



Off White Cement



Off White Cement provides a full colour range in paving



The use of Off White Cement present in garden features



Achieving the true pastel colours in paving using Off White Cement



Off White Cement

Off White Cement is a specially manufactured Portland cement that has revolutionised the development of architectural concrete. The use of Off White provides many building and construction applications with a wide range of aesthetic and decorative opportunities.

In addition to offering great design flexibility, Off White is a quality product that imparts proven high early strength and performance. Off White Cement complies with the requirements specified in Australian Standard AS3972 for Type HE cement.

Decorative appeal for today's modern designs

- Easy to colour using normal pigments means a wide colour spectrum
- Colour consistency – rich and true pastel colours

This technology means even better performance

- High early strength development and shorter cycle times in pre-cast manufacture
- Good mixing and blending capabilities means reliable strength

Suitable for a wide variety of applications and uses

Off White Cement uses its key features of whiteness and proven high early strength to deliver superior performance in the following uses:

- Architectural colour finishes in buildings, bridges, retaining walls/barriers etc.
- Pre-cast walls, columns, panels and floors
- Pre-cast blocks and pavers
- Coloured mortars and render
- Decorative pavements and terrazzo
- Grout and tiling
- Pool finishes

Create a wide range of aesthetic and design potential with proven high strength and performance.

Caution should be taken when specifying Type HE cements for use in mass concrete elements as peak temperatures and heat generation can be greater than that achieved with either Type GP or GB cements.

Off White Cement Properties

The following table details the relevant specified requirements of AS3972 and the indicative values achieved by Off White.

Property		AS3972 - 2010 Type HE	Indicative Type HE
Setting Time	Min	45min	60-90 min
	Max	10 hrs	2.0 - 2.5 hrs
Soundness	Max	5 mm	< 2mm
SO ₃	Max	3.50%	< 2.8%
ISO Mortar Compressive Strength	3 Day (min)	20 MPa	37-41 MPa
	7 Day (min)	30 MPa	46-51 MPa
	28 Day (min)	–	61-66 MPa

All testing is conducted in accordance with the relevant Australian Standard test methods, at a NATA registered laboratory.

Compatibilities

Off White Cement is compatible with:

- Admixtures that comply with AS 1478 – Chemical Admixtures for Concrete.
- Fly ashes complying with AS 3582.1 – Supplementary Cementitious Materials for Use with Portland cement: Fly ash.
- Ground granulated blast furnace slags complying with AS3582.2 - Supplementary cementitious materials for use with Portland cement: Slag - ground granulated Iron blast-furnace.
- Amorphous silica complying with AS3582.3 - Supplementary cementitious materials for use with Portland cement: Amorphous silica.
- Other cements complying with AS3972 - General Purpose and blended cements.

Note: Off White Cement is compatible with both fly ash and blast furnace slag. However, it should be recognised that their incorporation can slow early strength development.

Caution: Off White Cement must not be mixed with high alumina cement as this may result in uncontrollable expansion and setting times.

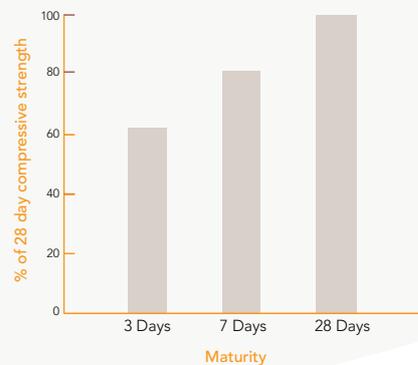
Mix Design

The proportioning of constituent materials in a concrete mix is a complicated matter which can be influenced by many factors. We recommend that trials be conducted with the available materials, to ascertain optimum cement contents for specific classes of concrete. For further guidance on this issue please refer to AS1379 – The specification and manufacture of concrete and AS3600 – Concrete structures.

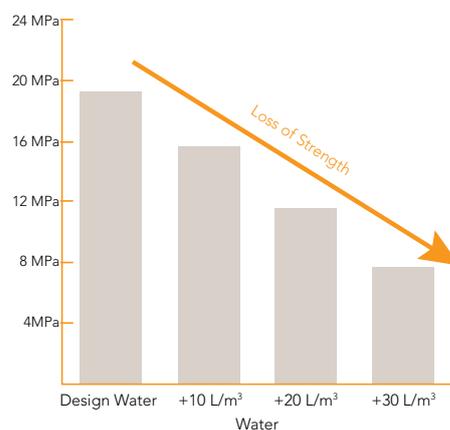
Concrete Properties

Compressive Strength Development

Compressive strength development in Portland cement concrete is affected by a number of factors such as the physical and chemical properties of the cement, water to cement ratio, admixtures, curing and environmental conditions. The following graph depicts the indicative compressive strength development of Off White cement.



Effect of Excess Water Addition on Concrete Compressive Strength



Workability

Concrete produced with off white (Type HE) cements may lose workability at a faster rate than concrete produced with Type GP or GB cements. Therefore consideration must be given to transportation distances, placing methods and ambient conditions.

Mortar/Render Mix Proportions

Off White Cement is suitable for use in brick mortars and wall renders. The following table gives a guide to the proportions (by volume) to be used (Note: This information is a guide only, specific advice for your project should be obtained for the materials you are using.)

Material	Off White HE	Sand	Lime
High Durability Mortar (eg retaining walls)	1	3	0 - 0.25
Maximum Bond Mortar (eg structural brickwork)	1	4.5	0.5
General Purpose Mortar	1	6	1
Wall Render	1	3	0

Additives such as air entrainers, thickening agents or plasticisers can be used but should always be used in accordance with the manufacturers recommendations.

For further information

Please contact Cement Australia's Customer Support Services:

Tel: 1300 236 368

Fax: 1800 236 329

Email: 1300cement@cemaust.com.au

Storage, Handling and Safety

The 'shelf life' of Portland cement products is dependent on the storage conditions. It is suggested that Portland cement products be re-tested prior to use if the age of the cement exceeds three months.

Portland cement products are highly alkaline materials and are significantly affected by exposure to water. Full Safety, Storage, Handling and Disposal information is available in the specific product Material Safety Data Sheet available on www.cemaust.com.au

Product Disclaimer

The information contained in this sheet is for general guidance only and should not be relied upon in specific instances. Cement performance results quoted are indicative as cement performance can be heavily influenced by a wide range of factors beyond our control. Users should rely on professional advice according to their particular circumstances. To the extent permissible by law Cement Australia will not be liable for any losses due to reliance on the information in this sheet or for losses due to the misuse of its products.

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