# TIGER 50CR® Sulphur/Sulphate

## SECTION 1. IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Identifier</th>
<th>TIGER 50CR® Sulphur/Sulphate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Means of Identification</td>
<td>Sulphur, Sulphate</td>
</tr>
<tr>
<td>Recommended Use</td>
<td>Plant nutrient fertilizer.</td>
</tr>
<tr>
<td>Restrictions on Use</td>
<td>Always follow safe handling practices.</td>
</tr>
</tbody>
</table>

**Manufacturer/Supplier Identifier**
- Tiger-Sul Products LLC - Hwy 31 West Industrial Park P.O. Box 5; Atmore, AL; 36504, USA.
- Tiger-Sul Products LLC - 61 Stork Rd; Stockton, CA; 95203, USA.
- Tiger-Sul (Canada) Co, - 275137 Range Road 263 P.O. Box 126; Irricana, AB; T0M 1B0, Canada.

**Emergency Phone No.**
- CHEMTREC, (800) 424-9300 - 24 hrs
- Atmore Toll free, (800) 239-3647
- Stockton Toll free, (877) 299-3399
- Irricana Toll free, (877) 299-3399

## SECTION 2. HAZARD IDENTIFICATION

*Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).*

**Classification**
- Combustible dust - Category 1
- Acute toxicity (Dermal) - Category 4
- Skin irritation - Category 2
- Eye irritation - Category 2A
- Skin sensitization - Category 1B
- Carcinogenicity - Category 1A

**Label Elements**

<table>
<thead>
<tr>
<th>Danger</th>
</tr>
</thead>
</table>

May form combustible dust concentrations in air.
May cause cancer.
Causes skin and eye irritation.
May be harmful if swallowed, in contact with skin or if inhaled.

**Other Hazards**
None known.
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>%</th>
<th>Other Identifiers</th>
<th>Other Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium sulfate</td>
<td>7783-20-2</td>
<td>55.48 - 62.61</td>
<td>EU EINECS/ELINCS Number: 231-984-1</td>
<td>(NH4)2SO4</td>
</tr>
<tr>
<td>SULFUR</td>
<td>7704-34-9</td>
<td>35.51 - 37.41</td>
<td>EU EINECS/ELINCS Number: 231-722-6</td>
<td>S</td>
</tr>
<tr>
<td>BENTONITE</td>
<td>1302-78-9</td>
<td>3.98 - 4.16</td>
<td>EU EINECS/ELINCS Number: 215-108-5</td>
<td>CLAY</td>
</tr>
<tr>
<td>SILICA QUARTZ</td>
<td>14808-60-7</td>
<td>0.128 - 0.134</td>
<td>EU EINECS/ELINCS Number: 238-878-4</td>
<td>SiO2</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST-AID MEASURES

First-aid Measures

**Inhalation**
Take precautions to ensure your own safety before attempting rescue (e.g. wear appropriate protective equipment). Remove source of exposure or move to fresh air.

**Skin Contact**
Avoid direct contact. Wear chemical protective clothing if necessary. Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes.

**Eye Contact**
Wear eye protection to avoid dust getting into eyes. If contact and irritation occurs rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. Remove contact lenses, if present and easy to do.

**First-aid Comments**
Get medical advice or attention if you feel unwell or are concerned.

**Most Important Symptoms and Effects, Acute and Delayed**
If in eyes: may cause moderate to severe irritation. Symptoms include sore, red eyes, and tearing.
If on skin: may cause mild to moderate irritation
If inhaled: repeated or long term inhalation can cause respiratory problems (SILICA, QUARTZ).

**Immediate Medical Attention and Special Treatment**

**Target Organs**
None known.

**Special Instructions**
Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Media**
Water spray or fog is preferred If water is not available, use Carbon dioxide, dry chemical powder or appropriate foam. Small fires may be smothered with sand.

**Unsuitable Extinguishing Media**
Avoid scattering spilled material with high pressure water streams.

**Specific Hazards Arising from the Product**
Combustible dust. Powder may form explosive dust-air mixture.

**Special Protective Equipment and Precautions for Fire-fighters**
Wear positive pressure self-contained breathing apparatus (SCBA) Structural firefighters’ protective clothing will only provide limited protection.
Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.
Hydrogen Sulphide is heavier than air and may collect in low lying areas and confined spaces.
SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures
Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions
Prevent uncontrolled release to the environment.

Methods and Materials for Containment and Cleaning Up
Avoid generating dust.
Avoid dry sweeping. If necessary, use a dust suppressant such as water.
Do not use compressed air for clean-up.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid breathing in this product.
Avoid repeated or prolonged skin contact.
Do not get in eyes.

Conditions for Safe Storage
Store in an area that is: cool, well-ventilated, out of direct sunlight and away from heat and ignition sources.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV® TWA</th>
<th>ACGIH TLV® STEL</th>
<th>OSHA PEL TWA</th>
<th>AIHA WEEL Ceiling</th>
<th>8-hr TWA</th>
<th>TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFUR</td>
<td>10 mg/m3</td>
<td></td>
<td></td>
<td>15 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BENTONITE</td>
<td>1 mg/m3</td>
<td>10 mg/m3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SILICA QUARTZ</td>
<td>0.025 mg/m3</td>
<td></td>
<td></td>
<td>10 mg/m3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appropriate Engineering Controls
Do not allow product to accumulate in the air in work or storage areas, or in confined spaces.
Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.
Provide eyewash in work area, if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection
Wear chemical safety goggles.

Skin Protection
Wear long sleeved clothing and impervious gloves.

Respiratory Protection
For non-routine or emergency situations: wear a NIOSH approved self-contained breathing apparatus (SCBA) or supplied air respirator.
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Absorbs moisture from the air. Lachrymator (causes tearing of the eyes).</td>
</tr>
<tr>
<td>Colour and Form</td>
<td>Blended white prills with greenish-tan pastilles.</td>
</tr>
<tr>
<td>Odour</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>115°C (239°F) (SULFUR) (melting); Not applicable (freezing)</td>
</tr>
<tr>
<td>Initial Boiling Point/Range</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>207°C (405°F) (SULFUR) (closed cup)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper/Lower Flammability or</td>
<td>0.14% (SULFUR) (upper); 0.0035% (SULFUR) (lower)</td>
</tr>
<tr>
<td>Explosive Limit</td>
<td></td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour Density (air = 1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Density (water = 1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility</td>
<td>Moderately soluble in water; Not available (in other liquids)</td>
</tr>
<tr>
<td>Partition Coefficient, n-Octanol/Water (Log Kow)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>&gt; 232 °C (450 °F) (SULFUR)</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable (kinematic); Not applicable (dynamic)</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>59 lb/ft3</td>
</tr>
</tbody>
</table>

SECTION 10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions of use.

Chemical Stability
Normally stable.

Possibility of Hazardous Reactions
None expected under normal conditions of storage and use. Reacts in the presence of high energy sources (e.g. welding arcs). Dust may cause a fire or explosion.

Conditions to Avoid
Reacts with bases to form ammonia
Avoid moisture and high humidity; Ammonium Sulphate absorbs water from the air.

Incompatible Materials
Do not store with oxidizers, strong acids or bases. Forms toxic chemicals on contact with: strong bases (e.g. sodium hydroxide).

Hazardous Decomposition Products
Sulphur Dioxide.
SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure
Inhalation; eye contact; skin contact.

Acute Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LC50</th>
<th>LD50 (oral)</th>
<th>LD50 (dermal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFUR</td>
<td>&gt; 0.047 mg/L (rat) (4-hour exp)</td>
<td>&gt; 5000 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>BENTONITE</td>
<td></td>
<td>5000 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>AMMONIUM SULFATE</td>
<td>&gt; 1800 mg/m3 (guinea pig) (4-hr exp)</td>
<td>2840-4250 mg/kg (rat)</td>
<td>&gt; 2000 mg/kg (rat)</td>
</tr>
<tr>
<td>SILICA QUARTZ</td>
<td></td>
<td>500 mg/kg (rat)</td>
<td></td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation
May cause irritation to skin, eyes and respiratory tract.

Serious Eye Damage/Irritation
Can cause serious eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation
Nose and throat irritation.

Skin Absorption
May cause skin to become sensitive to sunlight (ultraviolet light).

Ingestion
May be harmful If large amounts are swallowed symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Aspiration Hazard
Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure
If inhaled: lung injury, irritation of the respiratory system. May cause respiratory tract injury.

Respiratory and/or Skin Sensitization
May cause an allergic reaction (skin sensitization) based on limited evidence.

Carcinogenicity
If inhaled: Known to cause: lung cancer. A1 – Confirmed human carcinogen. (SILICA QUARTZ)

Reproductive Toxicity

Development of Offspring
No information was located.

Sexual Function and Fertility
No information was located.

Effects on or via Lactation
No information was located.

Germ Cell Mutagenicity
No information was located.

Interactive Effects
No information was located.
SECTION 12. ECOLOGICAL INFORMATION

Avoid uncontrolled release.

Ecotoxicity
May cause long lasting harmful effects to aquatic life.

Acute Aquatic Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LC50 Fish</th>
<th>EC50 Crustacea</th>
<th>ErC50 Aquatic Plants</th>
<th>ErC50 Algae</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFUR</td>
<td>&lt; 14 mg/L (Lepomis macrochirus (bluegill); 96-hour; fresh water; static)</td>
<td>&gt; 5000 mg/L (Daphnia magna (water flea); 48-hour; fresh water; static)</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>BENTONITE</td>
<td>19000 mg/L (Oncorhynchus mykiss (rainbow trout); 96-hour; fresh water; static)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Persistence and Degradability
No ingredient of this product or its degradation products is known to be highly persistent.

Bioaccumulative Potential
This product and its degradation products are not known to bioaccumulate.

Mobility in Soil
If released into the environment, this product is expected to move slowly through the soil, based on physical and chemical properties. Contamination of groundwater could occur with uncontrolled release.

Other Adverse Effects
There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

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

SECTION 14. TRANSPORT INFORMATION


Environmental Hazards
Potential Marine Pollutant (Ammonium sulfate)

Special Precautions
Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code
Not applicable
SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

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

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)
Listed on the DSL.

USA
Additional USA Regulatory Lists
This product does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

⚠ WARNING: This product can expose you to chemicals including crystalline silica, which is known to the State of California to cause cancer when inhaled. For more information, go to www.P65Warnings.ca.gov.

Listed Pennsylvania Right To Know. (SULFUR). (SILICA QUARTZ)

SECTION 16. OTHER INFORMATION

NFPA Rating
Health - 1  Flammability - 1  Instability - 0
Based on SULFUR

SDS Prepared By
Tiger-Sul
Phone No.
(877) 299-3399

Date of Preparation
September 13, 2017
Date of Last Revision
December 18, 2018

Key to Abbreviations
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
OSHA = US Occupational Safety and Health Administration
ACGIH® = American Conference of Governmental Industrial Hygienists

Disclaimer
This Safety Data Sheet is offered solely for information, consideration, and investigation purposes. It is not to be construed as recommending any practice or product in violation of any law or regulation. The user is responsible to determine the suitability of the material for use and practice necessary safety precautions. The information presented has been compiled from sources considered to be dependable and is reliable to the best of our knowledge and is not to be considered as a warranty or quality specification.