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

1.1 Product identifier
Product name Fly Ash
Synonym(s) Fine Grade Ash (FGA), Run of Station Ash (ROS)

1.2 Uses and uses advised against
Use(s) Fly Ash is used as a bulk filler, controlled low strength material, land fill, cement additive, soil stabilisation, road base, light weight building products, filler, raw material and road making.

1.3 Details of the supplier of the product
Supplier name Sunstate Cement Limited.
Address 8 Bulk Terminals Drive Port of Brisbane Qld 4178 AUSTRALIA
Telephone (07) 3895 9800
Email sales@sunstatecement.com.au
Website www.sunstatecement.com.au

1.4 Emergency telephone number(s)
Emergency 13 11 26 (Poisons Information Centre)
000 (Emergency Services)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA
GHS classification(s) Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2
Serious Eye Damage / Eye Irritation: Category 2A
Skin Corrosion/Irritation: Category 2
Specific Target Organ Systemic Toxicity (Single Exposure): Category 3

2.2 Label elements
Signal word WARNING
Pictogram(s)

Hazard statement(s)
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

Prevention statement(s)
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response statement(s)
P302 + P352  IF ON SKIN: Wash with plenty of soap and water.
P304 + P340  IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314  Get medical advice/attention if you feel unwell.
P321  Specific treatment is advised - see first aid instructions.
P362  Take off contaminated clothing and wash before re-use.

Storage statement(s)
P403 + P233  Store in a well-ventilated place. Keep container tightly closed.
P405  Store locked up.

Disposal statement(s)
P501  Dispose of contents/container in accordance with relevant regulations.

2.3 Other hazards
No information provided.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EC Number</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fly Ash</td>
<td>68131-74-6</td>
<td>268-627-4</td>
<td>95-100%</td>
</tr>
<tr>
<td>Crystalline Silica (Quartz)</td>
<td>14808-60-7</td>
<td>238-878-4</td>
<td>&lt;5%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye  If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation  If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

Skin  If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion  For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

First aid facilities  Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed
Irritating to the eyes, skin and respiratory system. Chronic over exposure to silica quartz dust may result in silicosis (lung disease). Principal symptoms of silicosis are coughing and breathlessness. Some individuals may exhibit an allergic response upon exposure to this product, possibly due to the trace amounts of chromium present. Crystalline silica and hexavalent chromium compounds are classified as carcinogenic to humans (IARC Group 1).

4.3 Immediate medical attention and special treatment needed
Treat as for moderate to strong alkali and symptomatically.
5. FIRE FIGHTING MEASURES

5.1 Extinguishing media
Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture
Non flammable. May evolve toxic gases if strongly heated.

5.3 Advice for firefighters
No fire or explosion hazard exists.

5.4 Hazchem code
None allocated.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Contact emergency services where appropriate.

6.2 Environmental precautions
Prevent product from entering drains and waterways.

6.3 Methods of cleaning up
Contain spillage, then collect and place in suitable containers for reuse or disposal. Avoid generating dust.

6.4 Reference to other sections
See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well ventilated area, removed from moisture, incompatible substances and foodstuffs. Ensure packages are adequately labelled, protected from physical damage and sealed when not in use.

7.3 Specific end use(s)
No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Reference</th>
<th>TWA ppm</th>
<th>TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica – Crystalline Quartz (respirable dust)</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>0.1</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Biological limits
No biological limit values have been entered for this product.
8.2 Exposure controls
Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

PPE
Eye / Face Wear safety glasses or dust-proof goggles when handling material to avoid contact with eyes.
Hands Wear PVC, rubber or cotton gloves when handling material to prevent skin contact.
Body Wear long sleeved shirt and full-length trousers.
Respiratory Where an inhalation risk exists wear a Class P1 (Particulate) respirator, dependent on a site specific risk assessment.

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>Appearance</td>
<td>FINE WHITE TO DARK GREY POWDER</td>
</tr>
<tr>
<td>Odour</td>
<td>ODOURLESS</td>
</tr>
<tr>
<td>Flammability</td>
<td>NON FLAMMABLE</td>
</tr>
<tr>
<td>Flash point</td>
<td>NOT RELEVANT</td>
</tr>
<tr>
<td>Boiling point</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Melting point</td>
<td>&gt; 1200°C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>pH</td>
<td>11 to 13</td>
</tr>
<tr>
<td>Vapour density</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>2.9 to 3.2</td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>&lt; 10 g/L</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>NOT RELEVANT</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>NOT RELEVANT</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Viscosity</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>

9.2 Other information
Density 1100 kg/m³ to 1500 kg/m³ (Bulk)

10. STABILITY AND REACTIVITY

10.1 Reactivity
Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability
Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions
Hazardous polymerization is not expected to occur.

10.4 Conditions to avoid
Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials
Incompatible with oxidising agents (e.g. hypochlorites), ethanol, acids (e.g. hydrofluoric acid) and interhalogens (e.g. chlorine trifluoride). Water contact may increase product temperature 2°C to 3°C.
10.6 **Hazardous decomposition products**
May evolve toxic gases if heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute toxicity</strong></td>
<td>No known toxicity data is available for this product. Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Skin</strong></td>
<td>Irritating to the skin. Contact with powder or wetted form may result in irritation, rash and dermatitis.</td>
</tr>
<tr>
<td><strong>Eye</strong></td>
<td>Irritating to the eyes. Contact may result in irritation, lacrimation, pain, redness, corneal burns and possible permanent damage.</td>
</tr>
<tr>
<td><strong>Sensitization</strong></td>
<td>This product is not classified as a skin or respiratory sensitizer. However, some individuals may exhibit an allergic response upon exposure to cement, possibly due to trace amounts of chromium.</td>
</tr>
<tr>
<td><strong>Mutagenicity</strong></td>
<td>Insufficient data available to classify as a mutagen.</td>
</tr>
<tr>
<td><strong>Carcinogenicity</strong></td>
<td>This product contains crystalline silica which is classified as carcinogenic to humans (IARC Group 1). However, there is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis. Therefore, preventing the onset of silicosis will also reduce the cancer risk. Hexavalent chromium compounds are classified as carcinogenic to humans (IARC Group 1), however due to the trace amounts present, the criteria for classification is not met.</td>
</tr>
<tr>
<td><strong>Reproductive</strong></td>
<td>Insufficient data available to classify as a reproductive toxin.</td>
</tr>
<tr>
<td><strong>STOT – single exposure</strong></td>
<td>Irritating to the respiratory system. Over exposure may result in irritation of the nose and throat, with coughing. High level exposure may result in breathing difficulties.</td>
</tr>
<tr>
<td><strong>STOT – repeated exposure</strong></td>
<td>Repeated exposure to respirable silica may result in pulmonary fibrosis (silicosis). Silicosis is a fibronodular lung disease caused deposition in the lungs of fine respirable particles of crystalline silica. Principal symptoms of silicosis are coughing and breathlessness. In the wet state, the likelihood of an inhalation hazard is reduced.</td>
</tr>
<tr>
<td><strong>Aspiration</strong></td>
<td>This product is a solid and aspiration hazards are not expected to occur.</td>
</tr>
</tbody>
</table>

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity
This product is non-toxic to aquatic organisms when present as a cured solid.

### 12.2 Persistence and degradability
Product is persistent and would have a low degradability.

### 12.3 Bioaccumulative potential
This product is not expected to bioaccumulate.

### 12.4 Mobility in soil
A low mobility would be expected in a landfill situation.

### 12.5 Other adverse effects
Avoid contamination of drains and waterways.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Waste disposal</strong></td>
<td>Reuse or recycle where possible. Alternatively, ensure product is covered with moist soil to prevent dust generation and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information (if required).</td>
</tr>
<tr>
<td><strong>Legislation</strong></td>
<td>Dispose of in accordance with relevant local legislation.</td>
</tr>
</tbody>
</table>
14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

<table>
<thead>
<tr>
<th></th>
<th>LAND TRANSPORT (ADG)</th>
<th>SEA TRANSPORT (IMDG / IMO)</th>
<th>AIR TRANSPORT (IATA / ICAO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1 UN Number</td>
<td>None Allocated</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>14.2 Proper Shipping Name</td>
<td>None Allocated</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>14.3 Transport hazard class</td>
<td>None Allocated</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>14.4 Packing Group</td>
<td>None Allocated</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
</tbody>
</table>

14.5 Environmental hazards
No information provided

14.6 Special precautions for user

| Hazchem code | None Allocated |

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Poison schedule
A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications
Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes
Xi Irritant
Xn Harmful

Risk phrases
R36/37/38 Irritating to eyes, respiratory system and skin.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety phrases
S22 Do not breathe dust.
S24/25 Avoid contact with skin and eyes.
S36/37 Wear suitable protective clothing and gloves.

Inventory listing(s)
AUSTRALIA: AICS (Australian Inventory of Chemical Substances)
All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information
PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.
Abbreviations

ACGIH American Conference of Governmental Industrial Hygienists
CAS # Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS Central Nervous System
EC No. EC No - European Community Number
GHS Globally Harmonized System
IARC International Agency for Research on Cancer
LC50 Lethal Concentration, 50% / Median Lethal Concentration
LD50 Lethal Dose, 50% / Median Lethal Dose
mg/m³ Milligrams per Cubic Metre
OEL Occupational Exposure Limit
pH relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm Parts Per Million
STEL Short-Term Exposure Limit
STOT-RE Specific target organ toxicity (repeated exposure)
STOT-SE Specific target organ toxicity (single exposure)
SUSMP Standard for the Uniform Scheduling of Medicines and Poisons
SWA Safe Work Australia TLV
Threshold Limit Value
TWA Time Weighted Average

Report status

Sunstate Cement Ltd believes the information in this document to be accurate as at the date of preparation noted below, but, to the maximum extent permitted by law, Sunstate Cement Ltd accepts no responsibility for any loss or damage caused by any person acting or refraining from action because of this information.

The provision of this information should not be construed by anyone as a recommendation to use this product. In particular, no one should use any product in violation of any patent or other intellectual proprietory rights or in breach of any statute or regulation.

Users should rely on their own knowledge and inquiries and make their own determination as to the applicability of this information in relation to their particular purposes and specific circumstances. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace and in conjunction with other substances or product.