1. Product and Company Identification

Product Name: Preparation of Insoluble Sulphur and 20% Naphthenic Oil treated

Company Name: Oriental Carbon and Chemicals Ltd.
Plot No. 3 & 4, Industrial Estate, Phase-1
Dharuhera, Rewari
Haryana, 123106,
India,
Ph: 91-1274-242109, 242250-51
Fax: 91-1274-242237

Intended Use: Vulcanizing agent
Contact Person P.K.Malik +91 9313180999 sales@occlindia.com

2. Hazards Identification

The material is not classified as hazardous material as per EEC Dangerous substance directive and Dangerous Preparation Directive.
Burning of sulphur emits toxic fumes, which in turns can cause suffocation.
In presence of air dust explosion can take place.

3. Composition/Information on Ingredients

As per directive of EC, this product is considered as preparation.
It’s composition is given below:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Substance</th>
<th>% Part</th>
<th>EC No.</th>
<th>CAS No.</th>
<th>REACH Pre. Reg. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sulphur Homopolymer</td>
<td>70-77</td>
<td>9035-99-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Sulphur</td>
<td>4 - 7</td>
<td>231-722-6</td>
<td>7704-34-9</td>
<td>5-2116412646-47-0000</td>
</tr>
<tr>
<td>3.</td>
<td>Distillates (Petroleum)</td>
<td>18-22</td>
<td>265-155-0</td>
<td>64742-52-5</td>
<td>5-2116412647-45-0000</td>
</tr>
<tr>
<td></td>
<td>Hydrotreated Heavy Naphthenic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. First Aid Measures

Contact with dust may cause irritation, wash with water.
Skin Contact- Prolong contact with skin may result in irritation. Wash immediately with plenty of
water.
Eye- dust contact with eye may cause irritation, wash with plenty of water and go in open air, in case of severity take medical advise.
Inhalation- Inhalation of dust may cause uneasiness and breathing discomfort. Take the victim in to open atmosphere, In case of severity consult doctor.
Ingestion- In case of dust ingestion induced vomiting is recommended, use plenty of water.

In case of fire SO2 gas is release which may cause severe irritation to throat, eyes and skin. Immediately move the victim to the safe and open area, keep the body warm. In case of unconsciousness provide artificial respiration. Take medical help.
It is strongly recommended to use appropriate Personal Protective Equipments (PPEs) while handling.

5. Fire Fighting Measures

In case of fire use appropriate fire extinguishers like, ABC type, CO2 fire extinguishers and water.
While fire fighting use suitable PPEs. In case of face mask it is recommended that face mask with SO2 cartridge to be used.

On line breathing apparatus can also be used during fire fighting.
In case of major fire take help of civil authorities.

6. Accidental Release Measures

Environmental Factor- In case of spillage cordon off the area, collect the spilled material in a closed container.
1. Water- Prevent contamination of water bodies, do not flush the material to public water course,
2. Air- Avoid any source of ignition or heat near the material which can cause fire (burning of material release SO2 gas)
3. Soil- Contamination of soil is to be prevented, contaminated material to be disposed suitably.

Personal Factor- Use PPEs, handle the spilled material safely.

Fire Factor- Avoid any source of ignition and heat. In case of fire follow the measures suggested in Section-5.

7. Handling and Storage

Handling- Material is to be handled with using appropriate PPEs (eg. Mask, apron, gloves, safety goggles etc.).
While shifting of material avoid dust generation to prevent dust explosion, do not smoke in the area.
Avoid static charge by friction or strike. Have proper earthing of the equipments which are used for handling this material.
Follow good industrial practices and personal hygiene.

Storage- Store the material in cool and dry place, have proper ventilation in the storage area.
Avoid exposure to sunlight. Keep away the material from source of ignition and heat.
Store the material away from oxidizing agents and amines.

8. Exposure Controls/Personal Protection
Exposure Levels- Exposure levels is not established of this material. The ingredients of this material has following exposure limits:

<table>
<thead>
<tr>
<th>Material</th>
<th>OES*-TWA**</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulphur Homopolymer</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Sulphur</td>
<td>10.0mg/m3</td>
<td>Inhalable dust</td>
</tr>
<tr>
<td>Distillates (Petroleum)</td>
<td>4.0mg/m3</td>
<td>Respirable dust</td>
</tr>
</tbody>
</table>

Personal Protection-
Eye- use safety goggles.
Face and respiratory parts- Use full face shield respirator with SO2 cartridge.
Skin- Use PVC /cotton apron and hand gloves

In case of fire refer Section-5.

* - Occupational Exposure Standards
** - Time Weighted Average

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Fine Powder</td>
</tr>
<tr>
<td>Colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Forms</td>
<td>Solid</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic Odour</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>400-600kg/m3</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1450 – 1800gm/liter</td>
</tr>
<tr>
<td>Melting Point</td>
<td>100-120°C</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>293°C (in naphtha solvent)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>207°C</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not applicable as material is in solid form</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>&lt;0.01mBar (20°C)</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Not soluble in water</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Inorganic solvent - partly soluble</td>
</tr>
<tr>
<td>Solubility Ratio</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH value</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosion limit (dust)</td>
<td>LEL+ 30g/m3</td>
</tr>
<tr>
<td></td>
<td>UEL` 1400g/m3</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not determined</td>
</tr>
<tr>
<td>Auto Ignition Temp</td>
<td>&gt;300°C</td>
</tr>
</tbody>
</table>

+ - Lower Explosion Limit
` - Upper Explosion Limit
10. Stability and Reactivity

Stability - As such the material is stable at room temperature (upto 45°C). High temperature should be avoided.

Reactivity – Material should be kept away from the heat, source of ignition, oxidizing agents and amines.
On oxidation it generates SO2 gas which is toxic.

11. Toxicological Information

Toxicological data is not established as such on this preparation, however it is available for the ingredients used in this preparation.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Sulphur</th>
<th>Sulphur</th>
<th>Distillates (Petroleum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homopolymer</td>
<td></td>
<td></td>
<td>Hydrotreated Heavy</td>
</tr>
<tr>
<td>Naphthenic</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Irritation -
- Skin Rabbit: No irritation
- Eye Rabbit: No irritation
- Respiratory Rabbit: No irritation

Acute Toxicity
- Oral LD50 Rat: >2000mg/kg
- Dermal LD50 Rabbit: >2000mg/kg
- Inhalation LC50 Rat: >9.23mg/l

Sensitization
- Not sensitizing – Patch testing

Genotoxicity
- in vitro – no mutagenic symptoms observed
- In vivo - no mutagenic symptoms observed

Toxicity to Reproduction: No such data is established.

12. Ecological Information

Ecological data is not established as such on this preparation. The following data is available for the ingredients listed below:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Sulphur</th>
<th>Distillates (Petroleum)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Hydro treated Heavy</td>
</tr>
</tbody>
</table>

Ecotoxicity -
- Fish LC-50 (96hr): 866mg/l
- Daphnia ECO (24hr): >10,000mg/l

Bioaccumulative- No practical data is available

13. Disposal Considerations

Product- Disposal of product should be made in compliance as per local regulations.
Packaging Waste- Contaminate packaging waste should also be disposed as per local statutes.
SOx to be neutralized if it is disposed through incineration.

14. Transport Information

Air Transport
Proper Shipping Name   -   None
Hazard Identification  -   None
TREM Card             -   None
ICAO-TI/IATA-DGR Class- None
UN No.                -   not relevent
Other Informations    -   not relevent

Sea Transport
Proper Shipping Name   -   None
Hazard Identification  -   None
TREM Card             -   None
IMO/IMDG Code         -   None
EMS                   -   None
Pollutant affecting sea - None
UN No.                -   not relevent
Other Informations    -   not relevent

Land Transport
Proper Shipping Name   -   None
Hazard Identification  -   None
TREM Card             -   None
ADR Class             -   None
RID Class             -   None
UN No.                -   not relevent
Other Informations    -   not relevent

Material is not classified in hazardous goods.

15. Regulatory Information

EC No.                -   See section-3
Risk Phrases (EU Classification) - None
Symbols (EU Classification)  -   None
Safety Phrases (EU Classification) - None

16. Other Information

The information contained in this data sheet is believed to be reliable but no representation, guaranty or warranty of any kind are made as to its accuracy suitability for a particular application or results to be obtained from them. It is up to the user to ensure that the information’s contained in the safety data sheet is relevant. Oriental Carbon and Chemicals Ltd. takes no guaranty/warranty expressed or implied in respect of adequacy of this document for any particular purpose. Information used to develop this data sheet; has been taken from different reliable sources.

Date of Issue: 13.11.2008  Version No.:00