SAFETY DATA SHEET

Fly Ash

Section 1: Identification of the Material and Supplier

Company Details
Cement Australia Pty Limited
ABN 75 104 053 474
18 Station Avenue
Darra, Queensland 4076

Contact Person: Technical Manager
Telephone: 1300 CEMENT (1300 236 368 - Business Hours) or
Poisons Information Centre 13 11 26

Emergency Contact Number:

Manufacturing Plants
Gladstone Power Station:
Port Curtis Way, Callemondah Queensland 4680
Callide Power Station:
Callide Dam Road, Mt Murchison Queensland 4715
Stanwell Power Station:
Switchyard Road, Stanwell QLD 4702
Flyash Australia Pty Ltd:
Eraring, Bayswater and Mt Piper Power Stations. Head Office - 12 Tryon Road,
Lindfield New South Wales 2070

Product
Name:
Fly Ash

Other Names:
Gladstone Ash
Callide Ash
Melbourne Ash (Blend of Gladstone and Callide Ash)
Central Queensland Ash (Blend of Gladstone and Callide Ash)
North Queensland Ash (Blend of various QLD Ash sources)
NSW Ash (Blend of Gladstone and Callide Ash)
Kaolite High Performance Ash (HPA, Special Grade Fly Ash, Ultrafine Fly Ash)
Sydney Ash (Blend of Eraring and Mt Piper Ash and/or Bayswater Ash)

Use:
Supplementary cementitious material for concrete. Also, used in soil stabilisation and
as a fine filler in asphalt and other products.

Fly Ash (CAS - 68131-74-8) composition varies based on the Source Coal used at
various power stations. These numbers reflect the various ranges in composition and
the SDS covers the highest GHS rating based on the product with the highest
concentration.

Section 2: Hazards Identification

Hazardous Substance. Non-dangerous Goods

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

For more information call 1300 CEMENT (1300 236 368)
or visit www.cementaustralia.com.au
Section 3: Composition/Information on Ingredients

Fly Ash (CAS - 68131-74-8) composition varies based on the Source Coal used at power station. These numbers reflect the various ranges in composition and the SDS covers the highest GHS rating based on the product with the highest concentration.

<table>
<thead>
<tr>
<th>Chemical Entity</th>
<th>Proportion</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mullite</td>
<td>5-30%</td>
<td>1302-93-8</td>
</tr>
<tr>
<td>Crystalline Silica (Quartz)</td>
<td>&lt;5.0%</td>
<td>14808-60-7</td>
</tr>
<tr>
<td>Hexavalent Chromium Cr (VI)</td>
<td>&lt;1ppm</td>
<td>18540-29-9</td>
</tr>
</tbody>
</table>

Note: It should be assumed that silica content is sufficient to create a silica hazard in work conditions where fine dust becomes airborne.

Section 4: First Aid Measures

**Swallowed:** Wash mouth with water. Give plenty of water to drink. Do not induce vomiting. Seek medical advice if symptoms persist.

**Eyes:** Flush thoroughly with flowing water for 15 minutes to remove all traces. If symptoms or irritation persist, seek medical attention.

**Skin:** Wash with soap and water. Remove and wash affected clothing before reuse. If symptoms persist, seek medical attention.

**Inhaled:** Remove to fresh air, away from dusty area. If symptoms persist, seek medical attention.

**First Aid Facilities:** Eye wash station.

**Advice to Doctor:** Treat symptomatically.
Section 5: Fire Fighting Measures

<table>
<thead>
<tr>
<th>Fire/Explosion Hazard:</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazchem Code:</td>
<td>None allocated</td>
</tr>
<tr>
<td>Flammability:</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Extinguishing Media:</td>
<td>None required</td>
</tr>
<tr>
<td>Hazards from Combustion Products:</td>
<td>None</td>
</tr>
<tr>
<td>Special Protective Precautions and equipment for fire fighters:</td>
<td>None</td>
</tr>
</tbody>
</table>

Section 6: Accidental Release Measures

Spills: A fine water spray should be used to suppress dust when sweeping. Wet sweep or vacuum dust with industrial vacuum cleaner.

Clean up Procedure: Work areas should be cleaned regularly by wet sweeping or vacuuming. Collect in containers and dispose of as trade waste in accordance with local authority guidelines. Keep out of stormwater and sewer drains. Personal protection recommendations should be followed – see Section 8.

Section 7: Handling and Storage

Storage: Keep in a dry place.

Conditions of safe storage: When handled pneumatically use standard dust filters on vehicles and silos.

Incompatibilities: None

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters

Exposure standards

<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>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium (VI) compounds (as Cr)</td>
<td>SWA (AUS)</td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.
Section 9: Physical and Chemical Properties

Appearance: Fine powder – light grey to fawn
Odour: No odour
Boiling/Melting Point: Melting point >1400ºC
Vapour Pressure: Not applicable
Specific Gravity: 2.35 - 2.40
Flash Point: Not flammable
Flammability Limits: Not applicable
Solubility in Water: Essentially insoluble
Particle Size: Approximately 40% of particles are respirable (≤7 micron in diameter)

Section 10: Stability and Reactivity

Chemical Stability: Chemically stable
Conditions to Avoid: None
Incompatible Materials: None
Hazardous Decomposition Products: None
Hazardous Reactions: None

Section 11: Toxicological Information

Acute toxicity: Has a caustic reaction and is corrosive to the mouth and throat.
Skin: Irritating to the skin. Contact with powder or wetted form may result in caustic reaction, rash and dermatitis.
Eye: Irritation and corrosive to the eyes. May cause chemical conjunctivitis and redness and watering of eyes and damage to cornea.
Sensitization: Irritating and drying to the skin. May cause alkali burns and irritant or allergic dermatitis.
Mutagenicity: Insufficient data available to classify as a mutagen.
Carcinogenicity: 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.
Reproductive STOT – single exposure: Insufficient data available to classify as a reproductive toxin.
Reproductive STOT – repeated exposure: 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.
Aspiration: This product is a solid and aspiration hazards are not expected to occur.

Section 12: Ecological Information

Ecotoxicity: Unlikely to have a negative impact on plant life or animals.
Persistence and Degradability: Product is persistent and would have a low degradability.
Mobility: A low mobility would be expected in a landfill setting.
Section 13: Disposal Considerations
Follow personal protection safety requirements. Collect in containers and dispose as trade waste and land fill in accordance with local authority guidelines. Keep out of stormwater and sewer drains.

Section 14: Transport Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Number</td>
<td>None allocated</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>None allocated</td>
</tr>
<tr>
<td>Class and Subsidiary Risk</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing Group</td>
<td>None allocated</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Avoid generating and breathing dust</td>
</tr>
<tr>
<td>Hazchem Code</td>
<td>None allocated</td>
</tr>
</tbody>
</table>

Section 15: Regulatory Information
Classified as non-Dangerous Goods.

Classified as Hazardous per the criteria of the National Occupational Health and Safety Commission (NOHSC)
Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008] 3rd Edition

All chemicals listed on the Australian Inventory of Chemical Substances (AICS)

Section 16: Other Information

For further information on this product contact:

- **Telephone:** 1300 CEMENT (1300 236 368 - Business Hours)
- **Facsimile:** 1800 CEMENT (1800 236 368)

Next Review Date for this MSDS: 31 December 2020.

Australian and New Zealand Standards:

AS 2161: Industrial Safety Gloves and Mittens (excluding electrical and medical gloves).
AS/NZS 1715: Selection, use and maintenance of respiratory protective devices.
AS/NZS 1716: Respiratory protective devices.
AS/NZS 4501: Occupational protective clothing.

Advice Note:
Cement Australia 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, Cement Australia 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. No one should use any product in violation of any patent or other intellectual proprietary 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 products.