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

1.1. Product identifier

Product Name: Eclipse™ Sustain

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use: Fire extinguishing agent.

Uses advised against: No information available.

1.3. Details of the supplier of the safety data sheet

Importer:
Sandvik Mining Australia
Daws Road Melrose Park
Adelaide South Australia
email: firesuppressionsales@sandvik.com

1.4. Emergency telephone number

UK National Poisons Information Service (NPIS) call 111 or, in life-threatening emergencies, 999

UK National Chemical Emergency Centre (NCEC):

For Europe and if no country-specific number listed: +44 1866 407 333
For Brazil: +55 11 3197 5891
For US: +1 202 464 2554
For Mexico: +52 55 5004 8763
For Africa: +27 21 300 2732
For Australia: +61 2 8014 4558
For NZ: +649 929 1483
For China (mainland): +86 532 8388 9090
For China (outside): +85 512 8090 3041
(24 hours per day/7 days per week)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1272/2008/EC)

| Serious eye damage/eye irritation | Category 2 - H319 |

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label elements
Signal word
Warning

Hazard Statements
H319 - Causes serious eye irritation

Precautionary Statements
P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention

2.3 Other hazards
None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (1272/2008/EC)</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Octyl Sulfate</td>
<td>205-535-5</td>
<td>142-31-4</td>
<td>&lt;3</td>
<td>Flam. Solid 1 H228 Skin Irr. 2 H315 Eye Dam. 1 H318 STOT SE 3 H335</td>
<td>01-2119966154-35</td>
</tr>
<tr>
<td>Alky polyglycoside</td>
<td>603-654-0</td>
<td>132778-08-6</td>
<td>&gt;3</td>
<td>Eye Dam. 1 H318</td>
<td>No data available</td>
</tr>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>203-961-6</td>
<td>112-34-5</td>
<td>&gt;1</td>
<td>Eye Irr. 2 H319</td>
<td>01-2119475104-44</td>
</tr>
<tr>
<td>1-propanaminium, N-(3-aminopropyl)-2-hydroxy-N, N-dimethyl-3-sulfo- N-coco acyl derivs., hydroxides, inner salts</td>
<td>268-751-3</td>
<td>68139-30-0</td>
<td>&lt;3</td>
<td>Eye Irr. 2 H319</td>
<td>No data available</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.
SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice
No hazards which require special first aid measures.

Eye contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation persists.

Skin contact
Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention immediately if irritation persists.

Ingestion
Clean mouth with water and afterwards drink plenty of water. Get medical attention immediately if symptoms occur.

Inhalation
Move victim to fresh air. Get medical attention immediately if symptoms occur.

Protection of First-aiders
Use personal protective equipment. Avoid contact with skin, eyes and clothing.

4.2. Most important symptoms and effects, both acute and delayed

Main Symptoms
If in eyes: May cause redness and tearing.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician
Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
None known.

5.2. Special hazards arising from the substance or mixture

Special Hazard
Thermal decomposition can lead to release of irritating and toxic gases and vapors (Nitrogen oxides (NO\textsubscript{x}), Carbon monoxide (CO), Carbon dioxide (CO\textsubscript{2}), Sulphur dioxide (SO\textsubscript{2}), Metal oxides).

5.3. Advice for firefighters

Fire fighting measures
Dilute toxic gases with water spray.

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus and protective suit.
SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation. Avoid contact with eyes. Keep away from heat, sparks and flame. Dispose of in accordance with local regulations.

6.2. Environmental precautions
Should not be released into the environment.

6.3 Methods and material for containment and cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect in closed and suitable containers for disposal.

6.4. Reference to other sections
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities
Store in accordance with local regulations. Keep in a dry, cool and well-ventilated place. Keep away from heat. Keep at temperatures between -30 and 49 °C.

7.3. Specific end use(s)
Exposure Scenario Not available.
Other information Not available.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>European Union</th>
<th>The United Kingdom</th>
<th>France</th>
<th>Spain</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>TWA: 67.5 mg/m³</td>
<td>STEL: 15 ppm</td>
<td>TWA: 10 ppm</td>
<td>VLA-ED: 67.5 mg/m³</td>
<td>MAK: 67 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL: 101.2 mg/m³</td>
<td>TWA: 10 ppm</td>
<td>STEL: 15 ppm</td>
<td>VLA-EC: 101.2 mg/m³</td>
<td>TWA: 100 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Italy</th>
<th>Portugal</th>
<th>Netherlands</th>
<th>Denmark</th>
<th>Poland</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>TWA: 67.5 mg/m³</td>
<td>STEL: 101.2 mg/m³</td>
<td>TWA: 100 mg/m³</td>
<td>TWA: 80 mg/m³</td>
<td>NDS: 67 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL: 101.2 mg/m³</td>
<td></td>
<td>STEL: 100 mg/m³</td>
<td>STEL: 200 mg/m³</td>
<td>NDSCh: 100 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Belgium</th>
<th>Sweden</th>
<th>Hungary</th>
<th>Finland</th>
<th>Czech Republic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>TWA: 67.5 mg/m³</td>
<td>TWA: 100 mg/m³</td>
<td>TWA: 67.5 mg/m³</td>
<td>TWA: 68 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL: 101.2 mg/m³</td>
<td>STV: 200 mg/m³</td>
<td>STEL: 101.2 mg/m³</td>
<td>TWA: 10 ppm</td>
<td></td>
</tr>
</tbody>
</table>

Recommended monitoring procedures

No information available.

Derived No Effect Level (DNEL)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Worker - inhalative, long-term - local</th>
<th>Worker - dermal, long-term - local</th>
<th>Worker - inhalative, short-term - local</th>
<th>Worker - dermal, short-term - local</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>67.5 mg/m³</td>
<td>101.2 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Worker - inhalative, long-term - systemic</th>
<th>Worker - dermal, long-term - systemic</th>
<th>Worker - inhalative, short-term - systemic</th>
<th>Worker - dermal, short-term - systemic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>67.5 mg/m³</td>
<td>83 mg/kg bw/day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium Octyl Sulfate</td>
<td>285 mg/m³</td>
<td>4 060 mg/kg bw/day</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predicted No Effect Concentration (PNEC)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Freshwater</th>
<th>Marine water</th>
<th>Intermittent release</th>
<th>Sewage treatment plant</th>
<th>Freshwater sediment</th>
<th>Marine sediment</th>
<th>Soil</th>
<th>Oral</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>1.1 mg/L</td>
<td>0.11 mg/L</td>
<td>200 mg/L</td>
<td>4.4 mg/kg sediment dw</td>
<td>0.44 mg/kg soil dw</td>
<td>0.32 mg/kg soil dw</td>
<td>56 mg/kg food</td>
<td></td>
</tr>
<tr>
<td>Sodium Octyl Sulfate</td>
<td>0.136 mg/L</td>
<td>0.014 mg/L</td>
<td>1.35 mg/L</td>
<td>1.5 mg/kg sediment dw</td>
<td>0.15 mg/kg soil dw</td>
<td>0.22 mg/kg soil dw</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye Protection

Safety glasses with side-shields.

Hand Protection

Polychloroprene (CR), Butyl rubber, Polyvinylchloride (PVC): > 0.5 mm; Nitrile rubber (NBR): > 0.4 mm. Break through time: >8 h.

Skin and body protection

Long sleeved clothing

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators: Face mask.

Recommended filter type

A

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls

The product should not be allowed to enter drains, water courses or the soil.
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>Physical State @20°C</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Foam</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow / Amber</td>
</tr>
<tr>
<td>Odor</td>
<td>Pleasant</td>
</tr>
<tr>
<td>pH</td>
<td>7 - 8.5</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>0 °C</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>24 hPa (@20°C)</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.02</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
</tr>
</tbody>
</table>

9.2 Other information

Critical Temperature

>60 °C

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Not reactive under recommended storage and handling conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Keep away from heat and sources of ignition.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of toxic and corrosive gases/vapors (Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NOₓ), Sulphur dioxides (SO₂), Metal oxides)
**SECTION 11: TOXICOLOGICAL INFORMATION**

### 11.1. Information on toxicological effects

**Acute toxicity**
- **Ingestion**: No known effect.
- **Skin contact**: No known effect.
- **Inhalation**: No known effect.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>3384 mg/kg (Rat)</td>
<td>2700 mg/kg (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>Sodium Octyl Sulfate</td>
<td>3200 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**: No known effect.

**Serious eye damage/irritation**: Causes eye irritation.

**Respiratory or skin sensitisation**: No known effect.

**Germ cell mutagenicity**: Not known to cause heritable genetic damage.

**Carcinogenicity**: Contains no ingredient listed as a carcinogen.

**Reproductive toxicity**: Not known to cause birth defects or have a deleterious effect on a developing fetus. Not known to adversely affect reproductive functions and organs.

**STOT-single exposure**: No known effect.

**STOT-repeated exposure**: No known effect.

**Aspiration hazard**: No known effect.

**SECTION 12: ECOLOGICAL INFORMATION**

### 12.1. Toxicity

Contains no substances known to be hazardous for the environment.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>EC50: &gt;100 mg/L Desmodesmus subspicatus 96 h</td>
<td>LC50: 1300 mg/L Lepomis macrochirus 96 h static</td>
<td>EC50: 2850 mg/L Daphnia magna 24 h EC50: &gt;100 mg/L Daphnia magna 48 h</td>
<td></td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

No information available.

### 12.5. Results of PBT and vPvB assessment

Not applicable.

### 12.6. Other adverse effects

No information available.
SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products
Dispose of in accordance with local regulations.

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: TRANSPORT INFORMATION

According to: ADR, RID, ADN, IMDG, IATA/ICAO.

14.1. UN number
Not regulated.

14.2. UN proper shipping name
Not regulated.

14.3. Transport hazard class(es)
Not regulated.

14.4. Packing group
Not regulated.

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

Restrictions on use
None.

Other regulations
None.

15.2 Chemical safety assessment
Not required.

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H228 - Flammable solid
H301 - Toxic if swallowed
H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H315 - Causes skin irritation
H318 - Causes serious eye damage  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation  
H412 - Harmful to aquatic life with long lasting effects

Revision Note  
Format updated in compliance with European REACH and CLP regulations.

Training Advice  
Workers must be trained in the proper use and handling of this product as required under applicable regulations.

Abbreviations and acronyms  
EC: European Commission  
REACH: Registration, Evaluation, Authorisation and Restriction of Chemical substances  
DNEL: Derived No Effect Level  
PNEC: Predicted No Effect Concentration  
STOT: Specific Target Organ Toxicity  
PBT: Persistent, Bioaccumulative, Toxic  
vPvB: very Persistent and very Bioaccumulating  
ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses (Regulations for the International Transport of Dangerous Goods by Rail)  
ADN: Accord européen relatif au transport international des marchandises Dangereuses par voies de Navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)  
IMDG: International Maritime Dangerous Goods Code  
ICAO: International Civil Aviation Organization

SDS No.  
SV00001

Disclaimer  
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet