Boral Cement
Material Safety Data Sheet

Product Name **OXIDES**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name	**BORAL CEMENT**
Address	Clunies Ross Street , Prospect , NSW, AUSTRALIA, 2148
Telephone	(02) 9033 4000
Fax	(02) 9033 4055
Emergency	1800 033 111
Web Site	http://www.boral.com.au/cement
Synonym(s)	BEACH • BHPL BLACK • BHPL YELLOW • BLUE CIRCLE SOUTHERN CEMENT OXIDES (FORMERLY) • IOX B 03 • MINOX BLACK B100 • SANDSTONE • SEPIA • TERRACOTTA • TUSCANY
Use(s)	COLOURANT • CONCRETE ADDITIVE • PIGMENT
SDS Date	30 Jul 2010

2. HAZARDS IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN No.	None Allocated	**DG Class**	None Allocated	**Subsidiary Risk(s)**	None Allocated
Packing Group	None Allocated	**Hazchem Code**	None Allocated		

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
C.I. PIGMENT BLACK	Not Available	3171-69-9	<100%
CALCIUM CARBONATE	Ca-C-O3	471-34-1	<100%
IRON (III) OXIDE	Fe2-O3	1309-37-1	<100%
IRON (III) OXIDE HYDRATE	FeOOH	20344-49-4	<100%
IRON OXIDE (MAGNETITE)	Fe3-O4	1317-61-9	<100%
TITANIUM DIOXIDE	Ti-O2	13463-67-7	<100%

4. 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.
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.
Advice to Doctor	Treat symptomatically.
First Aid Facilities	Eye wash facilities should be available.

5. FIRE FIGHTING MEASURES

Flammability Non flammable. May evolve toxic gases/ fumes (iron oxides) when heated to decomposition.

Fire and Explosion Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. 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.

Extinguishing Prevent contamination of drains or waterways.

Hazchem Code None Allocated

6. ACCIDENTAL RELEASE MEASURES

Spillage If spilt, collect and reuse where possible. Use personal protective equipment. Contain spillage, then cover / absorb spill with non-combustible absorbant material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.

7. STORAGE AND HANDLING

Storage Store in a cool, dry, well ventilated area, removed from oxidising agents, acids, carbon monoxide and foodstuffs. Ensure containers are adequately labelled and protected from physical damage when not in use.

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.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Stds

Ingredient	Reference	TWA		STEL	
Calcium carbonate	ASCC (AUS)	--	10 mg/m3	--	--
Iron oxide fume (Fe2O3) (as Fe)	ASCC (AUS)	--	5 mg/m3	--	--
Iron oxide fume (Fe2O3) (as Fe)	ASCC (AUS)	--	5 mg/m3	--	--
Iron oxide fume (as Fe)	ASCC (AUS)	--	5 mg/m3	--	--
Titanium dioxide (a)	ASCC (AUS)	--	10 mg/m3	--	--

Biological Limits No biological limit allocated.

Engineering Controls Avoid inhalation. Use in well ventilated areas. Maintain dust levels below the recommended exposure standard.

PPE Wear dust-proof goggles and PVC or rubber gloves. When using large quantities or where heavy contamination is likely, wear: coveralls. Where an inhalation risk exists, wear: a Class P1 (Particulate) respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	COLOURED POWDER	**Solubility (water)**	INSOLUBLE
Odour	ODOURLESS	**Specific Gravity**	4.0 to 5.0
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	> 1000°C	**Lower Explosion Limit**	NOT RELEVANT
Evaporation Rate	NOT AVAILABLE		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended conditions of storage.
Conditions to Avoid	Avoid heat, sparks, open flames and other ignition sources.
Material to Avoid	Incompatible with oxidising agents (eg. hypochlorites), acids (eg. nitric acid) and carbon monoxide.
Hazardous Decomposition Products	May evolve toxic gases/ fumes (iron oxides) when heated to decomposition.
Hazardous Reactions	Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Low toxicity - low irritant. Use safe work practices to avoid eye or skin contact and inhalation.
Eye	Low irritant. Contact with dust / powder may result in mechanical irritation.
Inhalation	Low irritant. Over exposure may result in irritation of the nose and throat, with coughing. However, under normal conditions of use adverse health effects are not anticipated.
Skin	Low irritant. Prolonged or repeated contact may result in mechanical irritation.
Ingestion	Low toxicity. Ingestion of large quantities may result in nausea, vomiting and gastrointestinal irritation.
Toxicity Data	CALCIUM CARBONATE (471-34-1) LD50 (Ingestion): 6450 mg/kg (rat) IRON (III) OXIDE (1309-37-1) LDLo (Subcutaneous): 30 mg/kg (dog) TITANIUM DIOXIDE (13463-67-7) Carcinogenicity: Possible human carcinogen (IARC Group 2B) TCLo (Inhalation): 250 mg/m3/6 hours (rat)

12. ECOLOGICAL INFORMATION

Environment	The main component/s of this product are not anticipated to cause any adverse effects to plants or animals.

13. DISPOSAL CONSIDERATIONS

Waste Disposal	For small amounts, cover with moist sand or similar, collect and dispose of to an approved landfill site. Avoid generating dust. 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

Shipping Name	None Allocated				
UN No.	None Allocated	**DG Class**	None Allocated	**Subsidiary Risk(s)**	None Allocated
Packing Group	None Allocated	**Hazchem Code**	None Allocated		

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

Additional Information	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. EXPOSURE STANDARDS - TIME WEIGHTED AVERAGE (TWA) or WES (WORKPLACE EXPOSURE STANDARD) (NZ): Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period

and shorten the period of recuperation).

ABBREVIATIONS:
ADB - Air-Dry Basis.
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.
M - moles per litre, a unit of concentration.
mg/m3 - Milligrams per cubic metre.
NOS - Not Otherwise Specified.
NTP - National Toxicology Program.
OSHA - Occupational Safety and Health Administration.
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.
TWA/ES - Time Weighted Average or Exposure Standard.

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 Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this Chem Alert 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.

Report Status

This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT 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 SDS.

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End of Report