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Boron sodium oxide (B8Na2O13) (CAS 12008-41-2)	STEL	3 ppm	
	TWA	1 mg/m3	
Calcium oxide (CAS 1305-78-8)	TWA	2 mg/m3	
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable particles.
Ferric oxide (CAS 1309-37-1)	TWA	5 mg/m3	Respirable.
Manganese (II) sulfate (CAS 7785-87-7)	TWA	0.2 mg/m3	
Manganese Chloride (CAS 7773-01-5)	TWA	0.2 mg/m3	
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable.
	TWA	2 mg/m3	Respirable.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Boric acid (CAS 10043-35-3)	STEL	6 mg/m3	Inhalable
	TWA	2 mg/m3	Inhalable
Calcium oxide (CAS 1305-78-8)	TWA	2 mg/m3	
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Ferric oxide (CAS 1309-37-1)	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		5 mg/m3	Dust.
		3 mg/m3	Respirable fraction.
		10 mg/m3	Total dust.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Manganese (II) sulfate (CAS 7785-87-7)	TWA	0.2 mg/m3	
Manganese Chloride (CAS 7773-01-5)	TWA	0.2 mg/m3	
Silica (CAS 7631-86-9)	TWA	4 mg/m3	Total
		1.5 mg/m3	Respirable.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable.
	TWA	2 mg/m3	Respirable.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Boric acid (CAS 10043-35-3)	STEL	6 mg/m3	Inhalable fraction.
	TWA	2 mg/m3	Inhalable fraction.
Boron sodium oxide (B8Na2O13) (CAS 12008-41-2)	STEL	6 mg/m3	Inhalable fraction.
	TWA	2 mg/m3	Inhalable fraction.
Calcium oxide (CAS 1305-78-8)	TWA	2 mg/m3	
Copper (II) sulfate pentahydrate (CAS 7758-99-8)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Copper oxide (CAS 1317-38-0)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Cuprous Oxide (CAS 1317-39-1)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Ferric oxide (CAS 1309-37-1)	TWA	5 mg/m3	Respirable fraction.
Manganese (II) sulfate (CAS 7785-87-7)	TWA	0.1 mg/m3	Inhalable fraction.
		0.02 mg/m3	Respirable fraction.
Manganese Chloride (CAS 7773-01-5)	TWA	0.1 mg/m3	Inhalable fraction.
		0.02 mg/m3	Respirable fraction.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Boric acid (CAS 10043-35-3)	STEL	6 mg/m3	Inhalable fraction.
	TWA	2 mg/m3	Inhalable fraction.
Boron Potassium Oxide (b4k2o7), Tetrahydrate (CAS 12045-78-2)	STEL	6 mg/m3	Inhalable fraction.
	TWA	2 mg/m3	Inhalable fraction.
Boron sodium oxide (B8Na2O13) (CAS 12008-41-2)	STEL	6 mg/m3	Inhalable fraction.
	TWA	2 mg/m3	Inhalable fraction.
Calcium oxide (CAS 1305-78-8)	TWA	2 mg/m3	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable fraction.
Ferric oxide (CAS 1309-37-1)	TWA	5 mg/m3	Respirable fraction.
Manganese (II) sulfate (CAS 7785-87-7)	TWA	0.2 mg/m3	
Manganese Chloride (CAS 7773-01-5)	TWA	0.2 mg/m3	
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Calcium oxide (CAS 1305-78-8)	TWA	2 mg/m3	
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable dust.
Ferric oxide (CAS 1309-37-1)	TWA	5 mg/m3	Dust and fume.
		10 mg/m3	Total dust.
Manganese (II) sulfate (CAS 7785-87-7)	TWA	5 mg/m3	Dust.
Manganese Chloride (CAS 7773-01-5)	TWA	5 mg/m3	Dust.
Silica (CAS 7631-86-9)	TWA	6 mg/m3	Respirable dust.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		10 mg/m3	Total dust.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Calcium oxide (CAS 1305-78-8)	PEL	5 mg/m3	
Crystalline silica (CAS 14808-60-7)	PEL	0.05 mg/m3	
Ferric oxide (CAS 1309-37-1)	PEL	10 mg/m3	Fume.
Manganese (II) sulfate (CAS 7785-87-7)	Ceiling	5 mg/m3	
Manganese Chloride (CAS 7773-01-5)	Ceiling	5 mg/m3	
Zinc oxide (CAS 1314-13-2)	PEL	5 mg/m3	Fume.
		5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.
Silica (CAS 7631-86-9)	TWA	0.8 mg/m3 20 mppcf	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Boric acid (CAS 10043-35-3)	STEL	6 mg/m3	Inhalable fraction.
	TWA	2 mg/m3	Inhalable fraction.
Boron sodium oxide (B8Na2O13) (CAS 12008-41-2)	STEL	6 mg/m3	Inhalable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
	TWA	2 mg/m3	Inhalable fraction.
Calcium oxide (CAS 1305-78-8)	TWA	2 mg/m3	
Copper (II) sulfate pentahydrate (CAS 7758-99-8)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Copper oxide (CAS 1317-38-0)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Cuprous Oxide (CAS 1317-39-1)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Ferric oxide (CAS 1309-37-1)	TWA	5 mg/m3	Respirable fraction.
Manganese (II) sulfate (CAS 7785-87-7)	TWA	0.1 mg/m3	Inhalable fraction.
		0.02 mg/m3	Respirable fraction.
Manganese Chloride (CAS 7773-01-5)	TWA	0.1 mg/m3	Inhalable fraction.
		0.02 mg/m3	Respirable fraction.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Calcium oxide (CAS 1305-78-8)	TWA	2 mg/m3	
Copper (II) sulfate pentahydrate (CAS 7758-99-8)	TWA	1 mg/m3	Dust and mist.
Copper oxide (CAS 1317-38-0)	TWA	0.1 mg/m3	Fume.
Crystalline silica (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.
Cuprous Oxide (CAS 1317-39-1)	TWA	1 mg/m3	Dust and mist.
Ferric oxide (CAS 1309-37-1)	TWA	5 mg/m3	Dust and fume.
Manganese (II) sulfate (CAS 7785-87-7)	STEL	3 mg/m3	Fume.
	TWA	1 mg/m3	Fume.
Manganese Chloride (CAS 7773-01-5)	STEL	3 mg/m3	Fume.
	TWA	1 mg/m3	Fume.
Silica (CAS 7631-86-9)	TWA	6 mg/m3	
Zinc oxide (CAS 1314-13-2)	Ceiling	15 mg/m3	Dust.
	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		5 mg/m3	Dust.

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.

Appropriate engineering controls Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety glasses or goggles.

Skin protection	
Hand protection	Wear suitable gloves.
Other	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
Thermal hazards	Not applicable.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Wash hands after handling and before eating.

9. Physical and Chemical Properties

Appearance	Powder.
Physical state	Solid.
Form	Powder.
Color	Pink
Odor	Odorless
Odor threshold	Not available.
pH	6.5 - 7
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not applicable.
Pour point	Not applicable.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Flammability	Not applicable.

10. Stability and Reactivity

Reactivity	May react with incompatible materials.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological Information

Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.

Information on likely routes of exposure

Ingestion	Harmful if swallowed.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Harmful if swallowed.

Components	Species	Test Results
Boric acid (CAS 10043-35-3)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, HSDB
		> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 2.1 mg/L, 4 Hours, ECHA
		> 2 mg/L, 5 Hours, ECHA
		> 0.2 mg/L, 4 Hours
Oral		
LD50	Chicken	2950 mg/kg, HSDB
		3 g/kg
	Dog	2000 mg/kg, HSDB
	Mouse	3450 mg/kg
	Rat	> 2600 mg/kg
		4080 mg/kg, ECHA, female
		3450 mg/kg, ECHA, male
Boron Potassium Oxide (b4k2o7), Tetrahydrate (CAS 12045-78-2)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 2 mg/l/4h
Oral		
LD50	Rat	> 2500 mg/kg
Boron sodium oxide (B8Na2O13) (CAS 12008-41-2)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
	Rat	2000 mg/kg
Oral		
LD50	Guinea pig	5300 mg/kg
	Rat	2000 mg/kg
		2 g/kg
Calcium oxide (CAS 1305-78-8)		
Acute		
Inhalation		
LC50	Not available	
Oral		
LD50	Not available	

Components	Species	Test Results
Copper (II) sulfate pentahydrate (CAS 7758-99-8)		
Acute		
Dermal		
LD50	Rabbit	> 1000 mg/kg
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	960 mg/kg
		300 mg/kg
Copper oxide (CAS 1317-38-0)		
Acute		
Oral		
LD50	Rat	470 mg/kg
Crystalline silica (CAS 14808-60-7)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	500 mg/kg, HSDB, IV only
Cuprous Oxide (CAS 1317-39-1)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Rat	> 50000 mg/m³, 4 hours
Oral		
LD50	Rat	470 mg/kg
Ferric oxide (CAS 1309-37-1)		
Acute		
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	> 10000 mg/kg
Manganese (II) sulfate (CAS 7785-87-7)		
Acute		
Inhalation		
LC50	Not available	
Oral		
LD50	Mouse	2330 mg/kg
	Rat	2150 mg/kg
Manganese Chloride (CAS 7773-01-5)		
Acute		
Oral		
LD50	Guinea pig	400 - 810 mg/kg
	Mouse	275 - 450 mg/kg
	Rat	250 - 275 mg/kg
Silica (CAS 7631-86-9)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Not available	

Components	Species	Test Results
Oral		
LD50	Mouse	> 15000 mg/kg
	Rat	> 5000 mg/kg

Zinc oxide (CAS 1314-13-2)

Acute		
Inhalation		
LC50	Mouse	> 5.7 mg/L, 4 Hours
		2500 mg/m3
Oral		
LD50	Mouse	7950 mg/kg
	Rat	> 5 g/kg
		5000 mg/kg

Zinc sulfate, monohydrate (CAS 7446-19-7)

Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Oral		
LD50	Mouse	57 mg/kg
	Rat	623 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Exposure minutes Not available.

Erythema value Not available.

Oedema value Not available.

Serious eye damage/eye irritation Causes serious eye damage.

Corneal opacity value Not available.

Iris lesion value Not available.

Conjunctival reddening value Not available.

Conjunctival oedema value Not available.

Recover days Not available.

Respiratory or skin sensitization

Canada - Alberta OELs: Irritant

Boron sodium oxide (B8Na2O13) (CAS 12008-41-2)	Irritant
Calcium oxide (CAS 1305-78-8)	Irritant

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity See below.

ACGIH Carcinogens

Crystalline silica (CAS 14808-60-7)	A2 Suspected human carcinogen.

Canada - Alberta OELs: Carcinogen category

Crystalline silica (CAS 14808-60-7)	Suspected human carcinogen.

Canada - Manitoba OELs: carcinogenicity

BORATE COMPOUNDS, INORGANIC, INHALABLE FRACTION (CAS 10043-35-3)	Not classifiable as a human carcinogen.
BORATE COMPOUNDS, INORGANIC, INHALABLE FRACTION (CAS 12008-41-2)	Not classifiable as a human carcinogen.
IRON OXIDE (FE2O3), RESPIRABLE FRACTION (CAS 1309-37-1)	Not classifiable as a human carcinogen.
MANGANESE ELEMENTAL AND INORGANIC COMPOUNDS, AS MN, INHALABLE FRACTION (CAS 7773-01-5)	Not classifiable as a human carcinogen.
MANGANESE ELEMENTAL AND INORGANIC COMPOUNDS, AS MN, INHALABLE FRACTION (CAS 7785-87-7)	Not classifiable as a human carcinogen.

SILICA, CRYSTALLINE-.ALPHA.-QUARTZ, RESPIRABLE FRACTION (CAS 14808-60-7) — Suspected human carcinogen.

Canada - Quebec OELs: Carcinogen category

Crystalline silica (CAS 14808-60-7) — Suspected carcinogenic effect in humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Crystalline silica (CAS 14808-60-7) — Volume 68, Volume 100C 1 Carcinogenic to humans.

Ferric oxide (CAS 1309-37-1) — Volume 1, Supplement 7 - 3 Not classifiable as to carcinogenicity to humans.

Silica (CAS 7631-86-9) — Volume 68 - 3 Not classifiable as to carcinogenicity to humans.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Crystalline silica (CAS 14808-60-7)

US NTP Report on Carcinogens: Known carcinogen

Crystalline silica (CAS 14808-60-7) — Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	May damage fertility or the unborn child.
Teratogenicity	Not available.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not classified.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity — See below

Ecotoxicological data

Components		Species	Test Results
Boric acid (CAS 10043-35-3)			
Crustacea	EC50	Daphnia	134 mg/L, 48 Hours
Aquatic			
Fish	LC50	Razorback sucker (Xyrauchen texanus)	> 100 mg/L, 96 hours
Boron sodium oxide (B8Na2O13) (CAS 12008-41-2)			
Crustacea	EC50	Daphnia	2528 mg/L, 48 Hours
Copper (II) sulfate pentahydrate (CAS 7758-99-8)			
Crustacea	EC50	Daphnia	0.187 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.006 - 0.007 mg/L, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	0.66 - 1.15 mg/L, 96 hours
Copper oxide (CAS 1317-38-0)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.011 - 0.039 mg/L, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	> 56000 mg/L, 96 hours
Manganese (II) sulfate (CAS 7785-87-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	7.09 - 9.36 mg/L, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	24.3 - 38.9 mg/L, 96 hours
Manganese Chloride (CAS 7773-01-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	4.7 mg/L, 48 hours
Silica (CAS 7631-86-9)			
Algae	IC50	Algae	440 mg/L, 72 Hours
Crustacea	EC50	Daphnia	7600 mg/L, 48 Hours
Zinc oxide (CAS 1314-13-2)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2246 mg/L, 96 hours

Components		Species	Test Results
Zinc sulfate, monohydrate (CAS 7446-19-7)			
Aquatic			
Crustacea	EC50	Rotifer (Philodina acuticornis)	0.3 mg/L, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.162 mg/L, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

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

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue.

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Canada CEPA Schedule I: Listed substance

Zinc oxide (CAS 1314-13-2)	Listed.
Zinc sulfate, monohydrate (CAS 7446-19-7)	Listed.

Canada DSL Challenge Substances: Listed substance

Crystalline silica (CAS 14808-60-7)	Listed.

Canada Priority Substances List (Second List): Listed substance

Zinc oxide (CAS 1314-13-2)	Listed.
Zinc sulfate, monohydrate (CAS 7446-19-7)	Listed.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions Controlled

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Copper oxide (CAS 1317-38-0)	Listed.
Cuprous Oxide (CAS 1317-39-1)	Listed.
Manganese (II) sulfate (CAS 7785-87-7)	Listed.
Manganese Chloride (CAS 7773-01-5)	Listed.
Zinc oxide (CAS 1314-13-2)	Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Manganese (II) sulfate	7785-87-7	15 - 40
Manganese Chloride	7773-01-5	15 - 40
Zinc oxide	1314-13-2	15 - 40
Zinc sulfate, monohydrate	7446-19-7	5 - 10
Copper oxide	1317-38-0	1 - 5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Manganese (II) sulfate (CAS 7785-87-7)
Manganese Chloride (CAS 7773-01-5)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

US state regulations See below

US - California Hazardous Substances (Director's): Listed substance

Calcium oxide (CAS 1305-78-8)	Listed.
Copper (II) sulfate pentahydrate (CAS 7758-99-8)	Listed.
Copper oxide (CAS 1317-38-0)	Listed.
Cuprous Oxide (CAS 1317-39-1)	Listed.
Ferric oxide (CAS 1309-37-1)	Listed.
Manganese (II) sulfate (CAS 7785-87-7)	Listed.
Manganese Chloride (CAS 7773-01-5)	Listed.
Silica (CAS 7631-86-9)	Listed.
Zinc oxide (CAS 1314-13-2)	Listed.
Zinc sulfate, monohydrate (CAS 7446-19-7)	Listed.

US - Illinois Chemical Safety Act: Listed substance

Copper oxide (CAS 1317-38-0)
Cuprous Oxide (CAS 1317-39-1)
Manganese (II) sulfate (CAS 7785-87-7)
Manganese Chloride (CAS 7773-01-5)
Zinc oxide (CAS 1314-13-2)

US - Louisiana Spill Reporting: Listed substance

Copper oxide (CAS 1317-38-0)	Listed.
Cuprous Oxide (CAS 1317-39-1)	Listed.
Manganese (II) sulfate (CAS 7785-87-7)	Listed.
Manganese Chloride (CAS 7773-01-5)	Listed.
Zinc oxide (CAS 1314-13-2)	Listed.

US - Michigan Critical Materials Register: Parameter number

Copper (II) sulfate pentahydrate (CAS 7758-99-8)	COPPER
Copper oxide (CAS 1317-38-0)	COPPER
Cuprous Oxide (CAS 1317-39-1)	COPPER
Zinc oxide (CAS 1314-13-2)	ZINC
Zinc sulfate, monohydrate (CAS 7446-19-7)	ZINC

US - Minnesota Haz Subs: Listed substance

Calcium oxide (CAS 1305-78-8)	Listed.
Crystalline silica (CAS 14808-60-7)	Listed.
Ferric oxide (CAS 1309-37-1)	Listed.
Manganese (II) sulfate (CAS 7785-87-7)	Listed.
Manganese Chloride (CAS 7773-01-5)	Listed.
Silica (CAS 7631-86-9)	Listed.
Zinc oxide (CAS 1314-13-2)	Listed.

US - New Jersey RTK - Substances: Listed substance

Boric acid (CAS 10043-35-3)

Boron Potassium Oxide (b4k2o7), Tetrahydrate (CAS 12045-78-2)
Boron sodium oxide (B8Na2O13) (CAS 12008-41-2)
Calcium oxide (CAS 1305-78-8)
Copper oxide (CAS 1317-38-0)
Crystalline silica (CAS 14808-60-7)
Cuprous Oxide (CAS 1317-39-1)
Ferric oxide (CAS 1309-37-1)
Manganese (II) sulfate (CAS 7785-87-7)
Manganese Chloride (CAS 7773-01-5)
Silica (CAS 7631-86-9)
Zinc oxide (CAS 1314-13-2)

US - North Carolina Toxic Air Pollutants: Listed substance

Manganese (II) sulfate (CAS 7785-87-7)
Manganese Chloride (CAS 7773-01-5)

US - Texas Effects Screening Levels: Listed substance

Boric acid (CAS 10043-35-3)	Listed.
Calcium oxide (CAS 1305-78-8)	Listed.
Copper (II) sulfate pentahydrate (CAS 7758-99-8)	Listed.
Copper oxide (CAS 1317-38-0)	Listed.
Crystalline silica (CAS 14808-60-7)	Listed.
Cuprous Oxide (CAS 1317-39-1)	Listed.
Ferric oxide (CAS 1309-37-1)	Listed.
Silica (CAS 7631-86-9)	Listed.
Zinc oxide (CAS 1314-13-2)	Listed.

US. Massachusetts RTK - Substance List

Calcium oxide (CAS 1305-78-8)
Copper (II) sulfate pentahydrate (CAS 7758-99-8)
Crystalline silica (CAS 14808-60-7)
Ferric oxide (CAS 1309-37-1)
Silica (CAS 7631-86-9)
Zinc oxide (CAS 1314-13-2)
Zinc sulfate, monohydrate (CAS 7446-19-7)

US. New Jersey Worker and Community Right-to-Know Act

Copper (II) sulfate pentahydrate (CAS 7758-99-8)
Copper oxide (CAS 1317-38-0)
Cuprous Oxide (CAS 1317-39-1)
Manganese (II) sulfate (CAS 7785-87-7)
Manganese Chloride (CAS 7773-01-5)
Zinc oxide (CAS 1314-13-2)
Zinc sulfate, monohydrate (CAS 7446-19-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Calcium oxide (CAS 1305-78-8)
Copper oxide (CAS 1317-38-0)
Crystalline silica (CAS 14808-60-7)
Cuprous Oxide (CAS 1317-39-1)
Ferric oxide (CAS 1309-37-1)
Manganese (II) sulfate (CAS 7785-87-7)
Manganese Chloride (CAS 7773-01-5)
Silica (CAS 7631-86-9)
Zinc oxide (CAS 1314-13-2)

US. Rhode Island RTK

Copper oxide (CAS 1317-38-0)
Cuprous Oxide (CAS 1317-39-1)
Manganese (II) sulfate (CAS 7785-87-7)
Manganese Chloride (CAS 7773-01-5)
Zinc oxide (CAS 1314-13-2)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Crystalline silica (CAS 14808-60-7)	Listed: October 1, 1988

Inventory status

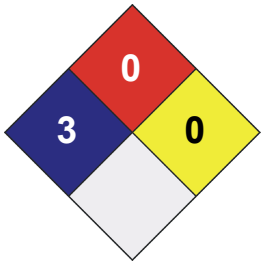
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	*	3
FLAMMABILITY		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		X



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Issue date 04-July-2017

Version # 01

Effective date 04-July-2017

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Other information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.