SAFETY DATA SHEET

1. Identification

Product identifier: Hercules Breakthru R-D Root Destroyer

Other means of identification:
- SDS number: 7397E
- Product code: 20602, 20610
- Product registration number: 7687-1

Synonyms: Break Thru R-D Root Destroyer, Hercules R-D Root Destroyer

Recommended use: Drain Opener.

Recommended restrictions: Never pour product into sinks or tub drains.

Manufacturer/Importer/Supplier/Distributor information:
- Company Name: HCC Holdings, Inc. an Oatey Affiliate
- Address: 4700 West 160th Street
  Cleveland, OH 44135
- Telephone: 216-267-7100
- E-mail: info@oatey.com
- Transport Emergency: Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
- Emergency First Aid: 1-877-740-5015
- Contact person: MSDS Coordinator

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards:
- Acute toxicity, oral: Category 4
- Skin corrosion/irritation: Category 2
- Serious eye damage/eye irritation: Category 2A

Environmental hazards:
- Hazardous to the aquatic environment, acute hazard: Category 1
- Hazardous to the aquatic environment, long-term hazard: Category 1

OSHA defined hazards: Not classified.

Label elements:
- Signal word: Warning
- Hazard statement: Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Very toxic to aquatic life with long lasting effects.
- Precautionary statement:
  - Prevention: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves.
  - Response: If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Collect spillage.
  - Storage: Store away from incompatible materials.
Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Supplemental information
None.

3. Composition/information on ingredients

Substances

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper sulphate pentahydrate</td>
<td></td>
<td>7758-99-8</td>
<td>99</td>
</tr>
</tbody>
</table>

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

4. First-aid measures

Inhalation
Move person to fresh air. If person is not breathing, call 911 or an ambulance, then, give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Skin contact
Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact
Rinse hands thoroughly before touching eyes. Hold eyes open and rinse slowly and gently with water for 15-20 minutes. After the first five minutes, remove contact lenses if present and easy to do, and continue rinsing. Call poison control center or doctor for treatment advice.

Ingestion
Immediately call a poison control center or doctor for treatment advice. A person should sip a glass of water if able to swallow. Do not induce vomiting unless directed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed
Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Dusts may irritate the respiratory tract, skin and eyes. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed
Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsions may be needed.

General information
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.

5. Fire-fighting measures

Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

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
Use water spray to cool unopened containers.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards
No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. 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
Sweep up into dustpan and then refer to Pesticide Disposal section.

Environmental precautions
Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage

Precautions for safe handling
Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities
Store in original container and keep in a locked storage area.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper sulphate pentahydrate (CAS 7758-99-8)</td>
<td>TWA</td>
<td>1 mg/m3</td>
<td>Dust and mist.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.2 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fume.</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
<th>Value</th>
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<td>TWA</td>
<td>1 mg/m3</td>
<td>Dust and mist.</td>
</tr>
</tbody>
</table>

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

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. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection
Face shield is recommended. Wear safety glasses with side shields (or goggles).

Skin protection
Hand protection
Wear appropriate chemical resistant gloves.

Skin protection
Other
Wear appropriate chemical resistant clothing.

Respiratory protection
Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

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.

9. Physical and chemical properties

Appearance
Physical state
Solid.
Form
Flakes.
Color
Blue.
Odor
None.
Odor threshold
Not available.

pH
4 (10% Solution)

Melting point/freezing point
Not available.

Initial boiling point and boiling range
Not determined.
Flash point  
> 212.0 °F (> 100.0 °C)

Evaporation rate  
Not available.

Flammability (solid, gas)  
Not available.

**Upper/lower flammability or explosive limits**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - upper (%)</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Vapor density  
Not available.

Relative density  
Not available.

Solubility (water)  
Not available.

**Partition coefficient**

<table>
<thead>
<tr>
<th>Partition coefficient (n-octanol/water)</th>
<th>Value</th>
</tr>
</thead>
</table>

Auto-ignition temperature  
Not available.

Decomposition temperature  
Not available.

Viscosity  
Not available.

**Other information**

- Explosive properties: Not explosive.
- Oxidizing properties: Not oxidizing.
- VOC: 0 g/l

**10. Stability and reactivity**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>Reacts with water.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>The product is hygroscopic and will absorb water by contact with the moisture in the air.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>No dangerous reaction known under conditions of normal use.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Avoid contact with water and moisture. Contact with incompatible materials.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Acetylene. Magnesium.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Sulphur oxides.</td>
</tr>
</tbody>
</table>

**11. Toxicological information**

**Information on likely routes of exposure**

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Dust may irritate respiratory system. Prolonged inhalation may be harmful.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>

**Symptoms related to the physical, chemical and toxicological characteristics**

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Dusts may irritate the respiratory tract, skin and eyes. Skin irritation. May cause redness and pain.

**Information on toxicological effects**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

**Respiratory or skin sensitization**

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory sensitization</td>
<td>Not a respiratory sensitizer.</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>This product is not expected to cause skin sensitization.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.</td>
</tr>
</tbody>
</table>
Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity
Not listed.

NTP Report on Carcinogens
Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not regulated.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not an aspiration hazard.

Chronic effects
Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity
Very toxic to aquatic life with long lasting effects.

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

Bioaccumulative potential
No data available.

Mobility in soil
No data 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
PESTICIDE DISPOSAL: Pesticide wastes may be hazardous. Improper disposal of excess pesticide is a violation of Federal Law. If this waste cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or Hazardous Waste Representative at the nearest EPA Regional Office for guidance. If partially filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor drain except as specified by the label.

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
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).

Contaminated packaging
CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Then offer for recycling, if available or puncture and dispose of in a sanitary landfill.

14. Transport information

DOT
UN number UN3077
UN proper shipping name Environmentally hazardous substances, solid, n.o.s. (CUPRIC SULFATE, PENTAHYDRATE)
Transport hazard class(es)
Class 9
Subsidiary risk -
Label(s) 9
Packing group III
Environmental hazards Yes
Marine pollutant
Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.
Special provisions 8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33
Packaging exceptions 155
Packaging non bulk 213
Packaging bulk 240
IATA
UN number UN3077
UN proper shipping name: Environmentally hazardous substance, solid, n.o.s. (CUPRIC SULFATE, PENTAHYDRATE)

Transport hazard class(es):
- Class: 9
- Subsidiary risk: -
- Packing group: III
- Environmental hazards: Yes
- ERG Code: 9L

Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

IMDG
- UN number: UN3077
- UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CUPRIC SULFATE, PENTAHYDRATE)
- Transport hazard class(es):
  - Class: 9
  - Subsidiary risk: -
  - Packing group: III
- Marine pollutant: No.
- EmS: F-A, S-F

Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

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

15. Regulatory information

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

Superfund Amendments and Reauthorization Act of 1986 (SARA)
- Hazard categories:
  - Immediate Hazard - Yes
  - Delayed Hazard - No
  - Fire Hazard - No
  - Pressure Hazard - No
  - Reactivity Hazard - No
- SARA 302 Extremely hazardous substance: Not listed.
- SARA 311/312 Hazardous chemical: Yes
- SARA 313 (TRI reporting):
<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper sulphate pentahydrate</td>
<td>7758-99-8</td>
<td>99</td>
</tr>
</tbody>
</table>

Other federal regulations:
- Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.
- Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.
- Clean Water Act (CWA) Section 112(r) (40 CFR 68.130):
  - Hazardous substance
    - Priority pollutant
    - Toxic pollutant
- Safe Drinking Water Act (SDWA):
  - 1.3 mg/l
**Food and Drug Administration (FDA)**
- Total food additive
- Direct food additive
- GRAS food additive

**FIFRA Information**
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

**Signal word**
DANGER

**Hazard statement**
PRECAUTIONARY STATEMENTS - HAZARDS TO HUMAN AND DOMESTIC ANIMALS
Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Do not get in eyes, on skin or clothing. Wear goggles or face shield. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water except as specified on the labeling.

**US state regulations**

**US. Massachusetts RTK - Substance List**
Copper sulphate pentahydrate (CAS 7758-99-8)

**US. New Jersey Worker and Community Right-to-Know Act**
Copper sulphate pentahydrate (CAS 7758-99-8)

**US. Pennsylvania Worker and Community Right-to-Know Law**
Copper sulphate pentahydrate (CAS 7758-99-8)

**US. Rhode Island RTK**
Not regulated.

**US. California Proposition 65**
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**International Inventories**

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*“Yes” indicates this product complies with the inventory requirements administered by the governing country(s).
*“No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

<table>
<thead>
<tr>
<th>Issue date</th>
<th>28-July-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>-</td>
</tr>
<tr>
<td>Version #</td>
<td>01</td>
</tr>
<tr>
<td>HMIS® ratings</td>
<td>Health: 2</td>
</tr>
<tr>
<td></td>
<td>Flammability: 0</td>
</tr>
<tr>
<td></td>
<td>Physical hazard: 0</td>
</tr>
</tbody>
</table>
NFPA ratings

Disclaimer

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