SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>Best Short-Kut 24 4-9 with X-cote</td>
</tr>
<tr>
<td>Product code</td>
<td>M74367</td>
</tr>
</tbody>
</table>

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet

<table>
<thead>
<tr>
<th>Supplier</th>
<th>JR Simplot Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>Boise, ID 83707</td>
</tr>
<tr>
<td>Phone</td>
<td>1-208-336-2110</td>
</tr>
</tbody>
</table>

1.4. Emergency telephone number

| Emergency number | CHEMTREC 1-800-424-9300 |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

| Skin Irrit. | H315 |
| Eye Irrit.  | H320 |
| STOT SE     | H335 |

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) : ![Exclamation Mark]

Signal word (GHS-US) : Warning

Hazard statements (GHS-US)

- H315 - Causes skin irritation
- H320 - Causes eye irritation
- H335 - May cause respiratory irritation

Precautionary statements (GHS-US)

- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
- P264 - Wash ... thoroughly after handling
- P271 - Use only outdoors or in a well-ventilated area
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P302+P352 - If on skin: Wash with plenty of water...
- P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
- P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P312 - Call a poison center/doctor/... if you feel unwell
- P321 - Specific treatment (see ... on this label)
- P332+P313 - If skin irritation occurs: Get medical advice/attention
- P337+P313 - If eye irritation persists: Get medical advice/attention
- P362 - Take off contaminated clothing and wash before reuse
- P403+P233 - Store in a well-ventilated place. Keep container tightly closed
- P405 - Store locked up
- P501 - Dispose of contents/container to ... in accordance with local/regional/national/international regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available
**SECTION 3: Composition/information on ingredients**

### 3.1. Substance

Not applicable

### 3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>urea</td>
<td>(CAS No) 57-13-6</td>
<td></td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2B, H320</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
<tr>
<td>ammonium sulfate</td>
<td>(CAS No) 7783-20-2</td>
<td></td>
<td>Eye Irrit. 2B, H320</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
<tr>
<td>potassium sulfate</td>
<td>(CAS No) 7778-80-5</td>
<td></td>
<td>Not classified</td>
</tr>
<tr>
<td>Polymer Coating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monoammonium Phosphate</td>
<td>(CAS No) 7722-76-1</td>
<td></td>
<td>Eye Irrit. 2B, H320</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
<tr>
<td>Iron Oxysulfate</td>
<td></td>
<td></td>
<td>Eye Irrit. 2B, H320</td>
</tr>
<tr>
<td>sulfur</td>
<td>(CAS No) 7704-34-9</td>
<td></td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2B, H320</td>
</tr>
<tr>
<td>Manganese Oxysulfate</td>
<td></td>
<td></td>
<td>Eye Irrit. 2B, H320</td>
</tr>
<tr>
<td>Wax</td>
<td>(CAS No) 64771-72-8</td>
<td></td>
<td>Not classified</td>
</tr>
<tr>
<td>Sand</td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
</tbody>
</table>

*Ingredients without WT% are considered proprietary based on trade secrets.

**SECTION 4: First aid measures**

### 4.1. Description of first aid measures

**First-aid measures general**: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**First-aid measures after inhalation**: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

**First-aid measures after skin contact**: Wash with plenty of soap and water. Wash contaminated clothing before reusing. If skin irritation occurs: Get medical advice/attention. Specific treatment (see ... on this label).

**First-aid measures after eye contact**: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**First-aid measures after ingestion**: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

**Symptoms/injuries after inhalation**: May cause respiratory irritation.

**Symptoms/injuries after skin contact**: Causes skin irritation.

**Symptoms/injuries after eye contact**: Causes eye irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

**SECTION 5: Firefighting measures**

### 5.1. Extinguishing media


**Unsuitable extinguishing media**: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

**Firefighting instructions**: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

**Protection during firefighting**: Do not enter fire area without proper protective equipment, including respiratory protection.

**SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures

### 6.1.1. For non-emergency personnel

**Emergency procedures**: Evacuate unnecessary personnel.
6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash ... thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container tightly closed.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

sulfur (7704-34-9)  
USA ACGIH | ACGIH TWA (mg/m³) | 3 mg/m³

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.
Hand protection : Wear protective gloves.
Eye protection : Chemical goggles or safety glasses.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : Wear appropriate mask.
Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Granules.
Colour : Blue-green;Grey
Odour : characteristic
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Best Short-Kut 24 24-4-9 with X-cote
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble and slowly soluble. Polymer coating and sulfur insoluble. Water:</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>9.2. Other information</td>
<td>No additional information available</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Not established.

10.3. Possibility of hazardous reactions
Not established.

10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials
Strong acids. Strong bases.

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

<table>
<thead>
<tr>
<th>Compound</th>
<th>LD50 Oral</th>
<th>LD50 Dermal Rat</th>
<th>LD50 Dermal Rabbit</th>
<th>ATE US</th>
</tr>
</thead>
<tbody>
<tr>
<td>urea (57-13-6)</td>
<td>8471 mg/kg (Rat)</td>
<td>&gt; 3200 mg/kg (Rat)</td>
<td>&gt; 21000 mg/kg (Rabbit)</td>
<td>8471.00000000 mg/kg bodyweight</td>
</tr>
<tr>
<td>ammonium sulfate (7783-20-2)</td>
<td>2840 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg</td>
<td></td>
<td>2840.00000000 mg/kg bodyweight</td>
</tr>
<tr>
<td>Monoammonium Phosphate (7722-76-1)</td>
<td>5750 mg/kg (Rat)</td>
<td>&gt; mg/kg</td>
<td>&gt; 7940 mg/kg (Rabbit)</td>
<td>5750.00000000 mg/kg bodyweight</td>
</tr>
<tr>
<td>potassium sulfate (7778-80-5)</td>
<td>6600 mg/kg (Rat)</td>
<td></td>
<td></td>
<td>6600.00000000 mg/kg bodyweight</td>
</tr>
</tbody>
</table>
**Manganese Oxysulfate**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>2150 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>2150.00000000 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

**sulfur (7704-34-9)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg (Rat)</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt; 9.23 mg/l/4h (Rat)</td>
</tr>
</tbody>
</table>

- Skin corrosion/irritation: Causes skin irritation.
- Serious eye damage/irritation: Causes eye irritation.
- Respiratory or skin sensitisation: Not classified
- Germ cell mutagenicity: Not classified
- Carcinogenicity: Not classified
- Reproductive toxicity: Not classified
- Specific target organ toxicity (single exposure): May cause respiratory irritation.
- Specific target organ toxicity (repeated exposure): Not classified
- Aspiration hazard: Not classified
- Potential adverse human health effects and symptoms: Based on available data, the classification criteria are not met.
- Symptoms/injuries after inhalation: May cause respiratory irritation.
- Symptoms/injuries after skin contact: Causes skin irritation.
- Symptoms/injuries after eye contact: Causes eye irritation.

**SECTION 12: Ecological information**

**12.1. Toxicity**

**urea (57-13-6)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
<td>&gt; 6810 mg/l (96 h; Leuciscus idus)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>&gt; 10000 mg/l (48 h; Daphnia magna)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>17500 mg/l (96 h; Poecilia reticulata)</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>&gt; 10000 mg/l (24 h; Daphnia magna)</td>
</tr>
<tr>
<td>TLM fish 1</td>
<td>17500 ppm (96 h; Poecilia reticulata)</td>
</tr>
<tr>
<td>Threshold limit other aquatic organisms 1</td>
<td>120000 mg/l (16 h; Bacteria; Toxicity test)</td>
</tr>
<tr>
<td>Threshold limit other aquatic organisms 2</td>
<td>&gt; 10000 mg/l (Pseudomonas putida)</td>
</tr>
<tr>
<td>Threshold limit algae 2</td>
<td>&gt; 10000 mg/l (168 h; Scenedesmus quadricauda)</td>
</tr>
</tbody>
</table>

**ammonium sulfate (7783-20-2)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
<td>126 mg/l (96 h; Poecilia reticulata)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>202 mg/l (96 h; Daphnia magna)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>250 - 480 mg/l (96 h; Brachydanio rerio)</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>433 mg/l (50 h; Daphnia magna)</td>
</tr>
<tr>
<td>TLM fish 1</td>
<td>1290 ppm (96 h; Gambusia affinis)</td>
</tr>
</tbody>
</table>

**Monoammonium Phosphate (7722-76-1)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
<td>155 ppm (96 h; Pimephales promelas)</td>
</tr>
</tbody>
</table>

**potassium sulfate (7778-80-5)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
<td>1692.4 mg/l (96 h; Albuminus albumus)</td>
</tr>
<tr>
<td>LC50 other aquatic organisms 1</td>
<td>&gt; 1000 mg/l (96 h)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>890 mg/l (48 h; Daphnia magna; Static system)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>653 - 796 mg/l (96 h; Lepomis macrochirus)</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>1180 mg/l (96 h; Crustacea)</td>
</tr>
<tr>
<td>TLM fish 1</td>
<td>3550 ppm (96 h; Lepomis sp.)</td>
</tr>
<tr>
<td>Threshold limit other aquatic organisms 1</td>
<td>&gt; 1000 mg/l (96 h)</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
<td>2900 mg/l (72 h; Scenedesmus subspicatus)</td>
</tr>
</tbody>
</table>
**Best Short-Kut 24 24-4-9 with X-cote**

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---

**12.2. Persistence and degradability**

### Best Short-Kut 24 24-4-9 with X-cote

**Persistence and degradability**

Not established.

#### urea (57-13-6)

**Persistence and degradability**


**ThOD**

0.27 g O<sub>2</sub>/g substance

#### ammonium sulfate (7783-20-2)

**Persistence and degradability**

Biodegradability in water: no data available. Not established.

### Monoammonium Phosphate (7722-76-1)

**Persistence and degradability**

Biodegradability in water: no data available. Not established.

#### potassium sulfate (7778-80-5)

**Persistence and degradability**

Biodegradability: not applicable. Not established.

**Biochemical oxygen demand (BOD)**

Not applicable

**Chemical oxygen demand (COD)**

Not applicable

**ThOD**

Not applicable

**BOD (% of ThOD)**

Not applicable

---

**Iron Oxysulfate**

**Persistence and degradability**

Not established.

#### sulfur (7704-34-9)

**Persistence and degradability**


**Biochemical oxygen demand (BOD)**

Not applicable

**Chemical oxygen demand (COD)**

Not applicable

**ThOD**

Not applicable

**BOD (% of ThOD)**

Not applicable

#### Sand

**Persistence and degradability**

Not established.

#### Wax (64771-72-8)

**Persistence and degradability**

Not established.

---

**12.3. Bioaccumulative potential**

### Best Short-Kut 24 24-4-9 with X-cote

**Bioaccumulative potential**

Not established.

#### urea (57-13-6)

**BCF fish 1**

1 (72 h; Brachydanio rerio; Fresh water)

**BCF other aquatic organisms 1**

11700 (Chlorella sp.)

**Log Pow**

-2.59 - -1.59

**Bioaccumulative potential**

Bioaccumulation: not applicable. Not established.

#### ammonium sulfate (7783-20-2)

**Log Pow**

-5.1

**Bioaccumulative potential**

Bioaccumulation: not applicable. Not established.

### Monoammonium Phosphate (7722-76-1)

**Bioaccumulative potential**

Not bioaccumulative. Not established.

#### potassium sulfate (7778-80-5)

**Bioaccumulative potential**

Not bioaccumulative. Not established.
**Iron Oxysulfate**
- Bioaccumulative potential: Not established.

**sulfur (7704-34-9)**
- Log Pow: 0.23 (Estimated value)
- Bioaccumulative potential: Low potential for bioaccumulation (Log Kow < 4). Not established.

**Sand**
- Bioaccumulative potential: Not established.

**Wax (64771-72-8)**
- Bioaccumulative potential: Not established.

### 12.4. Mobility in soil

**sulfur (7704-34-9)**
- Ecology - soil: Not toxic to bees.

### 12.5. Other adverse effects

- Effect on ozone layer: No additional information available
- Effect on the global warming: No known ecological damage caused by this product.
- Other information: Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.
- Ecology - waste materials: Avoid release to the environment.

### SECTION 14: Transport information

In accordance with DOT
- Not regulated for transport
- Additional information: No supplementary information available.

**ADR**
- Transport document description: 

**Transport by sea**
- No additional information available

**Air transport**
- No additional information available

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Oxysulfate</td>
<td></td>
</tr>
<tr>
<td>Manganese Oxysulfate</td>
<td></td>
</tr>
<tr>
<td>Sand</td>
<td></td>
</tr>
<tr>
<td>Polymer Coating</td>
<td></td>
</tr>
</tbody>
</table>

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

**Iron Oxysulfate**
- Not listed on the United States TSCA (Toxic Substances Control Act) inventory

**Sand**
- Not listed on the United States TSCA (Toxic Substances Control Act) inventory
Best Short-Kut 24 24-4-9 with X-cote
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15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

15.2.2. National regulations
No additional information available

15.3. US State regulations

sulfur (7704-34-9)
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Other information :
: None.

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H-phrases</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2B</td>
<td>Serious eye damage/eye irritation, Category 2B</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H320</td>
<td>Causes eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

SDS US (GHS HazCom 2012) - Custom

Disclaimer: This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE INFORMATION HEREIN PROVIDED. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.