

BORAL RECYCLING Safety Data Sheet



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1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name **BOTTOM ASH**

Synonym(s) BORAL BOTTOM ASH; FURNACE ASH; FURNACE BOTTOM ASH; ENVIR-O-AGG™

1.2 Uses and uses advised against

Use(s) BUILDING APPLICATIONS; POTTING COMPOUND; LANDFILL; BACKFILL; DRAINAGE AGGREGATE; ROADBASE; FILL PRODUCT; SOILS; SAND (FINE & COARSE)

1.3 Details of the supplier of the safety data sheet

Supplier name **BORAL CONSTRUCTION MATERIALS LTD.**
Address Level 3, 40 Mount Street, Nth Sydney, NSW, 2060, AUSTRALIA
Telephone (02) 9220 6300
Email sds@rmt.com.au
Website www.boral.com.au

1.4 Emergency telephone number(s)

Emergency 1800 555 477 (8am – 5pm WST)
Emergency (A/H) 13 11 26 (Poisons Information Centre)

2. HAZARDS IDENTIFICATION

HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA
NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

2.1 Classification of the substance or mixture

GHS classifications Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2

2.2 Label elements

Signal word **WARNING**

Pictograms



Hazard Statement(s)

H373 May cause damage to organs (lungs) through prolonged or repeated exposure (inhalation).

Prevention Statement(s)

P260 Do not breathe dust.

Response Statement(s)

P314 Get medical advice/attention if you feel unwell.

Storage Statement(s)

None Allocated

Disposal Statement(s)

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

2.3 Other hazards

Not applicable.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS No	Content
SILICA, AMORPHOUS	7631-86-9	50 to 70%
FLY ASH	68131-74-8	Up to 50%
ALUMINIUM OXIDE	1344-28-1	20 to 30%
QUARTZ (CRYSTALLINE SILICA)	14808-60-7	Up to 5%
IRON (III) OXIDE	1309-37-1	Up to 5%
TRACE ELEMENTS	Not Available	Up to 1%

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 Poisons Information Centre (PIC) or a doctor (at once). Due to product form and application, ingestion is considered unlikely.
First aid facilities	Eye wash facilities and safety shower are recommended.

4.2 Most important symptoms and effects, both acute and delayed

Chronic exposure to crystalline silica may result in lung fibrosis (silicosis). Principal symptoms of silicosis are cough and breathlessness. Crystalline silica is classified as carcinogenic to humans (IARC Group 1).

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIREFIGHTING 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.

5.3 Advice for firefighters

Treat as per requirements for surrounding fires. Evacuate area and contact emergency services. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

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 this SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

Product name Bottom Ash

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, keep moist and place in suitable containers for disposal or reapplication. Within enclosed environments clean spill site using wet methods or an approved industrial vacuum device. 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 SDS. The use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating.

7.2 Conditions for safe storage, including any incompatibilities

All stockpiles and dumps should be inspected.

7.3 Specific end use(s)

Not applicable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m3	ppm	mg/mg3
QUARTZ (RESPIRABLE DUST)	SWA (AUS)	--	0.1	--	--
FUMED SILICA (RESPIRABLE DUST)	SWA (AUS)	--	2	--	--
ALUMINIUM OXIDE	SWA (AUS)	--	10	--	--
IRON OXIDE FUME (as Fe)	SWA (AUS)	--	5	--	--

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 Quartz (Crystalline Silica) levels below the recommended exposure standard.

PPE

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Eye / Face

Wear safety glasses or dust-proof goggles when handling material to avoid contact with eyes.

Hand

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

Appearance	WHITE TO GREY SOLID
Odour	ODOURLESS
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT RELEVANT
Melting point	> 1400°C
Evaporation rate	NOT AVAILABLE
pH	ALKALINE
Vapour density	NOT AVAILABLE
Specific gravity	1.8 – 2.4
Solubility (water)	INSOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT EXPLOSIVE
Oxidising properties	NON OXIDISING
Odour threshold	NOT AVAILABLE

9.2 Other information

Density	800 - 1000 kg/m ³ (bulk)
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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

Polymerization will not occur.

10.4 Conditions to avoid

No known conditions to avoid.

10.5 Incompatible materials

Incompatible with strong acids (eg. hydrofluoric acid).

10.6 Hazardous decomposition products

This material is not expected to decompose to form hazardous products.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	No known toxicity data is available for this product. Based on available data, the classification criteria are not met.
Skin	Contact may result in mechanical irritation, redness, rash and dermatitis.
Eye	Contact may result in mechanical irritation, lacrimation and redness.
Sensitization	This product is not known to be a skin or respiratory sensitiser.
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.

Product name	Bottom Ash
Reproductive	Insufficient data available to classify as a reproductive toxin.
STOT – single exposure	Not classified as causing organ effects from single exposure.
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 cough and breathlessness.
Aspiration	This product is not expected to present an aspiration hazard.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

The main component/s of this product are not anticipated to cause any adverse effects to the environment.

12.2 Persistence and degradability

Product is persistent and non-degradable.

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.

12.6 Other adverse effects

Prevent contamination of drains or waterways.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal	Reuse or recycle where possible. Alternatively, ensure product is kept moist to prevent dust generation and dispose of within an approved landfill site. Contact the manufacturer for additional information
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

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

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<u>14.1 UN number</u>	None Allocated	None Allocated	None Allocated
<u>14.2 UN proper shipping name</u>	None Allocated	None Allocated	None Allocated
<u>14.3 Transport hazard classes</u>			
DG class / division	None Allocated	None Allocated	None Allocated
Subsidiary risk(s)	None Allocated	None Allocated	None Allocated
<u>14.4 Packing group</u>	None Allocated	None Allocated	None Allocated
<u>14.5 Environmental hazards</u>	None Allocated		
<u>14.6 Special precautions for user</u>			
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).
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Product name	Bottom Ash
Classifications	Xn; Harmful
Risk phrases	R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Safety phrases	S22: Do not breathe dust. S45: In case of accident or if you feel unwell seek medical advice immediately.
Inventory listing(s)	AUSTRALIA: AICS (Australian Inventory of Chemical Substances) All components are listed on AICS, or exempt.

16. OTHER INFORMATION

Abbreviations	<p>ACGIH - American Conference of Industrial Hygienists. ADG - Australian Dangerous Goods. BEI - Biological Exposure Indice(s). CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds. CNS - Central Nervous System. EC No - European Community Number. IARC - International Agency for Research on Cancer. mg/m3 - Milligrams per Cubic Metre. NOS - Not Otherwise Specified. pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline). ppm - Parts Per Million. RTECS - Registry of Toxic Effects of Chemical Substances. STEL - Short Term Exposure Limit. STOT-RE - Specific target organ toxicity (repeated exposure) STOT-SE - Specific target organ toxicity (single exposure) SWA - Safe Work Australia. TWA - Time Weighted Average.</p>
Report status	<p>This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').</p> <p>The information presented herein is based on data considered to be accurate as of the date of preparation of this SDS. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorisation given or implied to practice any patented invention without a licence. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, without a risk assessment for safe use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the products.</p> <p>This Safety Data Sheet (SDS) applies only to the formulated material as supplied by Boral. It does not apply where the formulation has been altered. In this case a new SDS may be required to reflect the modified material. Contact Boral for further information.</p> <p>Printed documents are uncontrolled. Refer to www.boral.com.au regularly for a more recent copy of the SDS where it exists.</p>
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End of Report