SAFETY DATA SHEET

1. Identification

Name of the substance or mixture (trade name) | OREAS 70B
---|---
Product code | Q0203078
Major recommended uses for the substance or mixture | Used as a check standard for soil and geochem calibrations.
Specific restrictions for use of the substance or mixture | Not available.

Manufacturer/Importer/Distributor information

Company name | Evident Scientific
Address | 48 Woerd Avenue
Waltham, MA 02453
USA
Telephone number | +1-781-419-3900
Emergency telephone number | CHEMTREC

2. Hazards identification

Classification of the substance or mixture

Physical hazards | Not classified.
Health hazards | Sensitization, skin Category 1
Germ cell mutagenicity | Category 2
Carcinogenicity | Category 1A
Specific target organ toxicity, repeated exposure | Category 1
Environmental hazards | Hazardous to the aquatic environment, acute hazard Category 3
Hazardous to the aquatic environment, long-term hazard Category 3

GHS labeling elements, including precautionary statements

Hazard symbol(s) | 
Signal word | Danger
Hazard statement(s) | May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. Causes damage to organs through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects.
Precautionary statement(s)
Prevention | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response | IF ON SKIN: Wash with plenty of soap and water. IF exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage | Store locked up.
Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards which do not result in classification | None known.
Supplemental information

None.

3. Composition/information on ingredients

Mixture

<table>
<thead>
<tr>
<th>Common chemical name or technical name</th>
<th>CAS number</th>
<th>Concentration or concentration range</th>
</tr>
</thead>
<tbody>
<tr>
<td>High grade massive nickel sulfide ore and barren ultramafic material</td>
<td>-</td>
<td>100</td>
</tr>
</tbody>
</table>

Constituents

<table>
<thead>
<tr>
<th>Common chemical name or technical name</th>
<th>CAS number</th>
<th>Concentration or concentration range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>-</td>
</tr>
<tr>
<td>Nickel sulfide</td>
<td>16812-54-7</td>
<td>-</td>
</tr>
</tbody>
</table>

Composition comments

The hazard evaluation is based on the content of nickel sulfide.

4. First-aid measures

First-aid measures

- **Inhalation**: Move to fresh air. Call a physician if symptoms develop or persist.
- **Skin contact**: Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
- **Eye contact**: Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
- **Ingestion**: Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

Personal protection for first-aid responders

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

Notes to physician

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

5. Fire-fighting measures

Means of fire extinguishing

- **Suitable extinguishing media**: Use fire-extinguishing media appropriate for surrounding materials.
- **Unsuitable extinguishing media**: None known.

Specific hazards arising from the chemical

None known.

Special fire fighting procedures

- **Use water spray to cool unopened containers.**

Protective measures taken by firefighting crews

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

The product is non-combustible.

6. Control measures for spills and leaks

Personal precautions, protective equipment and emergency procedures

To be taken by those who are not involved in rendering emergency services

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

To be taken by those who are involved in rendering emergency services

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
Environmental precautions
Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containment and cleaning up
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Minimize dust generation and accumulation. Collect dust using a vacuum cleaner equipped with HEPA filter. Prevent product from entering drains. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store locked up. Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Control parameters Follow standard monitoring procedures.

Occupational exposure limits

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constituents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nickel sulfide (CAS 16812-54-7)</td>
<td>TWA</td>
<td>0.2 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Quartz (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.025 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

| Colombia. OELs. Resolution No. 02400: Norms Concerning Working Conditions, Health and Safety in the Workplace |
|---|---|---|---|
| Constituents | Type  | Value  | Form       |
| Nickel sulfide (CAS 16812-54-7) | TWA | 0.2 mg/m³ | Inhalable fraction. |
| Quartz (CAS 14808-60-7) | TWA | 0.025 mg/m³ | Respirable fraction. |

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Constituents</td>
<td>Type</td>
<td>Value</td>
<td>Form</td>
</tr>
<tr>
<td>Nickel sulfide (CAS 16812-54-7)</td>
<td>TWA</td>
<td>0.2 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Quartz (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.025 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

| Paraguay. Decree No. 14.390/92 that approves the General Technical Regulation of Safety, Hygiene and Medicine in the Workplace |
|---|---|---|---|
| Constituents | Type  | Value  | Form       |
| Nickel sulfide (CAS 16812-54-7) | TWA | 0.2 mg/m³ | Inhalable fraction. |
| Quartz (CAS 14808-60-7) | TWA | 0.025 mg/m³ | Respirable fraction. |

| Peru. OELs. Decreto Supremo 015-2005-SA (Reglamento sobre Valores Limites Permisibles para Agentes Quimicos en el Ambiente de Trabajo) |
|---|---|---|---|
| Constituents | Type  | Value  | Form       |
| Nickel sulfide (CAS 16812-54-7) | TWA | 0.2 mg/m³ |
| Quartz (CAS 14808-60-7) | TWA | 0.05 mg/m³ | Respirable fraction. |
### 9. Physical and chemical properties

**Appearance**

- **Physical state**: Solid.
- **Form**: Powder.
- **Color**: Not available.
- **Odor**: Not available.
- **Odor threshold**: Not available.
- **pH**: Not available.
- **Melting point/freezing point**: Not available.
- **Initial boiling point and boiling temperature range**: Not available.
- **Flash point**: Not applicable.
- **Evaporation rate**: Not applicable.
- **Flammability (solid, gas)**: This material will not burn.

**Upper/lower flammability or explosive limits**

- **Flammability limit - lower (%)**: Not available.
- **Flammability limit - upper (%)**: Not available.
- **Explosive limit - lower (%)**: Not available.
- **Explosive limit - upper (%)**: Not available.

**Vapor pressure**: Not applicable.

**Vapor density**: Not applicable.

**Relative density**: Not available.

**Solubility(ies)**

- **Solubility (water)**: Insoluble in water.

**Partition coefficient (n-octanol/water)**: Not available.

**Auto-ignition temperature**: Not applicable.

**Decomposition temperature**: Not available.

**Viscosity**: Not available.
Other physical and chemical parameters

Explosive properties  
Not explosive.

Oxidizing properties  
Not oxidizing.

10. Stability and reactivity

Reactivity  
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability  
Material is stable under normal conditions.

Possibility of hazardous reactions  
No dangerous reaction known under conditions of normal use.

Conditions to avoid  
Contact with incompatible materials.

Incompatible materials  
Powerful oxidizers. Chlorine.

Hazardous decomposition products  
No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation  
Dust may irritate respiratory system. Chronic lung disease (silicosis) and/or lung cancer may result from prolonged/repeated breathing of the dust of this material.

Skin contact  
Dust or powder may irritate the skin. May cause an allergic skin reaction.

Eye contact  
Dust may irritate the eyes.

Ingestion  
Expected to be a low ingestion hazard.

Symptoms  
Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash.

Acute toxicity  
Not expected to be acutely toxic.

Skin irritation and corrosion  
Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation  
Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Venezuela OELs: Sensitizer  
Nickel sulfide (CAS 16812-54-7)  Sensitizer.

Respiratory sensitization  
Not a respiratory sensitizer.

Skin sensitization  
May cause an allergic skin reaction.

Germ cell mutagenicity  
Suspected of causing genetic defects.

Carcinogenicity  
May cause cancer.

ACGIH Carcinogens  
Nickel sulfide (CAS 16812-54-7)  A1 Confirmed human carcinogen.
Quartz (CAS 14808-60-7)  A2 Suspected human carcinogen.

Colombia. OELs. Resolution No. 02400: Norms Concerning Working Conditions, Health and Safety in the Workplace  
Nickel sulfide (CAS 16812-54-7)  A1 Confirmed human carcinogen.
Quartz (CAS 14808-60-7)  A2 Suspected human carcinogen.

Quartz (CAS 14808-60-7)  Group A2 Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity  
Nickel sulfide (CAS 16812-54-7)  1 Carcinogenic to humans.
Quartz (CAS 14808-60-7)  1 Carcinogenic to humans.

Paraguay. Decree No. 14.390/92 that approves the General Technical Regulation of Safety, Hygiene and Medicine in the Workplace  
Nickel sulfide (CAS 16812-54-7)  A1 Confirmed human carcinogen.
Quartz (CAS 14808-60-7)  A2 Suspected human carcinogen.

Peru. OELs. Decreto Supremo 015-2005-SA (Reglamento sobre Valores Limites Permisibles para Agentes Quimicos en el Ambiente de Trabajo)  
Nickel sulfide (CAS 16812-54-7)  A1 Confirmed human carcinogen.
Quartz (CAS 14808-60-7)  A2 Suspected human carcinogen.

Toxic to reproduction  
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

Not classified.
Specific target organ toxicity - repeated exposure
Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard
Not an aspiration hazard.

Chronic effects
Causes damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity
Harmful to aquatic life with long lasting effects.

Persistence and degradability
No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential
No data available.

Bioconcentration factor (BCF)
Not available.

Mobility in soil
No data available for this product.

Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Considerations on final disposal

Recommended methods for final destination

Residual waste
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Local disposal regulations
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. Transport information

National regulations

ANTT
Not regulated as dangerous goods.

International regulations

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

15. Regulatory information

Federal regulations
This product is not classified for Transportation in accordance with Resolution ANTT Resolution 5232, of December 14, 2016, as amended.

Colombia. Controlled Substances (Resolution No. 009 of 1987 nationally regulating the transport & use of substances in subparag. f) of article 20 of Law 30 of 1986, as amended)
Not listed.

International regulations

Montreal Protocol
Not applicable.

Stockholm Convention
Not applicable.

Rotterdam Convention
Not applicable.

Kyoto protocol
Not applicable.
16. Other information

Significant information, yet not specifically related to the previous sections

Not available.

Legends and abbreviations

ANTT: National Agency of Land Transport.
IATA: International Air Transport Association.

Disclaimer

Evident Scientific cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.