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

1.1. Product identifier
Product form: Mixture
Product name: PHT KZ 20/20
Product code: M77695

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
JR Simplot Company
Boise, ID 83707
T 1-208-336-2110

1.4. Emergency telephone number
Emergency number: CHEMTREC 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (GHS-US)
Acute Tox. 4 (Oral) H302
Skin Irrit. 2 H315
Eye Dam. 1 H318
STOT RE 2 H373

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US):

Signal word (GHS-US): Danger
Hazard statements (GHS-US):
- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H318 - Causes serious eye damage
- H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US):
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P264 - Wash ... thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P301+P312 - If swallowed: Call a poison center/doctor/... if you feel unwell
- P302+P352 - If on skin: Wash with plenty of water/...
- P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P310 - Immediately call a poison center/doctor/...
- P314 - Get medical advice/attention if you feel unwell
- P321 - Specific treatment (see ... on this label)
- P330 - Rinse mouth
- P332+P313 - If skin irritation occurs: Get medical advice/attention
- P362 - Take off contaminated clothing and wash before reuse
- P501 - Dispose of contents/container to ...

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>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>calcium carbonate</td>
<td>(CAS No) 471-34-1</td>
<td></td>
<td>Skin Irrit. 2, H315, Eye Irrit. 2B, H320</td>
</tr>
<tr>
<td>copper(II)hydroxide</td>
<td>(CAS No) 20427-59-2</td>
<td></td>
<td>Acute Tox. 4 (Oral), H302, Eye Irrit. 2B, H320</td>
</tr>
<tr>
<td>zinc oxide</td>
<td>(CAS No) 1314-13-2</td>
<td></td>
<td>Aquatic Acute 1, H400, Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>Sodium Lignosulfonate</td>
<td>(CAS No) 8061-51-6</td>
<td></td>
<td>Skin Irrit. 2, H315, Eye Irrit. 2B, H320, STOT SE 3, H335, STOT RE 2, H373</td>
</tr>
<tr>
<td>Sodium Alkylinaphthalene Sulfonate</td>
<td></td>
<td></td>
<td>Skin Irrit. 2, H315, Eye Dam. 1, H318, STOT SE 3, H335</td>
</tr>
</tbody>
</table>

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: Assure fresh air breathing. Allow the victim to rest.

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

First-aid measures after eye contact: 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/physician.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor/physician if you feel unwell.

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

Symptoms/injuries after skin contact: Causes skin irritation.

Symptoms/injuries after eye contact: Causes serious eye damage.

Symptoms/injuries after ingestion: Swallowing a small quantity of this material will result in serious health hazard.

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

Reactivity: Stable.

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 vapor. Avoid breathing dust/fume/gas/mist/vapors/spray.

Hygiene measures: Do not eat, drink or smoke when using this product. 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 closed when not in use.

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**

<table>
<thead>
<tr>
<th><strong>zinc oxide (1314-13-2)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH STEL (mg/m³)</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Fine dry powder</td>
</tr>
<tr>
<td>Color</td>
<td>light blue</td>
</tr>
<tr>
<td>Odor</td>
<td>Copper</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>pH solution</td>
<td>7.8 1% solution of copper hydrodix</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Relative vapor density at 20 °C: No data available
Relative density: No data available
Density: 0.1917 g/ml
Solubility: soluble.
Water: Solubility in water of component(s) of the mixture:
• : 0.0014 g/100ml • : 0.00029 g/100ml • : 522000 mg/l
Log Pow: No data available
Log Kow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidizing properties: No data available
Explosive limits: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
Stable.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Not established.

10.4. Conditions to avoid
Extremely high or low temperatures.

10.5. Incompatible materials
Oxidizing agent.

10.6. Hazardous decomposition products
NH3, CN, SOx, POx.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Harmful if swallowed.

PHT KZ 20/20
ATE US (oral) 500.00000000 mg/kg body weight

copper(I)hydroxide (20427-59-2)
LD50 oral rat 1000 mg/kg (Rat)
LD50 dermal rabbit > 3160 mg/kg (Rabbit)
ATE US (oral) 1000.00000000 mg/kg body weight

calcium carbonate (471-34-1)
LD50 oral rat 6450 mg/kg (Rat; OECD 420: Acute Oral toxicity – Acute Toxic Class Method; Literature study; >2000 mg/kg; Rat; Experimental value)
LD50 dermal rat > 2000 mg/kg body weight (Rat; Experimental value; Equivalent or similar to OECD 402)
LC50 inhalation rat (mg/l) > 3 mg/l/4h (Rat; Experimental value)
ATE US (oral) 6450.00000000 mg/kg body weight

calcium oxide (1314-13-2)
LD50 oral rat > 5000 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit > 7940 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l) > 5.7 mg/l/4h (Rat; Experimental value)
LC50 inhalation rat (ppm) > 5.71 ppm/4h mouse
Sodium Lignosulfonate (8061-51-6)

LD50 oral rat: > 40000 mg/kg (Rat)

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/irritation: Causes serious eye damage.
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
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

Potential Adverse human health effects and symptoms:
- Symptoms/injuries after skin contact: Causes skin irritation.
- Symptoms/injuries after eye contact: Causes serious eye damage.
- Symptoms/injuries after ingestion: Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

calcium carbonate (471-34-1)
- TLM fish 1: > 56000 mg/l (96 h; Gambusia affinis)
- Threshold limit algae 1: > 14 mg/l (72 h; Desmodesmus subspicatus; GLP)
- Threshold limit algae 2: 14 mg/l (72 h; Desmodesmus subspicatus; GLP)

zinc oxide (1314-13-2)
- LC50 fish 1: 0.59 ppm (96 h; Salmo gairdneri (Oncorhynchus mykiss); Zinc ion)
- EC50 Daphnia 1: 0.068 mg/l (48 h; Daphnia magna; Zinc ion)
- LC50 fish 2: 0.14 mg/l (96 h; Oncorhynchus mykiss)
- Threshold limit algae 1: 0.136 mg/l (72 h; Pseudokirchneriella subcapitata; Zinc ion)
- Threshold limit algae 2: < 0.12 mg/l (Algae; Zinc ion)

Sodium Lignosulfonate (8061-51-6)
- LC50 fish 1: 7300 mg/l 48 h; Salmo gairdneri (Oncorhynchus mykiss)

12.2. Persistence and degradability

PHT KZ 20/20
Persistence and degradability: Not established.
copper(II)hydroxide (20427-59-2)
- 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

calcium carbonate (471-34-1)
- ThOD: Not applicable (inorganic)

zinc oxide (1314-13-2)
- Biochemical oxygen demand (BOD): Not applicable
- Chemical oxygen demand (COD): Not applicable
- ThOD: Not applicable
# PHT KZ 20/20
## Safety Data Sheet

### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>Bioaccumulative potential</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>zinc oxide (1314-13-2)</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Sodium Lignosulfonate (8061-51-6)</td>
<td>Not readily biodegradable in water. Not established.</td>
<td></td>
</tr>
<tr>
<td>Sodium Alkylnaphthalene Sulfonate</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>PHT KZ 20/20</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>copper(II)hydroxide (20427-59-2)</td>
<td>No bioaccumulation data available. Not established.</td>
<td></td>
</tr>
<tr>
<td>calcium carbonate (471-34-1)</td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4). Not established.</td>
<td></td>
</tr>
<tr>
<td>zinc oxide (1314-13-2)</td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4). Not established.</td>
<td></td>
</tr>
<tr>
<td>Sodium Lignosulfonate (8061-51-6)</td>
<td>Bioaccumulation: not applicable. Not established.</td>
<td></td>
</tr>
<tr>
<td>Sodium Alkylnaphthalene Sulfonate</td>
<td>Not established</td>
<td></td>
</tr>
</tbody>
</table>

### 12.4. Mobility in soil

No additional information available

### 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. Dispose of contents/container to ...
- **Ecology - waste materials** : Avoid release to the environment.

## SECTION 14: Transport information

### In accordance with DOT

No dangerous good in sense of transport regulations

### Additional information

Other 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 on the Toxic Substances Control Act (TSCA) inventory except for:

<table>
<thead>
<tr>
<th>CAS No</th>
<th>C&lt;=1.00%</th>
</tr>
</thead>
</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.

**Sodium Alkynaphthalene Sulfonate**

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

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

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

**zinc oxide (1314-13-2)**

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:

- **Acute Tox. 4 (Oral)**: Acute toxicity (oral) Category 4
- **Acute Acute 1**: Hazardous to the aquatic environment - Acute Hazard Category 1
- **Acute Chronic 1**: Hazardous to the aquatic environment - Chronic Hazard Category 1
- **Eye Dam. 1**: Serious eye damage/eye irritation Category 1
- **Eye Irrit. 2B**: Serious eye damage/eye irritation Category 2B
- **Skin Irrit. 2**: Skin corrosion/irritation Category 2
- **STOT RE 2**: Specific target organ toxicity (repeated exposure) Category 2
- **STOT SE 3**: Specific target organ toxicity (single exposure) Category 3
- **H302**: Harmful if swallowed
- **H315**: Causes skin irritation
- **H318**: Causes serious eye damage
- **H320**: Causes eye irritation
- **H335**: May cause respiratory irritation
- **H373**: May cause damage to organs through prolonged or repeated exposure
- **H400**: Very toxic to aquatic life
- **H410**: Very toxic to aquatic life with long lasting effects

SDS US (GHS HazCom 2012)

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.