SAFETY DATA SHEET

1. Identification

Product identifier: OREAS 70B

Recommended use of the chemical and restrictions on use
- Recommended use: Used as a check standard for soil and geochem calibrations.
- Restrictions on use: Not available.

Details of manufacturer or importer
- Company name: Evident Australia PTY LTD
- Address: Level 4, 97 Waterloo Road, Macquarie Park NSW 2113 Australia
- Telephone number: +1800-844-211
- Fax: +
  Tel: 13 11 26 (Poison Information Centre)

2. Hazard(s) identification

Classification of the hazardous chemical
- Physical hazards: Not classified.
- Health hazards:
  - Sensitization, skin: Category 1
  - Germ cell mutagenicity: Category 2
  - Carcinogenicity: Category 1A
  - Specific target organ toxicity following 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

Label elements, including precautionary statements

Hazard symbol(s)
- Health hazard
- Exclamation mark

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. Avoid release to the environment. Wear protective gloves.

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. Wash contaminated clothing before reuse.

Storage:
- Store locked up.
Disposal
Not available.

Other hazards which do not result in classification
None known.

Supplemental information
None.

3. Composition/information on ingredients

Mixture

<table>
<thead>
<tr>
<th>Identity of chemical ingredients</th>
<th>CAS number and other unique identifiers</th>
<th>Concentration of ingredients</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>Identity of chemical ingredients</th>
<th>CAS number and other unique identifiers</th>
<th>Concentration of ingredients</th>
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</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>-</td>
</tr>
<tr>
<td>Nickel sulphide</td>
<td>16812-54-7</td>
<td>-</td>
</tr>
</tbody>
</table>

Composition comments
The hazard evaluation is based on the content of nickel sulphide.

4. First-aid measures

Description of necessary 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
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.

Personal protection for first-aid responders
Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

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

5. Fire-fighting measures

Extinguishing media
Use fire-extinguishing media appropriate for surrounding materials.

Suitable extinguishing media
None known.

Unsuitable extinguishing media
None known.

Specific hazards arising from the chemical
The product is non-combustible.

Special protective equipment and precautions for fire fighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
Use water spray to cool unopened containers.

Hazchem code
None.

General fire hazards
The product is non-combustible.

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
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.
For emergency responders

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). Minimise 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. Minimise 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 and personal protection

Control parameters

Follow standard monitoring procedures.

Occupational exposure limits

<table>
<thead>
<tr>
<th>Constituents</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel sulphide (CAS 16812-54-7)</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>Dust and fume.</td>
</tr>
<tr>
<td>Quartz (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>Respirable dust.</td>
</tr>
</tbody>
</table>

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

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US. ACGIH Threshold Limit Values

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<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel sulphide (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>

UK. EH40 Workplace Exposure Limits (WELs)

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<td>TWA</td>
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<td>Respirable.</td>
</tr>
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Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

Individual protection measures, for example personal protective equipment (PPE)

Eye/face protection

Use tight fitting goggles if dust is generated.
Skin protection
  Hand protection  Wear appropriate chemical resistant gloves.
  Other  Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection  Wear respirator with dust filter.
Thermal hazards  Wear appropriate thermal protective clothing, when necessary.
Hygiene measures  Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance
  Physical state  Solid.
  Form  Powder.
  Colour  Not available.
Odour  Not available.
Odour threshold  Not available.
pH  Not available.
Melting point/freezing point  Not available.
Initial boiling point and boiling 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 (%)
  Flammability limit - upper (%)
  Explosive limit - lower ( %)
  Explosive limit – upper (%)

Vapour pressure  Not applicable.
Vapour 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.
  Oxidising properties  Not oxidising.

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.
Powerful oxidizers. Chlorine.

No hazardous decomposition products are known.

11. Toxicological information

Information on possible 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 related to exposure
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 corrosion/irritation**
Prolonged skin contact may cause temporary irritation.

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

**Respiratory or skin sensitisation**

- **Respiratory sensitisation**
Not a respiratory sensitisier.

- **Skin sensitisation**
May cause an allergic skin reaction.

- **Germ cell mutagenicity**
Suspected of causing genetic defects.

**Carcinogenicity**
May cause cancer.

- **ACGIH Carcinogens**
  - Quartz (CAS 14808-60-7) A2 Suspected human carcinogen.

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

**Reproductive toxicity**
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.

**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. Disposal considerations

**Disposal methods**
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.

**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.
14. Transport information

ADG
Not regulated as dangerous goods.

RID
Not regulated as dangerous goods.

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

15. Regulatory information

Safety, health and environmental regulations

National regulations
No poison schedule number allocated. This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals (23/12/2011).

Australia Medicines & Poisons Appendix A
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix B
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix D
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix E
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix F
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix G
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix H
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix I
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix J
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix K
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 10
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 2
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 3
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 4
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 5
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 6
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 7
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 8
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 9
Poisons schedule number not allocated.
Australia National Pollutant Inventory (NPI): Threshold quantity
Nickel sulphide (CAS 16812-54-7) 10 TONNES/YR Threshold Category: 1

High Volume Industrial Chemicals (HVIC)
Quartz (CAS 14808-60-7) 100000 - 999999 TONNES See the regulation for additional information.

Importation of Ozone Deleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)
Not listed.

National Pollutant Inventory (NPI) substance reporting list
Nickel sulphide (CAS 16812-54-7) 2000 TONNES/YR Threshold Category: 2B

Prohibited Carcinogenic Substances
Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)
Not listed.

Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)
Not listed.

Restricted Carcinogenic Substances
Not regulated.

International regulations
Stockholm Convention
Not applicable.

Rotterdam Convention
Not applicable.

Kyoto Protocol
Not applicable.

Montreal Protocol
Not applicable.

Basel Convention
Not applicable.

16. Other information

Issue date 12-March-2019
Revision date 22-November-2022

Disclaimer
Evident Scientific 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.