1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Pro Pot Perm</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS #</td>
<td>7722-64-7</td>
</tr>
<tr>
<td>Product use</td>
<td>Regeneration of greensand iron filters</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Pro Products LLC</td>
</tr>
<tr>
<td></td>
<td>7201 Engle Road</td>
</tr>
<tr>
<td></td>
<td>Fort Wayne, IN 46804-5875 US</td>
</tr>
<tr>
<td></td>
<td>Phone 260-483-2519</td>
</tr>
<tr>
<td>Emergency Phone</td>
<td>1-800-424-9300 (CHEMTREC)</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>LEGEND HMIS/NFPA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe</td>
<td>4</td>
</tr>
<tr>
<td>Serious</td>
<td>3</td>
</tr>
<tr>
<td>Moderate</td>
<td>2</td>
</tr>
<tr>
<td>Slight</td>
<td>1</td>
</tr>
<tr>
<td>Minimal</td>
<td>0</td>
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</table>

<table>
<thead>
<tr>
<th>Health</th>
<th>/ 2</th>
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</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>1</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>X</td>
</tr>
</tbody>
</table>

2. Hazards Identification

Emergency overview
DANGER
MAY CAUSE EYE BURNS. MAY CAUSE SKIN BURNS.
OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.

Potential short term health effects

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

Eyes
May cause chemical burns. May cause blindness.

Skin
May cause chemical burns.

Inhalation
Inhalation of dusts may cause respiratory irritation.

Ingestion
Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

Target organs
Skin. Eyes. Respiratory system.

Chronic effects
Long-term inhalation of dust concentrations higher than recommended permissible exposure limits may cause delayed lung injury. Prolonged or repeated exposure may lead to liver or kidney damage or central nervous system effects.

Signs and symptoms
Symptoms may include redness, edema, drying, defatting and cracking of the skin. The product causes burns of eyes, skin and mucous membranes.

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

Potential environmental effects
See section 12.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium permanganate</td>
<td>7722-64-7</td>
<td>60 - 100</td>
</tr>
</tbody>
</table>

4. First Aid Measures

First aid procedures

Eye contact
Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.

Skin contact
Brush away excess of dry material. Immediately flush with cool water for 15 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical attention if irritation persists.

Inhalation
If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Ingestion
Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

General advice
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

Flammable properties
Not flammable by WHMIS/OSHA criteria.

Extinguishing media
Suitable extinguishing media
Water.

Unsuitable extinguishing media
Not available

Protection of firefighters
Specific hazards arising from the chemical
Container may explode in heat of fire. May decompose spontaneously if exposed to temperatures above 150°C. Increases flammability of combustible materials. Decomposition releases oxygen which may intensify fire.

Protective equipment for firefighters
Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products
May include and are not limited to: Oxides of manganese. Oxygen.

6. Accidental Release Measures

Personal precautions
Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Environmental precautions
Do not discharge into lakes, streams, ponds or public waters.

Methods for containment
Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up
Should not be released into the environment. 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. Large Spills: Wet down with water and dike for later disposal. After removal flush contaminated area thoroughly with water.

7. Handling and Storage

Handling
Use good industrial hygiene practices in handling this material. DO NOT get in eyes. DO NOT get on skin. Keep from contact with clothing and other combustible materials. Avoid dust formation. Use only with adequate ventilation. Avoid breathing dust. Wash thoroughly after handling.

Storage
Keep out of reach of children. Keep away from heat, open flames or other sources of ignition. Protect from sunlight. Store in a cool, dry, well-ventilated place away from incompatible materials.
## 8. Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium permanganate</td>
<td>ACGIH-TLV</td>
</tr>
<tr>
<td></td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>OSHA-PEL</td>
</tr>
<tr>
<td></td>
<td>Not established</td>
</tr>
</tbody>
</table>

**Engineering controls**
Use only under good ventilation conditions or with respiratory protection. Local exhaust recommended.

**Personal protective equipment**

- **Eye / face protection**
  Chemical splash goggles.

- **Hand protection**
  Rubber gloves. Confirm with a reputable supplier first.

- **Skin and body protection**
  As required by employer code. Rubber apron recommended.

- **Respiratory protection**
  Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

- **General hygiene considerations**
  Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

## 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Crystals</td>
</tr>
<tr>
<td>Color</td>
<td>Dark Metallic Purple</td>
</tr>
<tr>
<td>Form</td>
<td>Solid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Pour point</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>None</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability limits in air, lower, % by volume</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability limits in air, upper, % by volume</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>2.7</td>
</tr>
<tr>
<td>Octanol/water coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility (H2O)</td>
<td>Partially soluble</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>0</td>
</tr>
</tbody>
</table>

## 10. Stability and Reactivity

**Reactivity**
May react with organic materials, reducing agents, strong acids and oxidizers.

**Possibility of hazardous reactions**
Hazardous polymerization does not occur.

**Chemical stability**
Stable, however, may decompose if heated.

**Conditions to avoid**
Heat, open flames, static discharge, sparks and other ignition sources. Do not mix with other chemicals.

**Incompatible materials**
11. Toxicological Information

Component analysis - LC50

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium permanganate</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Component analysis - Oral LD50

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium permanganate</td>
<td>1090 mg/kg rat</td>
</tr>
</tbody>
</table>

Effects of acute exposure

- **Eye**: May cause chemical burns. May cause blindness.
- **Skin**: May cause chemical burns.
- **Inhalation**: Inhalation of dusts may cause respiratory irritation.
- **Ingestion**: Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

Sensitization: Non-hazardous by WHMIS/OSHA criteria.

Chronic effects: Non-hazardous by WHMIS/OSHA criteria.

Carcinogenicity: Not classified or listed by IARC, NTP, OSHA and ACGIH.

Mutagenicity: Non-hazardous by WHMIS/OSHA criteria.

Reproductive effects: Non-hazardous by WHMIS/OSHA criteria.

Teratogenicity: Non-hazardous by WHMIS/OSHA criteria.

Name of Toxicologically Synergistic Products: Not available

12. Ecological Information

Ecotoxicity: Components of this product have been identified as having potential environmental concerns.

**Ecotoxicity - Freshwater Fish - Acute Toxicity Data**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>EC50/LC50 (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium permanganate</td>
<td>7722-64-7</td>
</tr>
<tr>
<td>96 Hr LC50 Carassius auratus:</td>
<td>3.3-3.93</td>
</tr>
<tr>
<td>96 Hr LC50 Cyprinus carpio:</td>
<td>2.97-3.11</td>
</tr>
<tr>
<td>96 Hr LC50 Cyprinus carpio:</td>
<td>3.16-3.77</td>
</tr>
<tr>
<td>96 Hr LC50 Lepomis macrochirus:</td>
<td>2.3 mg/L (flow-through)</td>
</tr>
<tr>
<td>96 Hr LC50 Lepomis macrochirus:</td>
<td>1.8-5.6 mg/L (static)</td>
</tr>
<tr>
<td>96 Hr LC50 Oncorhynchus mykiss:</td>
<td>1.08-1.38 mg/L</td>
</tr>
<tr>
<td>96 Hr LC50 Lepomis macrochirus:</td>
<td>0.769-1.27 mg/L</td>
</tr>
<tr>
<td>96 Hr LC50 Oncorhynchus mykiss:</td>
<td>0.769-1.27 mg/L</td>
</tr>
</tbody>
</table>

Persistence / degradability: Not available

Bioaccumulation / accumulation: Not available

Mobility in environmental media: Not available

Environmental effects: Harmful to aquatic life.

Aquatic toxicity: Not available

Partition coefficient: Not available

Chemical fate information: Not available

Other adverse effects: Not available

13. Disposal Considerations

Disposal instructions: Review federal, state/provincial, and local government requirements prior to disposal.

Waste from residues / unused products: Not available

Contaminated packaging: Not available
14. Transport Information

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

Basic shipping requirements:
- Proper shipping name: Potassium permanganate
- Hazard class: 5.1
- UN number: UN1490
- Packaging group: II

Additional information:
- Special provisions: IB8, IP2, IP4, T3, TP33
- Packaging exceptions: 152
- ERG number: 140

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

Basic shipping requirements:
- Proper shipping name: POTASSIUM PERMANGANATE
- Hazard class: 5.1
- UN number: UN1490
- Packing group: II

15. Regulatory Information

**Canadian federal regulations**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**Canada - WHMIS - Ingredient Disclosure List**

Potassium permanganate 7722-64-7 1 %

**WHMIS status**

Controlled

**WHMIS classification**

Class C - Oxidizing Material, Class E - Corrosive Material

**WHMIS labeling**

**Occupational Safety and Health Administration (OSHA)**

Yes

**29 CFR 1910.1200 hazardous chemical**

**US Federal regulations**

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

**U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities**

Potassium permanganate 7722-64-7 100 Lb final RQ; 45.4 kg final RQ

**CERCLA (Superfund) reportable quantity**

Potassium permanganate: 100.0000
Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

Section 302 extremely hazardous substance
No

Section 311 hazardous chemical
Yes

Clean Water Act (CWA)
Hazardous substance

State regulations
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances
Potassium permanganate 7722-64-7 Present

U.S. - Louisiana - Reportable Quantity List for Pollutants
Potassium permanganate 7722-64-7 100 Lb final RQ; 45.4 kg final RQ

U.S. - Massachusetts - Right To Know List
Potassium permanganate 7722-64-7 Present

U.S. - New Jersey - Right to Know Hazardous Substance List
Potassium permanganate 7722-64-7 sn 1578

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
Potassium permanganate 7722-64-7 100 Lb RQ (air); 100 lb RQ (land/water)

U.S. - Pennsylvania - RTK (Right to Know) List
Potassium permanganate 7722-64-7 Environmental hazard

U.S. - Rhode Island - Hazardous Substance List
Potassium permanganate 7722-64-7 Flammable

Inventory name

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSSL)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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

16. Other Information

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
08-Apr-2013

Effective date
01-Apr-2013

Expiry date
01-Apr-2016

Prepared by
Dell Tech Laboratories Ltd. (519) 858-5021

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