SAFETY DATA SHEET

# Bottom 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

**Tel:** 1300 CEMENT (1300 236 368)
**Fax:** 1800 CEMENT (1800 236 368)
**Website:** www.cementaustralia.com.au

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

### Manufacturing Plants

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

### Product

| | |
|---|---|
| **Name:** | **Bottom Ash** |
| **Other Names:** | none |
| **Use:** | Supplementary cementitious material for concrete. Also, used as an aggregate when suitable.<br>Bottom ash is another by-product related to Fly Ash (CAS - 68131-74-8). Composition varies based on the Source Coal used at various power stations. |

## 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

**DANGER**

**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 (lungs). |

**Prevention statement(s)**

| | |
|---|---|
| P264 | Wash skin thoroughly after handling. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection rated for Dust. |
| P260 + P261 | Avoid/Do not breathe dust. Cement can become easily airborne. |

**Response statement(s)**

| | |
|---|---|
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P332 + P313 | If skin irritation occurs: Get medical advice/attention. |
| P304 + P340 + P305 | IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. |
| P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and |
| P337 + P313 | easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| P314 + P312 | Call a POISON CENTER or doctor/physician 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. |
| P405 | Keep container tightly closed. Store locked up. |

**Disposal statement(s)**

| | |
|---|---|
| P501 | Dispose of contents/container in accordance with relevant regulations. |

## 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.

| Chemical Entity | Proportion | CAS Number |
|---|---|---|
| Mullite | 5-30% | 1302-93-8 |
| Crystalline Silica (Quartz) | <5.0% | 14808-60-7 |
| Hexavalent Chromium Cr (VI) | <1ppm | 1309-48-4 |

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. |
| **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

| | |
|---|---|
| **Fire/Explosion Hazard:** | None |
| **Hazchem Code:** | None allocated |
| **Flammability:** | Not flammable |
| **Extinguishing Media:** | None required |
| **Hazards from Combustion Products:** | None |
| **Special Protective Precautions and equipment for fire fighters:** | None |

## 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

| Ingredient | Reference | TWA | | STEL | |
|---|---|---|---|---|---|
| | | ppm | mg/m³ | ppm | mg/m³ |
| Silica – Crystalline Quartz (respirable dust) | SWA (AUS) | -- | 0.05 | -- | -- |
| Chromium (VI) compounds (as Cr) | SWA (AUS) | -- | 0.05 | -- | -- |

### 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** | No known toxicity data is available for this product. Based on available data, the classification criteria are not met. |
| **Skin** | Irritating to the skin. Contact with powder or wetted form may result in irritation, rash and dermatitis. |
| **Eye** | Irritating to the eyes. Contact may result in irritation, lacrimation, pain, redness, corneal burns and possible permanent damage. |
| **Sensitization** | This product is not classified as a skin or respiratory sensitiser. However, some individuals may exhibit an allergic response upon exposure to cement, possibly due to trace amounts of chromium. |
| **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. 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. |
| **Reproductive** | Insufficient data available to classify as a reproductive toxin. |
| **STOT – single exposure** | 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. |
| **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

| | |
|---|---|
| **UN Number:** | None allocated |
| **Proper Shipping Name:** | None allocated |
| **Class and Subsidiary Risk:** | Not applicable |
| **Packing Group:** | None allocated |
| **Special precautions for user:** | Avoid generating and breathing dust |
| **Hazchem Code:** | None allocated |

## Section 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). |
| **Inventory listings** | **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**<br>All components are listed on AICS or are exempt. |

## Section 16: Other Information

| | |
|---|---|
| **For further information on this product contact:** | **Telephone:** 1300 CEMENT (1300 236 368 - Business Hours)<br>**Facsimile:** 1800 CEMENT (1800 236 368) |

**Previous Edition: 2014 –** GHS Compliance edits made, and supplementary compliance edits added.

**Next Review Date for this MSDS: 31 December 2024.**

## Australian and New Zealand Standards:

AS 2161: Industrial Safety Gloves and Mittens (excluding electrical and medical gloves).

AS/NZ 1336: Recommended Practices for Occupational Eye Protection.

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.

[End SDS]