



# PREMIUM CEMENT

## PRODUCT DESCRIPTION

Adelaide Brighton Cement produces Premium Cement, Type GB, conforming to Australian Standard AS 3972.

Premium Cement is a blended cement manufactured, to exacting standards, at our Birkenhead Works in Adelaide, South Australia for use in the construction and building industry and in domestic applications.

## SUPPLY

Premium Cement is available in bulk, bulk bags and 20 kg multi-walled paper bags from the Birkenhead Works and the Customer Service Centres in regional areas. Paper bags are palletised and stretch wrapped.

## SPECIFICATION

Premium Cement exceeds the minimum specification for Type GB cement given in AS 3972. Premium Cement is manufactured under a third party certified manufacturing and supply quality assurance system to ISO 9001 (BSI Certification No FS 604665).

Premium Cement is produced from Portland cement clinker, gypsum, ground granulated blast furnace slag complying with AS 3582.2 and may contain up to 7.5% mineral addition.

## APPLICATIONS

Premium Cements is ideal for use in structural concrete, mortars, renders, grouts and cement based products, and can also be used as general binders in areas such as soil stabilisation.

Supplementary cementitious materials:

Premium Cement is compatible with Fly ash, Amorphous Silica, and Ground Granulated Blast Furnace Slag conforming to the relevant sections of AS 3582.

Admixtures for concrete

Premium Cement is compatible with concrete admixtures complying with AS 1478.

Aggressive environments:

Given appropriate sand and stone and sufficient cement content, Premium Cement when placed, compacted and cured correctly is a preferred binder in mildly aggressive environments.

In hostile environments professional advice is essential to ensure all durability requirements are met.

## TYPICAL PROPERTIES

Premium Cement is often used in place of General Purpose Cement (Type GP) when early strength development is not critical. Premium Cement, containing slag, has enhanced workability and may set a little slower than Type GP cement. The ultimate strengths of the two cements are roughly equivalent.

Characteristics of Premium Cement compared to General Purpose Cement

- Slightly higher water demand.
- Improved workability, compactability, flowability and plasticity.
- Marginally slower setting times.
- Slower initial strength development. With good curing strengths after 28 days usually exceed that of Type GP.
- Lower heat of hydration.
- Better resistance to chemical attack (with adequate cement content).
- More sensitive to curing.

## Typical Physical Properties

Test	Premium Cement	AS 3972 Requirement
Fineness Index (m <sup>2</sup> /kg) AS 2350.8		
	390 – 460	
Setting Time (hr:min) AS 2350.4		
Initial	2:30	Min 00:45
Final	3:45	Max 10:00
Soundness (mm) AS 2350.5		
	<1	max 5
Compressive Strength ISO-CEN mortar bars (MPa) AS 2350.11		
3 Day	24	-
7 Day	35	20
28 Day	55	35
Sulphate Expansion (microstrain) – AS2350.14		
16 Weeks	460	750**

Note:

\* When testing the sulfate resistance of cement mortar the difference in sulfate expansion between two tests in the same laboratory, under conditions of repeatability can be up to 150 microstrain. To satisfy the requirements of sulfate resistance no single result may exceed 750 microstrain after 16 weeks.

## Typical Chemical Properties

Test	Units	Max AS 3972	Typical Values
Sulphur Trioxide	%	3.5	3.0
Loss on Ignition	%	-	2.3
Chloride	%	0.1	0.05
Equivalent Alkalies	%	-	0.55
Hexavalent Chromium	mg/kg	-	Trace
Crystalline Silica	%	-	Trace
Components			
Portland Clinker	%	-	57 – 65
Slag	%	-	30 nominal
Gypsum	%	-	5 - 7
Mineral Addition	%	-	up to 7.5



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## HANDLING AND STORAGE

Transportation may be in bulk road or rail tankers or in paper bags. Premium Cement can be stored in concrete or steel silos and bags for up to six months provided protection against ingress of moisture is observed throughout the storage of the product.

## SAFETY INFORMATION

For safety information refer to the Safety Data Sheet for Premium Cement.

## CONTACT POINTS

**For further information contact the Sales and Marketing Department at:**

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