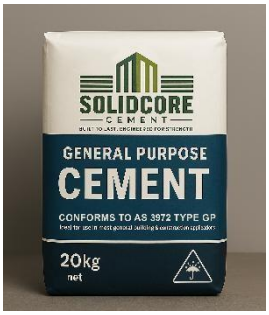
SOLIDCORE CEMENT
BUILT TO LAST. ENGINEERED FOR STRENGTH

PRODUCT DATA SHEET

GENERAL PURPOSE CEMENT



SolidCore General Purpose Cement is a reliable, cost-effective Type GP Portland cement conforming to AS 3972. It delivers consistent setting times and strength development for general construction, including concrete, mortar, render and grout applications. Manufactured under strict quality control (NATA-accredited), it meets or exceeds all Type GP requirements.

FEATURES & BENEFITS

- AS 3972 compliant (Type GP)
- Broad compatibility with most admixtures and supplementary cementitious materials
- Consistent workability and finish
- Suitable for both professional contractors and DIY use

APPLICATIONS

SolidCore GP Cement is suitable for a broad spectrum of uses, including:

- Residential construction projects such as driveways, footpaths, and concrete slabs
- Structural applications including tilt-up walls, columns, and pre-stressed concrete slabs
- Production of pavers, blocks, pipes, and panels
- Mining-related concrete works
- Large-scale civil and infrastructure projects that demand consistent quality and performance
- Formulations used in specialty products like adhesives, renders, mortars, and grouts

PERFORMANCE CHARACTERISTICS

Tested per Australian Standard methods, typical values:

Characteristics	Unit	AS3972 Type GP	Indicative GP
Setting Time	Initial (minutes)	45 min	100 - 140
	Final (hour)	6 max	3 - 5
Soundness	mm	5 max	1 - 3
SO3	%	3.50 max	2 - 3
CL	%	0.1 max	0.03 - 0.08
ISO Mortar Compressive Strength	3 Day (MPa)	--	24 - 28
	7 Day (MPa)	35 min	36 - 40
	28 Day (MPa)	45 min	46 - 50

All tests are performed in accordance with applicable Australian Standard testing methods at laboratories accredited by NATA.

COMPATIBILITY

SolidCore General Purpose Cement can be blended with other cements that meet AS 3972 (covering general purpose and blended cements), or with fly ash that complies with AS 3582.1 (Supplementary Cementitious Materials – Fly Ash). Please note that blending may result in different performance characteristics from those listed in the standard properties. SolidCore GP Cement is also compatible with admixtures that conform to AS 1478.1 (for concrete, mortar, and grout). Admixtures should be used according to the manufacturer's instructions.

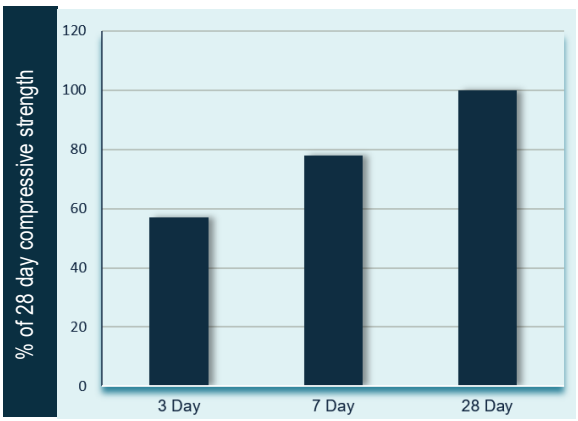
CONCRETE PROPERTIES

Mix constituents

SolidCore General Purpose Cement is suitable for most general concrete applications. For structural concrete works, refer to AS 1379 (Specification and supply of concrete) and consult a professional engineer for severe exposure conditions.

Strength Development

The graph illustrates how compressive strength typically increases over time in concrete made with SolidCore General Purpose Cement. Strength gains are observed at 3, 7, and 28 days under standard curing conditions, with higher compressive strength achieved as curing progresses.



Mix Design

SolidCore GP Cement is suitable for a wide variety of concrete applications. For structural uses, refer to AS 1379 (Specification and Supply of Concrete). Where concrete is exposed to aggressive or severe environments, durability should be reviewed by a qualified engineer.
For general, non-structural use in mild environments, suggested mix ratios by volume are:

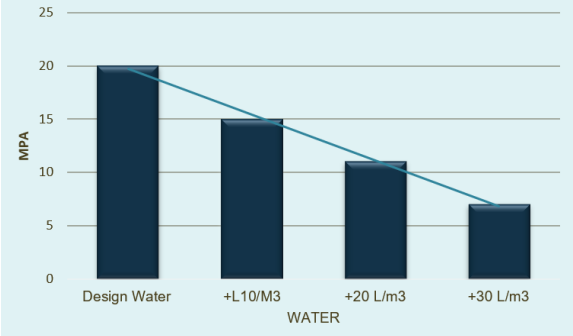
Application	Cement	Sand	Stone (or Gravel)
Foundations and Footings	1	3	5
General Use	1	2.5	4
Higher Strength	1	2	3

Mixing Instructions

When mixing manually, combine all aggregates thoroughly before adding SolidCore cement. Use only enough water to achieve desired workability and strength—do not exceed the minimum water required. If using a concrete mixer, follow the equipment and product manufacturer's directions. For ready-mix concrete, ensure it meets AS 1379.

Effect Of Excess Water

Minimizing water is crucial—adding too much will weaken the concrete and reduce durability and strength. Use only the amount necessary for proper placement and workability.



Additional Factors Influencing Concrete Durability

Several variables affect the performance of concrete, including:

- The selected mix design and use of admixtures
- Ambient temperature and material temperatures
- Air content in the mix
- Compaction method and thoroughness
- Proper curing practices

Placing And Finishing

Concrete must be properly compacted and shaped to achieve a smooth, durable finish. Ensuring enough cover over reinforcement is critical for durability and to prevent corrosion. Refer to AS 3600 (Concrete Structures) for minimum cover requirements.

Curing

To maintain moisture and promote strength gain, freshly placed concrete should be protected from drying out for at least seven days. This can be done by:

- Keeping the surface wet
- Covering with plastic sheeting
- Applying curing compounds in accordance with AS 3799 (Liquid Membrane-Forming Curing Compounds). Note: Avoid plastic sheeting if a uniform surface appearance is required, as it may cause discolouration.

MORTAR AND RENDER PROPERTIES

SolidCore GP Cement is well-suited for mortar and render applications, with different mix designs available to suit varying exposure conditions. The quality of all other ingredients used—such as sand, lime, and additives—plays a key role in determining the final strength and durability of the mix.
Use clean, well-graded sand with minimal silt or clay content. Plasticizers and water-retaining agents can be added to enhance workability but must be used as per manufacturer instructions

to avoid reducing bond strength and compressive performance. Hydrated lime can be included to further improve workability, especially in mortar applications.

Mix Design Recommendations

Below are suggested mix proportions by volume for various applications. These follow the guidelines in AS 3700 (Masonry Structures):

Application	Mortar Class (AS 3700)	Cement	Sand	Lime
General Use	M3	1	6	1
Severe Exposure	M4	1	4.5	0.5
General Rendering (plaster)	N/A	1	4	0.5

CLEAN-UP AND STORAGE

Always rinse tools and equipment with clean water immediately after use. Use vacuum systems or wet methods for cleaning—avoid dry sweeping. SolidCore cement should be stored in a dry, cool place, protected from moisture and off the ground where feasible. Exposure to humidity can initiate hydration and shorten the product's shelf life. It is best to use cement within 12 months of manufacture.

SAFE HANDLING/

This product may contain low levels of respirable crystalline silica and hexavalent chromium. Avoid creating or inhaling dust—use dust extraction systems or work in well-ventilated areas. When sawing or grinding hardened concrete, keep surfaces damp to suppress airborne dust. Always wear suitable personal protective equipment (PPE) to avoid skin and respiratory irritation. This includes:

- Safety goggles
- P2 dust masks or respirators
- Barrier creams and rubber gloves
- Rinse exposed skin immediately if contact occurs. When lifting heavy bags, use correct lifting techniques to avoid injury. If possible, use mechanical assistance or share the load.

Contact Details

MATERIALEDGE GROUP PTY LTD

(SolidCore is a registered brand of MaterialEdge Group Pty Ltd)

ACN: 683 902 847
Address: Level 57, 25 Martin Place, Sydney, NSW, Australia, 2000
Phone: +61 469 037 932
Email: materialedge@materialedgegroup.au
Website: www.materialedgegroup.au