



# SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product identifier</b>	<b>Nitrate Reagent Powder Pillows</b>
<b>Other means of identification</b>	Not available
<b>Recommended use</b>	Water Test Kit
<b>Recommended restrictions</b>	None known.
<b>Manufacturer information</b>	Pro Products LLC 6714 Pointe Inverness Way Suite 200 Fort Wayne, IN 46804-7935 US Phone: 260-483-2519 Emergency Phone: 1-800-424-9300 (CHEMTREC)
<b>Supplier</b>	See above.

## 2. Hazards Identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 3
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Germ cell mutagenicity	Category 2
	Carcinogenicity	Category 1
	Reproductive toxicity	Category 2
	Specific target organ toxicity, repeated exposure	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>WHMIS 2015 defined hazards</b>	Not classified	
<b>Label elements</b>		



**Signal word** Danger

**Hazard statement** Toxic if inhaled. Harmful if swallowed. Causes severe skin burns and eye damage. Suspected of causing genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Causes 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. Wear protective gloves, protective clothing, eye protection and face protection. Do not breathe dust. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

**Response** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. Specific treatment (see information on this label). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF exposed or concerned: Get medical attention.

**Storage** Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal** Dispose of container in accordance with local, regional, national and international regulations.

**WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)** None known

**WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)** None known

<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

### 3. Composition/Information on Ingredients

#### Mixture

Chemical name	Common name and synonyms	CAS number	%
Ammonium chloride		12125-02-9	15-40*
Cadmium		7440-43-9	3-7*
Copper (II) sulfate pentahydrate		7758-99-8	0.1-1*
Dipotassium Disulphate		7790-62-7	3-7*
Manganese Sulfate Pentahydrate		10034-96-5	3-7*
Phosphoric acid, monopotassium salt		7778-77-0	10-30*

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**Composition comments** US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.  
\*CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. First Aid Measures

<b>Inhalation</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.
<b>Skin contact</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Specific treatment (see information on this label). Wash contaminated clothing before reuse.
<b>Eye contact</b>	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 or doctor.
<b>Ingestion</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Coughing. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

### 5. Fire Fighting Measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire-fighting equipment/instructions</b>	Use water spray to cool unopened containers.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of nitrogen. Ammonia. Hydrogen chloride. Oxides of sulfur.

## 6. Accidental Release Measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. 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.
<b>Methods and materials for containment and cleaning up</b>	Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk.  Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.

## 7. Handling and Storage

<b>Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Use only outdoors or in a well-ventilated area. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of 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
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m <sup>3</sup>	Fume.
	TWA	10 mg/m <sup>3</sup>	Fume.
Cadmium (CAS 7440-43-9)	TWA	1.1 mg/m <sup>3</sup>	
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	TWA	1.2 mg/m <sup>3</sup>	

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

Components	Type	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m <sup>3</sup>	Fume.
	TWA	10 mg/m <sup>3</sup>	Fume.
Cadmium (CAS 7440-43-9)	TWA	1.1 mg/m <sup>3</sup>	
		1.2 mg/m <sup>3</sup>	Respirable.
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	TWA	0.2 mg/m <sup>3</sup>	

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

Components	Type	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m <sup>3</sup>	Fume.
	TWA	10 mg/m <sup>3</sup>	Fume.
Cadmium (CAS 7440-43-9)	TWA	1.1 mg/m <sup>3</sup>	
		1.2 mg/m <sup>3</sup>	Respirable fraction.

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

Components	Type	Value	Form
Copper (II) sulfate pentahydrate (CAS 7758-99-8)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	TWA	0.1 mg/m3	Inhalable fraction.
		0.02 mg/m3	Respirable fraction.

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

Components	Type	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m3	Fume.
	TWA	10 mg/m3	Fume.
Cadmium (CAS 7440-43-9)	TWA	1.1 mg/m3	Respirable fraction.
		1.2 mg/m3	
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	TWA	0.2 mg/m3	

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

Components	Type	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m3	Fume.
	TWA	10 mg/m3	Fume.
Cadmium (CAS 7440-43-9)	TWA	0.025 mg/m3	
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	TWA	5 mg/m3	Dust.

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

Components	Type	Value
Cadmium (CAS 7440-43-9)	TWA	0.005 mg/m3

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

Components	Type	Value
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	Ceiling	5 mg/m3

**US. OSHA Table Z-2 (29 CFR 1910.1000)**

Components	Type	Value	Form
Cadmium (CAS 7440-43-9)	Ceiling	0.6 mg/m3	Dust.
		0.3 mg/m3	Fume.
	TWA	0.2 mg/m3	Dust.
		0.1 mg/m3	Fume.

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

Components	Type	Value	Form
Ammonium chloride (CAS 12125-02-9)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m3	Fume.
	TWA	10 mg/m3	Fume.
Cadmium (CAS 7440-43-9)	TWA	1.1 mg/m3	Respirable fraction.
		1.2 mg/m3	

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Copper (II) sulfate pentahydrate (CAS 7758-99-8)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	TWA	0.1 mg/m3	Inhalable fraction.
		0.02 mg/m3	Respirable fraction.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m3	Fume.
	TWA	10 mg/m3	Fume.
Copper (II) sulfate pentahydrate (CAS 7758-99-8)	TWA	1 mg/m3	Dust and mist.
		0.1 mg/m3	Fume.
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	STEL	3 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

**Biological limit values****ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Cadmium (CAS 7440-43-9)	5 µg/g	Cadmium	Creatinine in urine	*
	5 µg/l	Cadmium	Blood	*

\* - For sampling details, please see the source document.

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection** Impervious gloves. Confirm with reputable supplier first.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. As required by employer code.

**Respiratory protection**

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

**Thermal hazards**

Not applicable.

**General hygiene considerations**

Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. When using do not eat or drink.

**9. Physical and Chemical Properties**

<b>Appearance</b>	Solid.
<b>Physical state</b>	Solid.
<b>Form</b>	Powder.
<b>Color</b>	grey
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.

<b>Initial boiling point and boiling range</b>	Not available.
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

---

## 10. Stability and Reactivity

---

<b>Reactivity</b>	This product may react with strong oxidizing agents.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of nitrogen. Hydrogen chloride. Ammonia. Oxides of sulfur.

---

## 11. Toxicological Information

---

<b>Routes of exposure</b>	Eye, Skin contact, Inhalation, Ingestion.
<b>Information on likely routes of exposure</b>	
<b>Ingestion</b>	Causes digestive tract burns. Harmful if swallowed. May cause stomach distress, nausea or vomiting.
<b>Inhalation</b>	Toxic if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Dusts may irritate the respiratory tract, skin and eyes. Coughing.

### Information on toxicological effects

**Acute toxicity** Toxic if inhaled. Harmful if swallowed.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Ammonium chloride (CAS 12125-02-9)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg

Components	Species	Test Results
		> 2000 mg/kg, 24 Hours, ECHA
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	1410 mg/kg, ECHA
Cadmium (CAS 7440-43-9)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Mouse	> 9 mg/m3, 15 Minutes, ECHA
	Mouse, Rat	> 1 mg/m3, 3 Hours, ECHA
	Rabbit	> 22.4 mg/m3, 15 Minutes, ECHA
		> 4.5 mg/m3, 2 Hours, ECHA
	Rat	> 132 mg/m3, 2 Hours, ECHA
		> 8.6 mg/m3, 30 Minutes, ECHA
		> 8.4 mg/m3, 3 Hours, ECHA
		> 4.6 mg/m3, 3 Hours, ECHA
		> 4.5 mg/m3, 2 Hours, ECHA
		112 mg/m3, 2 Hours, ECHA
<i>Oral</i>		
LD50	Mouse	890 mg/kg, ECHA
		63 mg/kg, ECHA
	Rat	63 - 259 mg/kg, ECHA
Copper (II) sulfate pentahydrate (CAS 7758-99-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg, 24 Hours, ECHA
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD100	Mouse	50 mg/kg
LD50	Rat	960 mg/kg, HSDB
		482 mg/kg, ECHA
		481 mg/kg, ECHA
Dipotassium Disulphate (CAS 7790-62-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Mouse	850 mg/m3, 4 Hours, ECHA
	Rat	375 mg/m3, 4 Hours, ECHA
<i>Oral</i>		
LD50	Rat	2140 mg/kg, ECHA
Manganese Sulfate Pentahydrate (CAS 10034-96-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Rat	> 4.5 mg/L, 4 Hours, ECHA

Components	Species	Test Results
<i>Oral</i> LD50	Mouse	2330 mg/kg, ECHA
	Rat	2150 mg/kg, ECHA
		1470 mg/kg, ECHA
Phosphoric acid, monopotassium salt (CAS 7778-77-0)		
<b>Acute</b>		
<i>Dermal</i> LD50	Rabbit	> 5000 mg/kg, 24 Hours, ECHA > 300 mg/kg, 24 Hours, ECHA ≥ 4640 mg/kg, SCIENCELAB
	Rat	> 2000 mg/kg, 24 Hours, ECHA
<i>Inhalation</i> LC50	Rat	> 0.8 mg/L, 4 Hours, ECHA
<i>Oral</i> LD50	Mouse	1700 mg/kg
	Rat	> 500 mg/kg, ECHA
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.	
<b>Exposure minutes</b>	Not available.	
<b>Erythema value</b>	Not available.	
<b>Oedema value</b>	Not available.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.	
<b>Corneal opacity value</b>	Not available.	
<b>Iris lesion value</b>	Not available.	
<b>Conjunctival reddening value</b>	Not available.	
<b>Conjunctival oedema value</b>	Not available.	
<b>Recover days</b>	Not available.	
<b>Respiratory or skin sensitization</b>		
<b>Canada - Alberta OELs: Irritant</b>		
Ammonium chloride (CAS 12125-02-9)		Irritant
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Mutagenicity</b>	Suspected of causing genetic defects.	
<b>Carcinogenicity</b>	May cause cancer. See below.	
<b>ACGIH Carcinogens</b>		
Cadmium (CAS 7440-43-9)		A2 Suspected human carcinogen.
<b>Canada - Alberta OELs: Carcinogen category</b>		
Cadmium (CAS 7440-43-9)		Suspected human carcinogen.
<b>Canada - Manitoba OELs: carcinogenicity</b>		
CADMIUM AND COMPOUNDS, AS CD, RESPIRABLE FRACTION (CAS 7440-43-9)		Suspected human carcinogen.
<b>Canada - Quebec OELs: Carcinogen category</b>		
Cadmium (CAS 7440-43-9)		Suspected carcinogenic effect in humans.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Cadmium (CAS 7440-43-9)		Volume 58, Volume 100C 1 Carcinogenic to humans.
<b>US - California Proposition 65 - CRT: Listed date/Carcinogenic substance</b>		
Cadmium (CAS 7440-43-9)		
<b>US NTP Report on Carcinogens: Known carcinogen</b>		
Cadmium (CAS 7440-43-9)		Known To Be Human Carcinogen.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>		
Cadmium (CAS 7440-43-9)		Cancer
<b>Reproductive toxicity</b>	Suspected of damaging fertility or the unborn child.	
<b>Teratogenicity</b>	Not available.	



<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

---

## 12. Ecological Information

---

**Ecotoxicity** See below

**Ecotoxicological data**

Components		Species	Test Results
Ammonium chloride (CAS 12125-02-9)			
<b>Aquatic</b>			
Crustacea	EC50	American lobster ( <i>Homarus americanus</i> )	0.237 - 0.288 mg/L, 48 hours
Fish	LC50	Rainbow trout, donaldson trout ( <i>Oncorhynchus mykiss</i> )	0.42 - 0.56 mg/L, 96 hours
Cadmium (CAS 7440-43-9)			
Crustacea	EC50	Daphnia	0.024 mg/L, 48 Hours
<b>Aquatic</b>			
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	0.025 mg/L, 48 hours
Fish	LC50	Rainbow trout, donaldson trout ( <i>Oncorhynchus mykiss</i> )	0.002 - 0.003 mg/L, 96 hours
Copper (II) sulfate pentahydrate (CAS 7758-99-8)			
Crustacea	EC50	Daphnia	0.187 mg/L, 48 Hours
<b>Aquatic</b>			
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	0.006 - 0.007 mg/L, 48 hours
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )	0.66 - 1.15 mg/L, 96 hours
Manganese Sulfate Pentahydrate (CAS 10034-96-5)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	7.09 - 9.36 mg/L, 48 hours
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	24.3 - 38.9 mg/L, 96 hours

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Mobility in general</b>	Not available.
<b>Other adverse effects</b>	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

---

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. 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).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

---

## 14. Transport Information

---

<b>Transport of Dangerous Goods (TDG) Proof of Classification</b>	Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.
<b>General</b>	IMDG Regulated Marine Pollutant.

**U.S. Department of Transportation (DOT)**

**Basic shipping requirements:**

**UN number** UN2923  
**Proper shipping name** Corrosive solids, toxic, n.o.s.  
**Technical name** Dipotassium Disulphate  
**Technical name** Cadmium  
**Hazard class** 8  
**Subsidiary hazard class** 6.1(PGI, II), Limited Quantity -  
**Packing group** II  
**Marine pollutant** Yes  
**Special provisions** IB8, IP2, IP4, T3, TP33  
**Packaging exceptions** <2.2 pounds - Limited Quantity  
**Packaging non bulk** 212  
**Packaging bulk** 240

**Transportation of Dangerous Goods (TDG - Canada)**

**Basic shipping requirements:**

**UN number** UN2923  
**Proper shipping name** CORROSIVE SOLID, TOXIC, N.O.S.  
**Technical name** Dipotassium Disulphate  
**Technical name** Cadmium  
**Hazard class** 8  
**Subsidiary hazard class** 6.1, Limited Quantity -  
**Packing group** II  
**Special provisions** 16  
**Packaging exceptions** <1kg - Limited Quantity

**DOT**



**TDG**



---

**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**

Ammonium chloride (CAS 12125-02-9) Listed.  
Cadmium (CAS 7440-43-9) Listed.

**Canada Priority Substances List (Second List): Listed substance**

Ammonium chloride (CAS 12125-02-9) Listed.

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Not regulated.

**WHMIS 2015 Exemptions** Not applicable

**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)**

Ammonium chloride (CAS 12125-02-9)	Listed.
Cadmium (CAS 7440-43-9)	Listed.
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	Listed.

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

Cadmium (CAS 7440-43-9)	Cancer Lung Kidney Acute toxicity
-------------------------	--

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
--------------------------	--

<b>SARA 302 Extremely hazardous substance</b>	No
---	----

<b>SARA 311/312 Hazardous chemical</b>	No
--	----

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Cadmium	7440-43-9	3-7*
Copper (II) sulfate pentahydrate	7758-99-8	0.1-1*
Manganese Sulfate Pentahydrate	10034-96-5	3-7*

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Cadmium (CAS 7440-43-9)	
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	

**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**

Ammonium chloride (CAS 12125-02-9)	Listed.
Cadmium (CAS 7440-43-9)	Listed.
Copper (II) sulfate pentahydrate (CAS 7758-99-8)	Listed.
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	Listed.

**US - Illinois Chemical Safety Act: Listed substance**

Ammonium chloride (CAS 12125-02-9)	
Cadmium (CAS 7440-43-9)	
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	

**US - Louisiana Spill Reporting: Listed substance**

Ammonium chloride (CAS 12125-02-9)	Listed.
Cadmium (CAS 7440-43-9)	Listed.
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	Listed.

**US - Michigan Critical Materials Register: Parameter number**

Cadmium (CAS 7440-43-9)	
Copper (II) sulfate pentahydrate (CAS 7758-99-8)	

**US - Minnesota Haz Subs: Listed substance**

Ammonium chloride (CAS 12125-02-9)	Listed.
Cadmium (CAS 7440-43-9)	Listed.
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	Listed.

**US - New Jersey RTK - Substances: Listed substance**

Ammonium chloride (CAS 12125-02-9)	
Cadmium (CAS 7440-43-9)	
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	

**US - North Carolina Toxic Air Pollutants: Listed substance**

Cadmium (CAS 7440-43-9)	
Manganese Sulfate Pentahydrate (CAS 10034-96-5)	

**US - Pennsylvania RTK - Hazardous Substances: Special hazard**

Cadmium (CAS 7440-43-9)	
-------------------------	--

**US - Texas Effects Screening Levels: Listed substance**

Ammonium chloride (CAS 12125-02-9)	Listed.
------------------------------------	---------

Cadmium (CAS 7440-43-9) Listed.  
 Copper (II) sulfate pentahydrate (CAS 7758-99-8) Listed.  
 Manganese Sulfate Pentahydrate (CAS 10034-96-5) Listed.  
 Phosphoric acid, monopotassium salt (CAS 7778-77-0) Listed.

**US - Washington Chemical of High Concern to Children: Listed substance**

Cadmium (CAS 7440-43-9)

**US. Massachusetts RTK - Substance List**

Ammonium chloride (CAS 12125-02-9)  
 Cadmium (CAS 7440-43-9)  
 Copper (II) sulfate pentahydrate (CAS 7758-99-8)

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

Cadmium (CAS 7440-43-9)  
 Copper (II) sulfate pentahydrate (CAS 7758-99-8)  
 Manganese Sulfate Pentahydrate (CAS 10034-96-5)

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

Ammonium chloride (CAS 12125-02-9)  
 Cadmium (CAS 7440-43-9)  
 Manganese Sulfate Pentahydrate (CAS 10034-96-5)

**US. Rhode Island RTK**

Ammonium chloride (CAS 12125-02-9)  
 Cadmium (CAS 7440-43-9)

**US. California Proposition 65**



**WARNING:** This product can expose you to chemicals including Cadmium, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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

Cadmium (CAS 7440-43-9) Listed: October 1, 1987

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

Cadmium (CAS 7440-43-9) Listed: May 1, 1997

**US - California Proposition 65 - CRT: Listed date/Male reproductive toxin**

Cadmium (CAS 7440-43-9) Listed: May 1, 1997

**Inventory status**

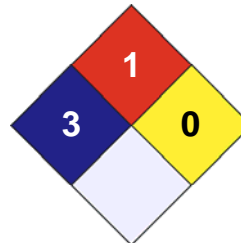
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*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	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



**Disclaimer**

The data contained in this material safety data sheet was obtained from sources that were technically accurate, reliable, and state of the art when this document was prepared. If data was unavailable to complete certain sections, the absence of that data is identified in this document. Because the supplier cannot know the exact circumstances during actual use of this product, other hazards, exposure scenarios, disposal considerations, and regulations may apply and it is the responsibility of the user to read and understand the product label and this document before use. Do not use the product for purposes other than those stated in Section 1.

**Issue date**

23-November-2018

**Version #**

02

**Effective date**

07-August-2018

**Prepared by**

Dell Tech Laboratories Ltd. Phone: (519) 858-5021

**Other information**

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