



Material Safety Data Sheet

Product Name **FLYASH**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	FLYASH
Supplier Name	MORGAN CEMENT INTERNATIONAL PTY LTD A.B.N. 29 075 095 822
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Manufacturing Plant	Gate 7, Foreshore Road, Port Kembla, NSW 2505
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Web Site	http://www.adelaidebrighton.com.au
Synonym(s)	VALES POINT FLYASH, FINE GRADE FLYASH, COARSE GRADE FLYASH, MEDIUM GRADE FLYASH, RUN OF STATION FLYASH.
Use(s)	Bulk filler, controlled low strength material, landfill, Portland Cement additive, soil stabilisation, road base, lightweight building products, additive, cement additive, filler, raw material, road making.

2. HAZARDS IDENTIFICATION

This product is classified as hazardous according to criteria of NOHSC.
Not classified as a dangerous good by the criteria of the ADG Code.

RISK PHRASES

R36/37/38	Irritating to eyes, respiratory system and skin.
R40	Limited evidence of a carcinogenic effect.
R43	May cause sensitisation by skin contact.
R48/20	Harmful : danger of serious damage to health by prolonged exposure through inhalation.

SAFETY PHRASES

S20/21	When using do not eat, drink or smoke.
S22	Do not breathe dust.
S24/25	Avoid contact with skin and eyes.
S36/37	Wear suitable protective clothing and gloves.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.

UN No	None Allocated	Hazchem Code	None Allocated	Pkg Group	None Allocated
DG Class	None Allocated	Subsidiary Risk(s)	None Allocated	EPG	None Allocated

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Formula	Conc.	CAS No.
AVAILABLE LIME CALCIUM OXIDE	as CaO	5%	1305-78-8
SILICA	SiO ₂	55 - 70%	14808-60-7
ALUMINIUM OXIDE	Al ₂ O ₃	15-30%	1344-28-1
RESPIRABLE SILICA	-	<2%	14808-60-7
IRON OXIDE	Fe ₂ O ₃	<5%	1309-37-1
MAGNESIUM OXIDE	MgO	<4%	1309-48-4
SODIUM OXIDE	as Na ₂ O	<4%	1313-59-3
POTASSIUM OXIDE	as K ₂ O	<2%	12136-45-7
SULPHUR TRIOXIDE	SO ₃	<3%	7446-11-9
PHOSPHORUS PENTOXIDE	P ₂ O ₅	<1%	1314-56-3
MANGANESE OXIDE	Mn ₂ O ₃	<1%	1317-34-6



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4. FIRST AID MEASURES

Eye	Flush thoroughly with flowing water for at least 15 minutes. Seek medical attention if symptoms persist.
Inhalation	Remove from dusty area to fresh air. If symptoms persist, seek medical attention.
Skin	Quickly, but gently, wipe material off skin. Immediately remove all contaminated clothing and footwear. Wash thoroughly with water. A shower may be required.
Ingestion	Rinse mouth and lips with water. Do not induce vomiting. Give water to drink to dilute stomach contents. If symptoms persist, seek medical attention.
Advice to Doctor	Treat symptomatically.
First Aid Facilities	Eye wash station.

Additional Information - Aggravated Medical Conditions

Inhalation	Inhalation of dust through prolonged, repeated exposure can cause bronchitis, silicosis (scarring of the lung.) It may also increase the risk of scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels and internal organs) and lung cancer. Epidemiological studies have shown that smoking increases the risk of bronchitis, silicosis (scarring of the lung) and lung cancer.
Skin	Irritating and drying to skin. May cause alkaline burns and irritant or allergic dermatitis. Prolonged and repeated skin contact with cement in wet concrete, mortars and slurries may cause both irritant dermatitis and allergic (contact) dermatitis. The latter is due to the presence of traces of water soluble hexavalent chromium in cement.

5. FIRE FIGHTING

Flammability	Non flammable. Does not support combustion of other materials.
Fire and Explosion	Non flammable. Does not cause dust explosions.
Extinguishing	Non flammable.
Hazchem Code	None.

6. ACCIDENTAL RELEASE MEASURES

Spillage	If spilt (bulk), contact emergency services if appropriate. Wear dust-proof goggles, PVC/rubber gloves, a Class P3 Full Face respirator (where an inhalation risk exists), coveralls and rubber boots. Spray with water to prevent dust generation. Clear area of all unprotected personnel. Prevent spill entering drains or waterways. Collect and place in sealable containers for disposal or reuse. Avoid generating dust. Material should be neutralised with dilute hydrochloric acid, eg 6M, before disposal.
Emergency Procedures	Follow safety requirements for personal protection under Section 8 Exposure Controls/Personal Protection.

7. HANDLING AND STORAGE

Storage	Store in cool, dry, well ventilated area, removed from moisture, oxidising agents (eg. Hypochlorites, phosphorus oxide), acids, (eg hydrochloric acid), ethanol, interhalogens (eg. chlorine trifluoride) and foodstuffs. Ensure packages are adequately labelled, protected from physical damage and sealed when not in use.
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Handling

Minimise all unnecessary personal contact.

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 area.

Property/ Environmental

Refer to Section 13.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation

Do not inhale dust/powder. Use with adequate ventilation. Where a dust inhalation hazard exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

Exposure Standards

SILICA, CRYSTALLINE – QUARTZ (14808-60-7)
ES-TWA: 0.1 mg/m³ (Silica Quartz, respirable, NOHSC)
ES-TWA: 0.1 mg/m³ (QLD); 0.15 mg/m³ (NSW)
WES-TWA: 0.1 mg/m³
MAGNESIUM OXIDE (1309-48-4)
ES-TWA: 10 mg/m³ (fume)
ES-TWA: 10 mg/m³ Inspirable dust
WES-TWA: 10 mg/m³
CALCIUM OXIDE (1305-78-8)
ES-TWA: 2mg/m³ (Peak level)
WES-TWA: 2mg/m³
ALUMINIUM OXIDE (1344-28-1)
ES-TWA: 10mg/m³ (total dust)
WES-TWA: 10mg/m³
IRON (III) OXIDE (1309-37-1)
WES-TWA: 5 mg/m³
MANGANESE OXIDE (1317-35-7)
ES-TWA: 1mg/m³ dust, as Manganese (Mn)
PHOSPHORUS PENTOXIDE (1314-56-3)
ES-STEL: 2mg/m³ (Switzerland)
ES-TWA: 1 mg/m³ (Switzerland)

PPE

Wear dust-proof goggles and rubber or PVC gloves. Where an inhalation risk exists, wear a Class P2 respirator. If there is potential for prolonged and/or excessive skin contact, wear coveralls. At high dust levels, wear a Class P3 respirator or a Powered Air Purifying Respirator (PAPR) with Class P3 filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Grey, fine grained powder with particle size less than 600 µm	Solubility (water)	Insoluble
Odour	Odourless	Specific Gravity	2.4
pH	Not Available	% Volatiles	Not Available
Vapour Pressure	Not Available	Flammability	Non Flammable
Vapour Density	Not Available	Flash Point	Not Relevant
Boiling Point	Not Available	Upper Explosion Limit	Not Relevant
Melting Point	> 1400°C	Lower Explosion Limit	Not Relevant
Evaporation Rate	Not Available	Autoignition Temperature	Not Available
Bulk Density	750 - 1320 kg/m ³		
Particle Size	100% < 600 µm		

10. STABILITY AND REACTIVITY

Reactivity

Incompatible with oxidising agents (eg hypochlorites), ethanol, acids (eg hydrofluoric acid) and interhalogens (eg chlorine trifluoride).

Decomposition Products

May evolve toxic gases when heated to decomposition.



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11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Slightly corrosive. Avoid eye or skin contact or dust inhalation. This product has the potential to cause acute and chronic health effects with over exposure. Crystalline silica can cause silicosis (lung disease) with chronic over exposure, however due to low levels present and product application, adverse health effects are not anticipated. Crystalline silica is classified as carcinogenic to humans (IARC Group 1).
Eye	Slightly Corrosive. Severe irritant upon contact with powder/dust. Over exposure may result in pain, redness, corneal burns and ulceration with possible permanent damage.
Inhalation	Irritant – slightly corrosive. Over exposure at high levels may result in irritation of the nose and throat with coughing. Prolonged and repeated inhalation of respirable silica may result in pulmonary fibrosis (silicosis). Crystalline quartz is classified as carcinogenic to humans (IARC Group 1).
Skin	Slightly corrosive. Prolonged and repeated contact with powder or wetted form may result in skin rash, dermatitis and sensitisation.
Ingestion	Slightly corrosive. Ingestion may result in burns to the mouth and throat, with vomiting and abdominal pain. Due to product form, ingestion is not considered a likely exposure route.
Toxicity Data	SILICA, CRYSTALLINE – QUARTZ (14808-60-7) Carcinogenicity: Classified as a human carcinogen (IARC Group 1) PHOSPHORUS PENTOXIDE (1314-56-3) LC50 (Inhalation): 61 mg.m ³ /1 hour (guinea pig) SULPHUR TRIOXIDE 97446-11-9) Carcinogenicity: Classified as a human carcinogen (IARC Group 1) MANGANESE OXIDE (1317-35-7) LD50 (Ingestion): 9000 mg/kg (rat)

12. ECOLOGICAL INFORMATION

Environment	Limited ecotoxicity data was available for this product at the time this report was prepared. Ensure appropriate measures are taken to prevent this product from entering the environment.
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13. DISPOSAL CONSIDERATIONS

Waste Disposal	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 for additional information.
Legislation	Dispose of in accordance with relevant local legislation. Keep out of sewer and stormwater drains.

14. TRANSPORT INFORMATION

Transportation	Transportation is by road in bulk. Concrete or steel bins and silos or plastic lined paper sacks are the recommended forms of storage. Store in a cool dry area removed from moisture. Not classified as a dangerous good by the criteria of the ADG Code.
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Shipping Name	None Allocated	Hazchem Code	None Allocated	Pkg Group	None Allocated
UN No	None Allocated	Subsidiary Risk(s)	None Allocated	EPG	None Allocated
DG Class	None Allocated				



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15. REGULATORY INFORMATION

Poison Schedule AICS A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).
All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Additional Information

This product also contains trace levels of mercury, lead, arsenic, cadmium, zinc and copper.

ALUMINO SILICATES: When alumino silicates have been exposed to service temperatures exceeding 982⁰C for prolonged periods, cristobalite, a form of crystalline silica may be formed. Exposure to cristobalite dust may cause pulmonary fibrosis-silicosis. A hazard is only anticipated during demolition of used refractory materials. Cristobalite is classified as carcinogenic to humans (IARC Group 1).

IARC – GROUP 1 – PROVEN HUMAN CARCINOGEN. This product contains an ingredient for which there is sufficient evidence to have been classified by the International Agency for Research into Cancer as a human carcinogen. The use of products known to be human carcinogens should be strictly monitored and controlled.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES: The Recommendation for protective equipment contained within this MSDS 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 an MSDS report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

ABBREVIATIONS:

mg/m³ – Milligrams per cubic metre

ppm – Parts Per Million

ES-TWA – Exposure Standard - Time Weighted Average

CNS – Central Nervous System

NOS – Not Otherwise Specified

pH – relates to hydrogen ion concentration – this value will relate to a scale of 0 – 14, where 0 is highly acidic and 14 is highly alkaline.

CAS# - Chemical Abstract Service Number – used to uniquely identify chemical compounds.

M – Moles per litre, a unit of concentration.

IARC – International Agency for Research on Cancer.

WES-TWA – Workplace Exposure Standard – Time Weighted Average

Report Status

This document has been compiled by Morgan Cement the manufacturer of the product and serves as the manufacturer's Material Safety Data Sheet ("MSDS").



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While Morgan Cement has taken all due care to include accurate and up-to-date information in this MSDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, Morgan Cement accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this MSDS.

Contact Point

For further information on this product contact:

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Advice Note

The information in this document is believed to be accurate. Please check the currency of this MSDS by contacting:

02 4276 4888
or
<http://www.adelaidebrighton.com.au>

The provision of this information should not be construed as a recommendation to use this product in violation of any patent rights or in breach of any statute or regulation. Users are advised to make their own determination as to the suitability of this information in relation to their particular purposes and specific circumstances. Users 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.

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