

## Fosroc agreement cements carbon reduction strategy

### HIGHLIGHTS

- **Collaboration agreement signed with Fosroc on graphene technology for cement additive systems**
- **Fosroc is a global manufacturer of high-performance chemicals and materials for the construction industry**
- **Agreement strengthens position to assist cement companies in reducing carbon emissions**

First Graphene Limited (ASX:FGR; "First Graphene" or "the Company") is pleased to advise it has entered into a collaboration agreement with global construction chemicals manufacturer Fosroc International Limited (Fosroc) for the development of PureGRAPH® graphene-enhanced cement additives, or grinding aids.

The agreement is a key step in First Graphene's strategy to help the cement and concrete industries, which are responsible for up to 8 per cent of global carbon dioxide emissions, to achieve 25 per cent emissions reduction by 2030.

As part of its commitment to reducing emissions, the global cement segment is exploring methods to produce cements with lower clinker factor to produce greener cements. Under current production methods, for every tonne of clinker produced, between 0.8 and 0.9 tonnes of CO<sub>2</sub> is emitted.

By adding low dosages of PureGRAPH®-enhanced cement additives to the final grinding phase of cement production, up to 20% lower clinker factor cement production is made possible while maintaining or improving cement performance. The PureGRAPH®-enhanced cement additives will assist cement manufacturers to gain superior strength and improved physical properties, while improving grinding efficiency in the grinding phase of cement production.

The purpose of the five-year collaboration agreement is to facilitate the exchange of knowledge through research and development work. Each party will contribute scientific and industry knowledge at its own cost, with First Graphene providing access to its PureGRAPH® product range, formulation and dispersion process technologies, while Fosroc will take responsibility for additive raw material supplies and formulations, mixing and dispersion, and extensive laboratory trials. There are no other material terms of the agreement or an assessment of economic impact at this stage.

Ultimately, the objective of the collaboration is to jointly develop a range of PureGRAPH®-enhanced cement additives that Fosroc will add to its portfolio of specialty products. These would provide the cement industry with a global solution to reducing carbon dioxide emissions.

As announced to the market in the Company's New Growth Strategy<sup>1</sup>, the global cement and concrete market is of key significance, with a predicted market value of US\$774 billion by 2027<sup>2</sup>.

First Graphene Managing Director and CEO Michael Bell said: *"The agreement with Fosroc is a significant further step for First Graphene as we implement our go-to-market plan to become the world's leading supplier of graphene-enhanced cement and concrete solutions. Fosroc has significant penetration into multiple global markets that will be highly beneficial in helping expand our reach and educating the market on the significant benefits, including emission reductions, that graphene-enhanced products provide."*

Fosroc Head of Technology and Product Management Dr. Martyn Whitehead said: *"Fosroc are excited to be working together with First Graphene to develop the next generation of Cement Additives using Graphene technology with a focus on enhancing the performance characteristics of low clinker factor cements."*

## Investors

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## About First Graphene Ltd (ASX: FGR)

*First Graphene Ltd is the leading supplier of high-performing, graphene products. The company has a robust manufacturing platform based upon captive supply of high-purity raw materials and an established 100 tonne/year graphene production capacity. Commercial applications are now being progressed in composites, elastomers, fire retardancy, construction and energy storage.*

*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 and is a Tier 1 partner at the Graphene Engineering and Innovation Centre (GEIC), Manchester, UK.*

## About Fosroc

*Fosroc is a global manufacturer of specialised construction chemicals with a particular focus on concrete and cement. Fosroc has offices and manufacturing locations across Europe, Africa, the Middle East, India, North, South and East Asia, with distributor representation across many other regions.*

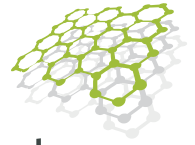
## PureGRAPH® Range of Products

*PureGRAPH® graphene powders and PureGRAPH® AQUA pastes with lateral platelet sizes of 50µm, 20µm, 10µm and 5µm, as well as a range of PureGRAPH® Masterbatch and Admixture products are available in tonnage volumes. The products are high performing additives, characterised by their high quality and ease of use.*

<sup>1</sup> Link to previous ASX Announcement: [First Graphene's New Growth Strategy](#)

<sup>2</sup> Source: 360 Research Reports

# ASX ANNOUNCEMENT



**first graphene**

The world's leading graphene company

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## **Trading Symbols**

**Australia:** FGR

**Frankfurt:** FSE:M11

**USA OTCQB:** FGPHF

*With authority of the board, this announcement has been authorised for release by Aditya Asthana, Chief Financial Officer and Company Secretary.*