Section 1: CHEMICAL IDENTITY AND USE

Product Name: TECHNO-S (SULFUR 90 %)
Active ingredient: Sulfur
Chemical Classification: Non Metallic Element
Chemical Name: Sulfur
CAS No.: 7704-34-9
Molecular weight: 32.1

Manufacturer:
Sulphur Mills Limited
604/605, 349 - Business Point
Western Express Highway
Andheri (E) - 400 069
Mumbai, India
Tel : +91 22 43452222
Fax : +91 22 43452245

Product use:
Soil Fertilizer in microgranular form.

Section 2: Hazard Identification

Health Hazards:
- Acute toxicity inhalation: Cat. 4
- Skin corrosion/irritation: Cat. 2

OSHA:
Combustible dust

Signal Word:
WARNING

Hazard Statement:
Causes skin irritation. Harmful if inhaled. May form combustible dust concentrations.

Precautionary Statements
Prevention:
Avoid breathing dusts or fumes. Wash thoroughly after handling. Use only outdoors or in a well ventilated area. Wear protective gloves. Observe good industrial hygiene practices.

Response:
- IF ON SKIN: Wash with plenty of water.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF SKIN IRRITATION OCCURS: Get medical attention. Take off contaminated clothing and wash before reuse. Call a POISON CONTROL CENTER or doctor if you feel unwell.

Section 3: COMPOSITION /INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>Content (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sulfur</td>
<td>7704-34-9</td>
<td>90.00</td>
</tr>
<tr>
<td>2. Other inert Ingredients</td>
<td></td>
<td>10.00</td>
</tr>
</tbody>
</table>

Section 4: FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Center:
- Eyes: Rinse eyes well with copious amount of water for at least 15 minutes.
- Skin: Remove any contaminated clothing, wash skin thoroughly with soap and water. Obtain medical attention if irritation occurs.
- Inhalation: Remove from source of contaminated to open space/fresh air, maintain respiration. Obtain medical attention if symptoms persist
- Ingestion: Rinse mouth with water and drink a glass of water. If vomiting occurs, drink further water. Seek medical attention.
- Antidote: No antidote, treat symptomatically.

Section 5: FIRE AND EXPLOSION HAZARD

Flash Point: 190 °C
Auto Ignition Temperature:
Dust Clouds - 190 °C (374 °F)
Undispersed Dust - 220 °C (428 °F)
Section 8: EXPOSURE CONTROL & PERSONAL PROTECTION

- **Respiratory Protection:** Dust-type respirators shall be provided for dusty conditions. Breathing apparatus must be available for emergency use in case of fire.
- **Eyes and Face:** Dust-tight goggles with plastic or rubber frames may be helpful in dusty conditions.
- **Hands, Arms and Body:** Workers whose skin may be sensitive to sulphur dust should button collars, roll sleeves down, and gather trousers at the ankle. Gloves may be helpful.
- **Other Clothing and Equipment:** Hardhat and safety shoes. Fire-retardant fabric is recommended. Sulphur impregnated clothing should not be worn.

Eyes wash and washing facilities must be readily available. For decontamination of clothes and equipment’s have soap and water on hand.

Section 6: ACCIDENTAL RELEASE MEASURES

Eliminate all potential sources of ignition. Cover with damp inert material such as sand and sweep or vacuum up without generating dust. Shovel into labelled, sealed containers, bags or drums for disposal or reuse using a spark-free shovel. Equip clean up personnel with appropriate protective equipment and work upwind or increase ventilation.

Section 7: HANDLING AND STORAGE PRECAUTION

- Store in original container in a cool, well-ventilated area away from sources of heat or ignition and out of direct sunlight. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations.
- Minimize dust generation and accumulation.
- Provide adequate precautions, such as electrical grounding or bonding or inert atmospheres.
- Keep containers tightly closed. Keep away from children.
- Keep away from food stuffs, seed, herbicides and insecticides.
- Wear protective equipment’s and clothing during use. Avoid skin and eye contact and inhalation of dust. Keep clothing as free from dust as possible.

Section 9: PHYSICAL AND CHEMICAL INFORMATION

<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>Brown coloured free flowing granules</td>
</tr>
<tr>
<td>Odor</td>
<td>sulfur</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>374.0 °F (190.0 °C) (Dust)</td>
</tr>
<tr>
<td>Granule size</td>
<td>0.1 – 0.5 mm</td>
</tr>
</tbody>
</table>

Section 10: STABILITY AND REACTIVITY DATA

- **Stability:** Product is stable under normal conditions
- **Conditions to Avoid:** The main hazards are heat, spark and open flame and dust explosions
- **Hazardous Polymerization:** Will not occur
- **Materials to Avoid:** Mixtures with chlorates, nitrates or other oxidizing agents may be explosive. Sulphur will react with alkalis or alkaline earths.
- **Hazardous decomposition:** Burning may produce toxic fumes, including oxides of Sulphur.
**Section 11: TOXICITY INFORMATION**

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD₅₀ (rat)</td>
<td>&gt; 5000 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD₅₀ (rat)</td>
<td>&gt; 2000 mg/kg (rat)</td>
</tr>
<tr>
<td>Inhalation LC₅₀ (rat)</td>
<td>&gt; 2.6 + 0.35 mg/l (rat)</td>
</tr>
</tbody>
</table>

Eye contact: Slight irritant (rabbits)
Skin contact: Slight irritant (rabbits)
Skin sensitization: Not a sensitizer
Mutagenic potential: Non mutagenic
Reproductive hazard potential: No reproduction hazard
Chronic/sub chronic toxicity studies: No risk of chronic toxicity
Carcinogenic potential: Non carcinogenic

**Section 12: ECOLOGICAL INFORMATION**

Nontoxic to bees, fish and wild life.
Avoid contaminating waterways

**Section 13: DISPOSAL CONSIDERATIONS**

Local regulations should be adhered to. Incineration in controlled furnace. Destroy the empty containers in a safe and authorized place. If burnt avoid inhalation of smoke (if burning permitted). Never re-use empty packs.

**Section 14: TRANSPORT INFORMATION**

Type of product: Fertilizer
State of product: Solid (granules)
DOT: Not regulated as dangerous goods
IMDG – Not regulated
IATA – Not regulated
Granulated Sulphur is not subject to the requirements of ADR, RID, IMO IMDG Code, IATA according to special provision 242 of UN Recommendations on the Transport of Dangerous Goods: Sulphur is not subject of ADR, RID, IMDG Code, IATA when it has been formed to a specific shape (such as prills, granules, pellets, pastilles or flakes)

**Section 15: REGULATORY INFORMATION**

It is a soil fertilizer with 90% Sulphur active content in the form of microgranules.

**Safety phrases:**
S1: Keep locked up;
S2: Keep out of the reach of children;
S13: Keep away from food, drink and animal foodstuffs;
S20/S21: When using, do not eat, drink or smoke;
S35: This material and its container must be disposed of in a safe way;
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection;
S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

US Federal Regulations: This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**Section 16: OTHER INFORMATION**

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

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