15 April 2025

OUTSTANDING AUSPOZZ™ PERFORMANCE FROM INDEPENDENT CONCRETE TRIALS

Emerging mineral processing technology company Zeotech Limited (ASX: ZEO, "Zeotech" or "the Company") is pleased to announce the results from independent concrete trials using the Company's low embodied carbon AusPozz™ high-reactivity metakaolin ("HRM") product. Independent testing confirms that AusPozz™ delivers significant gains in concrete strength and other performance improvements, alongside the ability to achieve high levels of concrete decarbonisation.

The suite of comprehensive concrete test work has expanded on the proof-of-concept trials undertaken with Holcim (Australia) Pty Ltd ("Holcim")[1]and further validates the outstanding performance advantages that AusPozz™ can deliver in low-carbon concrete mixes.

Zeotech's independent concrete expert has thoroughly evaluated AusPozz™ across a wide range of concrete mix design applications, achieving impressive results.

HIGHLIGHTS

- Results demonstrate that AusPozz™ can replace up to 40% of General Purpose ("GP") Cement and Limestone Type ("GL") Cement[2] binder in concrete and improve product performance.
- Concrete strength gain of approximately 50% achieved with AusPozz™ when used to replace 20% of GL Cement (56-day MPa).
- AusPozz™ enhances concrete performance, enabling a significant reduction in total cement binder, thereby accelerating a lower total embodied carbon for concrete.
- The cementitious binders in concrete are the most expensive components in terms of cost and carbon intensity; therefore, reducing binder use can yield positive economic and environmental outcomes.
- AusPozz™ can significantly reduce concrete shrinkage compared to GP Cement and GL Cement controls, which is a desirable technical and commercial advantage.
- AusPozz™ can replace silica fume in concrete, supporting significant cost reductions and handling improvements.
- When used in optimised designs for large volume concrete applications such as wind farms and deep foundation pilings, AusPozz™ can eliminate the challenging issue of heat differential.

[1] ASX Announcement 12/03/2025 – AusPozz Low-Carbon Concrete Trials Produce Promising Result
[2] GL Cement contains 12 – 14% limestone

Zeotech Limited | ASX: ZEO
ACN 137 984 297
Level 27, Santos Place, 32 Turbot Street, Brisbane QLD 4000
P: +61 7 3181 5523 | E: info@zeotech.com.au

Zeotech, Chief Executive Officer, James Marsh commented:

"These results are extremely exciting as they demonstrate that AusPozz™ can be a game-changer in the race to decarbonise concrete, contributing to sustainability in the built environment.

The test work indicates that AusPozz™ offers a much more significant concrete carbon reduction than expected and a host of potential performance benefits across a wide range of high-volume concrete applications.

Our simple and low-cost process flowsheet will make AusPozz™ a low-carbon, economical product, eliminating the key barriers to market entry and allowing broad customer uptake."

Background

Pozzolanic materials, like AusPozz™, have been utilised in building and construction for their technical benefits for over 2000 years[3]. The recognised performance benefits from using pozzolans in concrete are:

- Elimination of alkali-silica reaction (concrete cancer)
- Increased durability and compressive strength
- Reduced water absorption
- Reduced chloride penetration
- Increased sulphide resistance
- Efflorescence control
- Increased flexural strength
- Increased abrasion resistance

Over thirty years ago, kaolin companies started producing and selling HRM, a manufactured pozzolan, as a performance improvement additive. However, the conventional manufacturing process makes it an expensive and relatively high-carbon product, restricting its use to high-performance concrete applications. HRM is a well-known additive for concrete engineers and is approved for use in Australian concrete standards[4].

Calcined clay (low-reactivity metakaolin) is widely used in concrete globally to reduce embodied carbon, but its effectiveness and potential market are limited by its performance. Zeotech's ultra-high purity Toondoon kaolin feedstock enables AusPozz™ to be specifically designed for:

- Low embodied carbon;
- Economic viability; and
- Maximum reactivity

The natural 80-90% kaolinite content of Toondoon kaolin feedstock and simplified processing give AusPozz™ a competitive advantage with respect to these three key properties and offer tremendous decarbonisation opportunities for the construction industry.

[3] New York Times 2024/10/19 Science - concrete Roman construction
[4] AS3582.4:2022 Supplementary cementitious materials pozzolans manufactured

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Independent Testing Program

Zeotech engaged an independent expert consultancy to evaluate concrete mix designs using AusPozz™, ensuring that it meets or exceeds performance standards and requirements for various customer applications.

The testing program evaluated six core concrete mix designs covering a wide range of targeted industry applications and assessed several properties, including compressive strength, flexural strength, workability, shrinkage, bleed, and temperature differential.

The independent expert performed preparatory admixture benchmarking, including water demand, workability, slump retention, and performance under hydrostatic pressure over a six-month period. This testwork has provided Zeotech with valuable information about the optimal concrete mix designs for using AusPozz™.

Figure 1 – Concrete sample preparation

Testwork Design

The trials focused on a standard 40MPa concrete mix design, which was selected to demonstrate the broad potential market opportunity. The 40MPa concrete mix is also a challenging mix design to reduce the cement content without compromising performance, providing an excellent test case for AusPozz™.

Testwork was undertaken using GP and GL cement types. GP Cement (mixes 1 & 3) is the most used type of cement in Australia due to its versatility; however, GL Cement (mixes 2, 4, 5 & 6) is gaining momentum as a lower-carbon cement option. Importantly, the results from the test work confirm that AusPozz™ performs strongly with both cement types.

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Table 1 shows the results for the 40MPa concrete mix design. This grade represents a significant sector of the construction industry, and the results confirm that AusPozz™ can replace up to 40% of cement while providing significantly higher strength and lower shrinkage.

Table 1 - 40MPa Super Workable Concrete Mix Design

Description	Control	Control	20% AusPozz™	20% AusPozz™	30% AusPozz™	40% AusPozz™
Mix Number	1	2	3	4	5	6
Cement Type	GP	GL	GP	GL	GL	GL
Cement (kg)	400	400	320	320	280	240
AusPozz (kg)	-	-	**80**	**80**	**120**	**160**
W/C Ratio	0.49	0.49	0.49	0.49	0.49	0.49
Unconfined Compression Strength (UCS)						
7 day (MPa)	46.0	44.0	63.0	60.5	36.0	35.0
28 day (MPa)	57.5	52.0	77.8	82.2	66.0	65.5
56 day (MPa)	59.0	53.5	82.5	84.5	73.5	75.0
Shrinkage (Microstrains)						
7 Day Average	284	289	267	280	N/A	N/A
14 Day Average	413	460	412	411	N/A	N/A
21 Day Average	599	576	445	441	N/A	N/A
28 Day Average	865	854	475	472	N/A	N/A
Modulus of Elasticity (AS 1012.17)						
40 Day Average (GPa)	34	N/A	40	N/A	N/A	N/A

Figure 2 - 40MPa Unconfined Compression Strength (MPa)

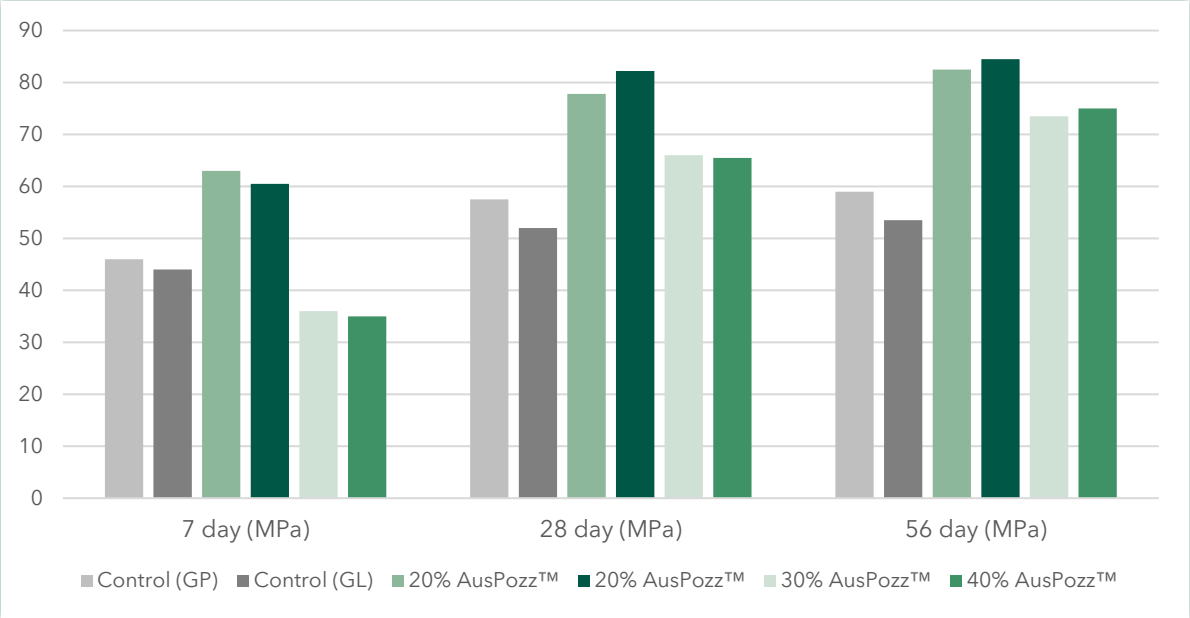

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Figure 3 - 40MPa Shrinkage (Microstrains)

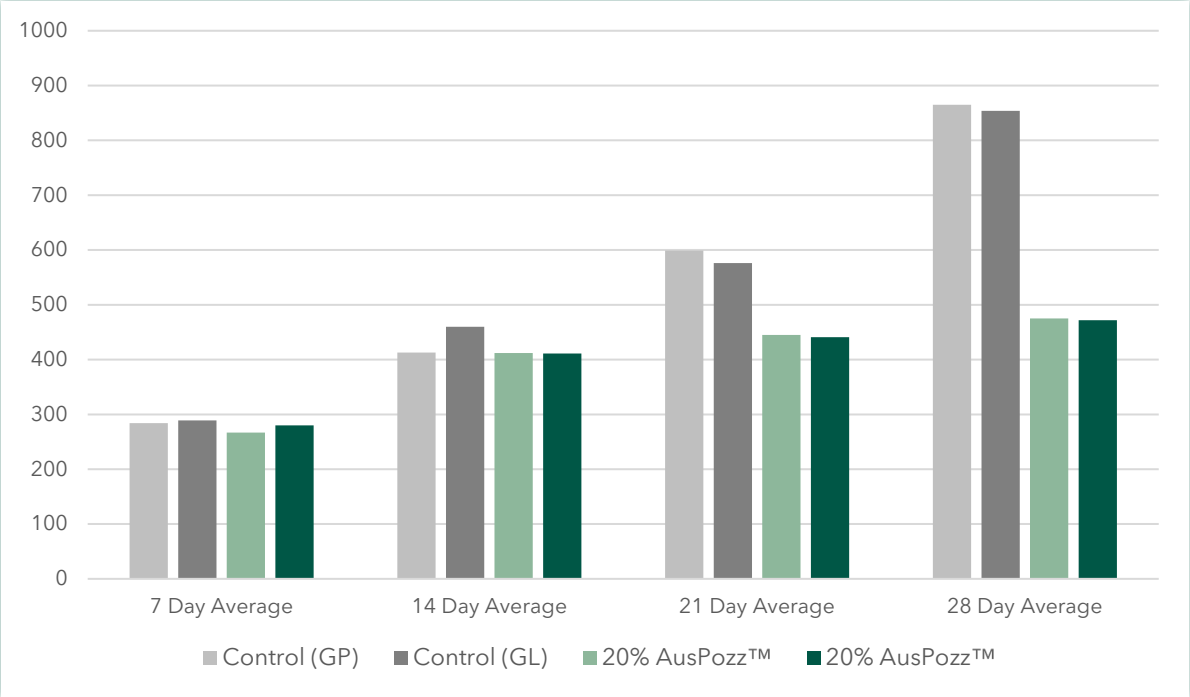


Table 2 shows the results for concrete spray mix (shotcrete), widely used throughout Australia. The water-cement ratio was kept constant in this program to eliminate a variable, and the AusPozz™ concrete workability was maintained with correct admixture selection.

Table 2 – 32 MPa Spray Mix Design Concrete (Silica Fume Replacement)

Description	Control 20kg Silica Fume	20kg AusPozz™	20kg AusPozz™	60kg AusPozz™	60kg AusPozz™
Mix Number	1	2	3	4	5
Cement Type	GP	GP	GL	GP	GL
Cement (kg)	320	320	320	280	280
AusPozz (kg)	-	**20**	**20**	**60**	**60**
Silica Fume (kg)	20	-	-	-	-
W/C Ratio	0.59	0.59	0.59	0.59	0.59
Unconfined Compression Strength (UCS)					
3 day (MPa)	24.0	29.0	26.5	16.0	16.0
7 day (MPa)	32.0	39.0	35.0	28.0	26.5
28 day (MPa)	47.5	53.2	50.8	38.0	42.0

The aim of the shotcrete test work program was to replace silica fume, a costly and challenging additive to use. One-for-one silica fume replacement with AusPozz™ has delivered equivalent and improved strength when combined with GP and GL cement types.

Table 3 – Wind Farm & Large Volume Mix Design Concrete

Description	40% AusPozz™	40% AusPozz™	40% AusPozz™
Trial Type	Lab	Truck	Lab
Mix Number	1	2	3
Cement Type	GP	GP	GP
Cement (kg)	180	180	204
AusPozz (kg)	120	120	136
Total Binder (kg)	300	300	340
Bleed (ml) AS 1012.6	1.7	2.5	0.0
Bleed Under Pressure (ml)	20	20	10
W/C Ratio	0.62	0.62	0.55
Air Content (%)	1.4	1.1	1.6
Ambient Temp (°C)	27	26	24
Concrete Temp (°C)	28	28	26
Unconfined Compression Strength (UCS)			
24hr (MPa)	10.0	>10.0	10.0
3 day (MPa) Hotbox Cure	N/A	19.5	N/A
7 day (MPa)	33.5	31.0	38.0
28 day (MPa)	54.5	N/A	62.0
Shrinkage (Microstrains)			
7 Day Average	376	N/A	358
14 Day Average	436	N/A	420
21 Day Average	456	N/A	448

Table 3 above shows a typical concrete mix design used for large volume pours such as bases for windmills in wind farms. A combination of AusPozz™ and cement was used to achieve the desired physical properties whilst reducing the embodied carbon and eliminating the problem of heat differential.

Temperature Differential

The primary aim of this evaluation was to produce a concrete mix design with a temperature differential between the 'Bottom' and the 'Core' of the Hotbox of less than 30°C. Temperature differentials of this magnitude are a major problem in the industry with large volume pours as they cause cracking and failures. It is a difficult problem to solve and considerably more difficult with the added constraints of decarbonisation.

The use of AusPozz™ in the mix design allows a total solution for these large volume concrete applications, which are commonly used in wind farm construction and deep foundation pilings.

Figure 4 – Hotbox Curing Profile for Large Volume Concrete (^{0}C)

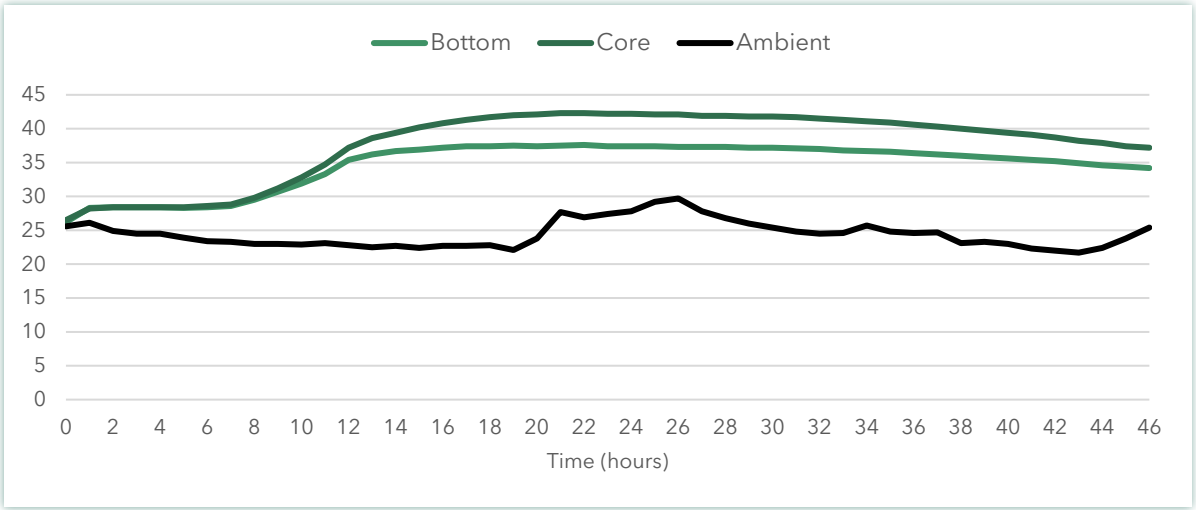
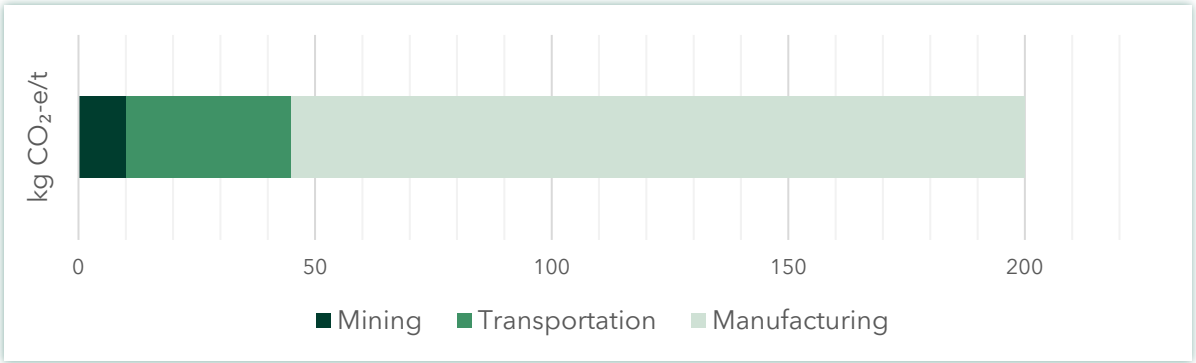


Figure 4 shows an average temperature differential of about 4 - 5°C for this concrete test, noting that the black line is the ambient air temperature. This differential would present no problem in practice and successfully demonstrates that AusPozz™ can be used to give a technical and environmental solution.

Decarbonisation

Approximately 80% of concrete's carbon footprint comes from the cement binder[5]. Therefore, a reduction in the binder significantly impacts the embodied carbon of concrete.

Figure 5 – AusPozz™ Manufacturing kg CO_2-e/tonne



[5] Dept of Climate Change, Energy, the Environment and Water – how to calculate embodied carbon of a concrete mix 01 May 2024

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Zeotech has completed a desktop assessment of the carbon footprint of AusPozz™ based on a proposed AusPozz™ manufacturing facility located at the Port of Bundaberg to support PFS workstreams. This preliminary assessment has determined a carbon footprint of approximately 200kg per tonne of AusPozz™, compared to the Australian average of 951kg per tonne of GP Cement[6], or 79% less embodied carbon. Independent third-party verification of this assessment is currently in progress.

AusPozz™ has demonstrated the ability to replace up to 40% of cement in concrete. In addition, and due to the strength gains achieved, AusPozz™ could reduce the total binder content in concrete, which could further accelerate carbon reduction associated with concrete. At the same time, AusPozz™ is improving the durability and longevity of concrete structures, potentially extending their useful life and providing a significant environmental benefit.

Commercial Progress

Customer testing of AusPozz™ is underway with the following companies:

- AdBri (CRH) – expanded due to successful first round
- Heidelberg Materials Australia
- Nucon Concrete
- Hallet Group
- Omnis Building Technologies USA – geopolymers
- Xatico SARL Luxembourg - geopolymers

A commercial-scale concrete trial using AusPozz™ is scheduled in April. The trial will be attended by a large number of potential customers who represent key segments in Australia's building materials and construction industries.

Approximately 200 tonnes of high-purity Toondoon kaolin feedstock has been delivered to Melbourne in preparation for a commercial-scale production run of AusPozz™, which will be used in live concrete trials.

Expert Consultant

HPSC Services Pty Ltd ("HPSC") conducted all concrete testing to meet Australian Standards at NATA (National Association of Testing Authorities) accredited laboratories

HPSC has over 27 years of experience in the pre-mix concrete industry and fibre-crete production, ranging from delivery, batching, field testing, NATA Laboratory, project coordination, technical management, admixture production and technical sales.

Summary

AusPozz™ offers a high-performance, low-carbon, and cost-effective solution for concrete applications. The Company's natural, high-purity kaolinite feedstock produces a reactive manufactured pozzolan, making it an attractive option for environmentally friendly, durable, and resilient concrete projects.

[6] Life Cycle Strategies – Lifecycle inventory of cement & concrete produced in Australia (2015)

This announcement has been approved by the Zeotech Board.

- End -

For further information, please contact:

James Marsh - Chief Executive Officer
james.marsh@zeotech.com.au
Tel: (+61) 7 3181 5523

Neville Bassett - Company Secretary
info@zeotech.com.au
Tel: (+61) 7 3181 5523

About Zeotech

Zeotech Limited (ASX: ZEO) is a team of dedicated people working together to build a future-focused company, leveraging wholly-owned high-grade kaolin resources to produce high-reactivity metakaolin (HRM) for the low-carbon concrete market and advanced materials for greenhouse gas (GHG) mitigation, such as zeolites for fugitive methane control.

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Whilst ASX remains the prime channel for market-sensitive news, investors and other interested parties are encouraged to follow Zeotech on Twitter (@zeotech10) and LinkedIn.

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This release may contain certain forward-looking statements with respect to matters including but not limited to the financial condition, results of research and development, operations, and business of Zeotech, and certainty of the plans and objectives of Zeotech with respect to these items.

These forward-looking statements are not historical facts but rather are based on Zeotech current expectations, estimates and projections about the industry in which Zeotech operates, and its beliefs and assumptions.

Words such as "anticipates," "expects," "intends," "potential," "plans," "believes," "seeks," "estimates", "guidance," and similar expressions are intended to identify forward-looking statements and should be considered an at-risk statement.

Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the process of developing technology and in the endeavour of building a business around such products and services.

These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and other factors, some of which are beyond Zeotech's control, are difficult to predict, and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements.

Zeotech cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which reflect the view of Zeotech only as of the date of this release.

The forward-looking statements made in this announcement relate only to events as of the date on which the statements are made. Zeotech will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this announcement except as required by law or by any appropriate regulatory authority.

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