SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
   Trade name: POLSINEX 20, POLSINEX 20 HQ
   Synonyms: Insoluble sulphur oil composition 20 %

1.2. Relevant identified uses of the substance or mixture and uses advised against
   Identified uses: 1. Formulation & (Re)packaging of Substances and Mixtures - industrial use.
   2. Rubber Production and Processing - industrial use.
   Uses advised against: other uses than those listed above.

1.3. Details of the supplier of the safety data sheet
   Manufacturer: Grupa Azoty Kopalnie i Zakłady Chemiczne Siarki „Siarkopol” S.A.
   Address: Grzybów, 28-200 Staszów, Poland
   Telephone No/Fax No: +48 15 864 8000 / +48 15 864 3717
   E-Mail /www: siarkopol.zc@grupaazoty.com / www.grupaazoty.com

1.4. Emergency telephone number
   +48 15 864 8008

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
<table>
<thead>
<tr>
<th>Classification</th>
<th>According to Regulation (EC) No 1272/2008 (CLP):</th>
</tr>
</thead>
<tbody>
<tr>
<td>for physical-chemical properties:</td>
<td>Not classified</td>
</tr>
<tr>
<td>for health hazards:</td>
<td>Not classified</td>
</tr>
<tr>
<td>for environmental hazards:</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

2.2. Label elements
   Hazard pictogram(s): not applicable
   Signal word(s): not applicable
   Hazard statement(s): not applicable
   Precautionary statement(s): not applicable

2.3. Other hazards
   Solid sulfur is flammable. Burning sulfur emits toxic and irritating gas - sulfur dioxide (SO₂), which may be corrosive and cause environment acidification. Dust of sulfur/air mixtures may be explosive. May be irritating by inhalation, eye and skin contact. May cause digestive system disorders.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

<table>
<thead>
<tr>
<th>Substance name</th>
<th>% m/m</th>
<th>CAS No</th>
<th>EC No</th>
<th>Index No</th>
<th>Regulation (EC) No</th>
<th>Registration No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insoluble sulfur</td>
<td>72</td>
<td>9035-99-8</td>
<td></td>
<td>-</td>
<td>-</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Sulfur</td>
<td>8</td>
<td>7704-34-9</td>
<td>231-722-6</td>
<td>016-094-00-1</td>
<td>Skin Irrit. 2, H315</td>
<td>01-2119487295-27-xxxx</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>20</td>
<td>64742-52-5</td>
<td>265-155-0</td>
<td>649-465-00-7</td>
<td>- *</td>
<td>01-2119467170-45-xxxx</td>
</tr>
</tbody>
</table>

*The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.

The text of the H-phrases is shown in section 16 of the safety data sheet.
SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation:
When inhaled remove to fresh air. Seek medical aid when adverse effects maintain or when feeling unwell.

Contact with skin:
Take off contaminated clothing. Wash skin thoroughly with soap and water, and then with a plenty of water. When an irritation persists get medical attention.

Contact with eyes:
Flush eyes with plenty of water for a few minutes, remove contact lenses. Do not chafe eyes. When an irritation persists get medical attention.

Ingestion:
Rinse mouth with water, do NOT induce vomiting. Get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
Light laxative effect after ingestion. Skin and/or eye irritation or corrosion may appear.

4.3. Indication of any immediate medical attention and specific treatment needed
Show the safety data sheet or label/packaging to a person providing first aid. Information to a doctor: treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media: carbon dioxide, dry chemical powder, foam, water fog, earth, sand.
Unsuitable Extinguishing Media: direct water jets. Burning liquid can spread over water surface.

5.2. Special hazards arising from the substance or mixture

Flammable product. Dust and vapours with air can form explosive mixtures. Hazardous combustion products: sulfur oxides (SO$_2$, SO$_3$) and hydrogen sulphide (H$_2$S).

5.3. Advice for firefighters

Cool imilled containers with water spray and remove to a safe place. In case of large fire or poorly ventilated spaces wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA).

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Alert about a break down. Alert emergency personnel. Keep non-involved personnel away from the area of spillage. All persons have to be trained, equipped with special clothing and protective equipment. Avoid any source of ignition. Avoid spreading of dust/vapours. Use adequate personal protective equipment as required in Section 8 of the safety data sheet.

6.2. Environmental precautions

Prevent from entering sewers, rivers or other bodies of water and soil. Collect dust from water surface. Alert emergency personnel if necessary.

6.3. Methods and material for containment and cleaning up

Stop or limit leaks or spillages of the product from the container. Collect the product from water surface. Cover with earth and than collect to a special cointainer. Dispose of waste in compliance with current legislation.

6.4. Reference to other sections

Refer to Sections 8 and 13 of the safety data sheet.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Keep away from any source of ignition. Dust and vapours of sulfur with air can form explosive mixtures. Avoid breathing dust and vapours. Avoid skin and eye contact. Work in well ventilated area. Use adequate personal protective equipment as required in Section 8 of the safety data sheet. Never eat, drink or smoke during use. Change and wash contaminated clothing immediately. Avoid contact with product, especially large body
surface. Always wash hands with soap and water after work.

7.2. Conditions for safe storage, including any incompatibilities
Store in closed, properly labelled carrying containers or multipack suitable for the product. Do not smoke, use fire or other sources of ignition. Store separately from oxidising agents.

7.3. Specific end use(s)
Not known

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters
Base oil OEL (UK): STEL 10 mg/m³, TWA 5 mg/m³, Hydrogen sulphide OEL (UK): STEL: 14 mg/m³ 15 minute(s), STEL: 10 ppm 15 minute(s), TWA: 7 mg/m³ 8 hour(s), TWA: 5 ppm 8 hour(s).
Sulfur dioxide OEL (UK): STEL: 14 mg/m³ 15 minute(s), STEL: 10 ppm 15 minute(s), TWA: 7 mg/m³ 8 hour(s), TWA: 5 ppm 8 hour(s).
Sulfur DNEL: not applicable
Base oil DNEL: not available
PNEC: not applicable

8.2. Exposure controls
Appropriate engineering controls:
Adequate general and local ventilation is required to remove dust and vapours from the source of emission.

Eye/face protection:
Safety goggles or face shield.

Skin protection:
Protective gloves eg. cotton. PVA gloves are unsuitable. Protective clothing, non-skid boots. A helmet is recommended.

Respiratory protection:
In normal conditions, with adequate ventilation not required. Insufficient ventilation - a mask with a dust filter or with a filter for organic vapours (type E).

Thermal hazards:
Molten hot sulfur can cause skin and eye burns.

Environmental exposure controls:
Precautions should be made against environmental contamination.

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>a) Appearance</td>
<td>Solid, yellow powder</td>
</tr>
<tr>
<td>b) Odour</td>
<td>Characteristic</td>
</tr>
<tr>
<td>c) Odour threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>d) pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>e) Melting point/freezing point</td>
<td>113 - 120 °C at 101.3 kPa*</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
<td>444,6 °C at 101.3 kPa *</td>
</tr>
<tr>
<td>g) Flash point</td>
<td>218 °C at 761 mmHg*</td>
</tr>
<tr>
<td>h) Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>i) Flammability (solid, gas)</td>
<td>Not flammable</td>
</tr>
<tr>
<td>j) Upper/lower flammability or explosive limits</td>
<td>&gt;2000 g/m³ / 30 g/m³ (explosive limits)*</td>
</tr>
<tr>
<td>k) Vapour pressure</td>
<td>0.00014 Pa at 20 °C*</td>
</tr>
<tr>
<td>l) Vapour density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>m) Relative density</td>
<td>-1.58 g/cm³ at 20 °C</td>
</tr>
<tr>
<td>n) Solubility(ies)</td>
<td>Not soluble in water (&lt;0.005 mg/l at 22 °C)*</td>
</tr>
<tr>
<td>o) Partition coefficient: n-octanol/water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>p) Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>q) Decomposition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>r) Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>s) Explosive properties</td>
<td>Dust with air form explosive mixtures</td>
</tr>
<tr>
<td>t) Oxidising properties</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

9.2. Other information
Surface tension: Not applicable
*data for sulfur on its own

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity
Product is not reactive.

10.2. Chemical stability
Product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3. Possibility of hazardous reactions
Not known.

10.4. Conditions to avoid
High temperature, fire, hot surface and other sources of ignition.

10.5. Incompatible materials
Strong oxidising agents eg. strong alkali, alkaline amines, nitrates, chlorates, perchlorates, permanganates.
Sulfur is corrosive to some metals and polymers.

10.6. Hazardous decomposition products
Not known. Hazardous combustion products are included in Section 5 of the safety data sheet.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:
Sulfur: LD50: >2000 mg/kg bw (oral, rat)  
LD50: >2000 mg/kg bw (dermal, rabbit)  
LD50: >5430 mg/m³ (inhalation, rat, 4h)
Base oil: LD50: not available (oral, rat)
LD50: not available (dermal, rabbit)
LC50: not available (inhalation, rat)

Skin corrosion/irritation:
Based on available data, the classification criteria are not met. The product can cause skin irritation. Skin redness or even skin damage may appear.

Serious eye damage/irritation:
Based on available data, the classification criteria are not met. Contact with the product can cause eye burning and tearing, and even sight damage.

Respiratory or skin sensitisation:
Based on available data, the classification criteria are not met.

Germ cell mutagenicity:
Based on available data, the classification criteria are not met.

Carcinogenicity:
Based on available data, the classification criteria are not met.

Reproductive toxicity:
Based on available data, the classification criteria are not met.

STOT—single exposure:
Based on available data, the classification criteria are not met. Ingestion of molten sulfur can cause gullet and digestive system burns which may cause further damage to other organs. Dust inhalation - breathing shortenings with cough, irritation of the upper respiratory tract.

STOT—repeated exposure:
Based on available data, the classification criteria are not met. Chronic exposure to sulfur’s vapours and dust can cause mucous membrane irritation, headache, dizziness, excitement, apathy, digestive system disorders, skin dryness and cracking.
Sulfur: NOAEL: 1000 mg/kg (oral, subchronic, rat)  
NOAEL: 400 mg/kg (dermal, subacute, rat)

Aspiration hazard:
Based on available data, the classification criteria are not met.

SECTION 12. ECOLOGICAL INFORMATION
12.1. Toxicity
Water:
Sulfur:
   Short-term and long-term toxicity to invertebrates, algae, fish: not applicable, product is insoluble in water
Sediment:
   Sediment organism toxicity: not applicable, product is insoluble in water
Terrestrial compartment:
Sulfur:
   NOEC: >1000 mg/kg earth - toxicity to soil micro-organisms, 14 days
   NOEC: 25.2 kg/ha - toxicity to terrestrial plants, Zea mays, Avena Sativa, Allium cepa, 14 days
   NOEC: 1400 - 1900 g/ha - toxicity to arthropods, Typhlodromus pyri, 60 days
   LD50: >2000 mg/kg - toxicity to birds, Coturnix coturnix japonica, 15 days

12.2. Persistence and degradability
Biotic:
   Biodegradation in water: not applicable, sulfur is an inorganic substance
   Simulation tests (water and sediments): not applicable, product is insoluble in water
Abiotic:
   Hydrolysis as a Function of pH: not applicable, product is insoluble in water
   Photolysis / phototransformation: half life of sulfur in air t1/2: 3.21 - 4.25h at 80000 lux and 25°C

12.3. Bioaccumulative potential
Not applicable, product has low bioaccumulation potential.

12.4. Mobility in soil
Studies on adsorption/desorption: not applicable, product is insoluble in water

12.5. Results of PBT and vPvB assessment
Substances present in the mixture do not meet the PBT and vPvB criteria set out in Annex XIII to the REACH Regulation.

12.6. Other adverse effects
Not known.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Recycle or dispose of waste in compliance with current legislation.

Contaminated containers can be used again for storage the same product. Waste should be returned to supplier or recycled/disposed of in compliance with current legislation.


SECTION 14. TRANSPORT INFORMATION

14.1. UN number
Not applicable

14.2. UN proper shipping name
Not applicable

14.3. Transport hazard class(es)
Not applicable

14.4. Packing group
Not applicable

14.5. Environmental hazards
Not applicable

14.6. Special precautions for user
Not applicable

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Not applicable

SECTION 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Chemical safety assessment has been carried out for the mixture's components.

### Changes made in the safety data sheet during revision:

- Section: 7.2

### Legend to abbreviations and acronyms used in the safety data sheet:

- OELs: Occupational Exposure Limits
- vPvB: Very persistent and very bioaccumulative (substance)
- PBT: Persistent, bioaccumulative and toxic (substance)
- PNEC: Predicted No Effect Concentration
- DNEL: Derived No Effect Levels
- LD₅₀: Lethal Dose 50%, dose required to kill half the members of a tested population after a specified test duration
- LC₅₀: Lethal Concentration, 50 dose required to kill half the members of a tested population after a specified test duration
- NOEC: No Observed Effect Concentration
- NOAEL: No observed adverse effect level

### Literature references and sources for data:


### List of relevant hazard statements and/or precautionary statements, which are not written out in full under Sections 2 to 15:

- H315: Causes skin irritation.

### Advice on any training appropriate for workers to ensure protection of human health and the environment:

Workers that use the product should be trained and informed about personal protection, accident procedure, etc.
Exposure scenarios: not applicable - mixture is not classified as dangerous.

Information in this safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. Information provided herein serves only as guidelines for safe work, use, processing, storage, and waste management. It cannot be considered as a warranty or quality certificate. This information applies only to specific material designated and may not be suitable for such material used in combination with any other materials or in any other manner not described in this document.