

Waterproofing additive available in South African cement and concrete industry

Highlights

- Cement and concrete waterproofing additive product containing PureGRAPH® released to market in South Africa through Glade Chemicals
- PureGRAPH® enhanced additives deliver 48% reduction in water absorption along with 19.2% reduction in rate of oxygen penetration, using a simple dispersion method for clients
- Direct pathway from trials to market for PureGRAPH® reflected in growing commercial interest globally

First Graphene Limited (ASX:FGR; “First Graphene” or “the Company”) is pleased to announce a new waterproofing additive containing PureGRAPH® has been released to the South African cement and concrete market.

Initial orders for graphene enhanced waterproofing additives, containing the Company’s PureGRAPH® product, have been received by South African high performance construction chemicals producer Glade Chemicals Manufacturers CC (“Glade”).

Glade is steadily supplying the graphene enhanced waterproofing additive named KR2-Tech Dry commercially into the South African construction sector following trials conducted in 2024-25.



Figure 1: Pouring of the slab at Bontebok Ridge Reserve in Wellington, South Africa and the slab undercover during curing.

The trials in South Africa – the first conducted in this market as well as in southern Africa – confirmed PureGRAPH® enhanced additives deliver a step-change in the durability performance of ready-mix concrete, reducing secondary (long-term) rate water absorption by more than 17.4% and 48% at 28 and 400 days of curing respectively, compared to the control mixture.

Furthermore, PureGRAPH® enhanced additives reduces the rate of oxygen penetration by 19.2% and 18.6% respectively after 28 and 400 days of curing compared to the control mixture.

First Graphene Managing Director and CEO Michael Bell said:

“The Company’s entrance into the South African construction materials market represents the rising prominence of our PureGRAPH® product and the range of benefits it provides to the global cement and concrete industry.

Initial orders secured by Glade Chemical Manufacturers delivers both a boost to our bottom line and new opportunities to expand our presence into an emerging market.

Awareness of graphene’s ability to batch longer lasting ready-mix concrete by delivering an end product with enhanced waterproofing and barrier properties to protect reinforced concrete structures is growing.

First Graphene is now recouping commercial reward for collaboratively testing a high-quality and high-performing material during trials and converting market opportunities.”

Results indicate clear commercial market entry point

Trial results highlighted how PureGRAPH® additives reduce permeability of conventional ready-mix concrete, illustrating the significant commercial potential for graphene-based solutions in the construction sector.

This positions First Graphene to capture value from new applications in waterproofing and durability enhancement tailored for the construction sector.

The collaborative commercial trial with Glade, Stellenbosch University, AFRIMAT Ltd., Melt Wahl Concrete Services and Kindling Inc. also demonstrated the simple dispersion method required to add PureGRAPH® to ready-mix concrete while still achieving enhanced material performance.

Results from the large-scale trial, which compared control mixture reference concrete against graphene enhanced concrete in a 11m x 11m x 0.1m thick slab, further validated PureGRAPH®’s industry compatibility as well as its capabilities to increase longevity of concrete structures.

Trial data was supplied to interested clients and future partners to showcase commercial applications of the Company’s PureGRAPH® to the cement and concrete industry.

First Graphene’s entry into this new market in South Africa reflects growing commercial interest in the performance benefits of graphene additives globally, and it may also look to introduce Glade’s KR2-Tech Dry additive to the Australian market for interested parties.

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ASX ANNOUNCEMENT

This release has been approved for release by the Chairman.

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About First Graphene Ltd (ASX: FGR)

First Graphene Limited is focused on the development of advanced materials to help industry improve. The Company is a leading supplier of graphitic materials and product formulations with a specific commercial focus on large, high-growth global markets including cement and concrete; composites and plastics; coatings, adhesives, sealants and elastomers (CASE); and energy storage applications.

One of the key outcomes these advanced materials offer is the reduction of carbon dioxide emissions, whether directly through a reduction in output of these harmful greenhouse gases or lower energy usage requirements in manufacturing, or indirectly due to enhanced performance characteristics and extending the usable life of products.

First Graphene has a robust manufacturing platform based on captive and abundant supply of high-purity raw materials, and readily scalable technologies to meet growing market demand. As well as being the world's leading supplier of its own high performance PureGRAPH® graphene product range, the Company works with multiple industry partners around the world as a supplier of graphitic materials and partner to research, develop, test and facilitate the commercial marketing of a wide range of sector-specific chemical solutions.

First Graphene Ltd is publicly listed in Australia (ASX:FGR) and has a primary manufacturing base in Henderson, near Perth, WA. The Company is incorporated in the UK as First Graphene (UK) Ltd where it has a strong R&D capability.