



First Graphene Receives Commercial Scale Order for PureGRAPH™ Products

Highlights

- FGR is in receipt of what it believes to be the largest single order for the commercial supply of bulk graphene materials to date, thereby signalling that the commercialisation of graphene has gone beyond a concept to become a reality.
- newGen has placed an order for 2,000 kg of PureGRAPH™ range products to be delivered during 2019, for use in the Armour-GRAPH™ product range
- PureGRAPH™ products from the range of 5, 10 and 20 micron to be drawn down during the 2019 calendar year
- This order confirms First Graphene's status as the world's leading graphene company. There are expectations for an expanding sales book as we go into 2019, from both newGen and other customers and product verticals.

Advanced materials company, First Graphene Limited ("**FGR**" or "**the Company**") (ASX: FGR) is pleased to report that is delivering on its previous guidance whereby it had advised shareholders that it expected to receive commercial scale orders for its graphene products by the end of 2018.

The purchase order for 2,000kg of PureGRAPH™ range products from newGen for delivery during 2019, represents a significant development not only for FGR, but also for the broader graphene market. It demonstrates the initial market appetite for high quality bulk graphene products of the type in which FGR specialises. Up until now the graphene sector has been supplying mostly samples for evaluation. This order represents a step change in the business as it starts to scale up for larger size orders.

Pleasingly, the premium price to be received pursuant to the order debunks the myth that graphene is expensive. The productivity benefits and material performance improvements experienced when PureGRAPH™ is added to materials more than compensate for the cost of the graphene, and it underpins the pricing strategy employed by First Graphene.

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ASX Symbol

FGR
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Background

As previously reported FGR is working closely with newGen Group to provide performance enhancement to their existing products with the addition of PureGRAPH™ graphene products. newGen Group has recently introduced a branded Armour-GRAPH™ product range of wear liners for bucket wheel, pipe spools and conveyor applications.

In a recent development, the Company was pleased to confirm further progress in its R&D collaboration with newGen Group. newGen is supplying a wear lining system for dryer chute applications to a large Australian cement producer in their Perth facility. It is a leading supplier of cement and lime to the Western Australia's mining, agriculture and construction industries.

Each 50m² liner will contain 10 to 12kg of PureGRAPH™ and is a further significant step in the adoption of First Graphene products into large industrial applications. PureGRAPH™ has been demonstrated to provide up to 37% improved tensile strength and improve abrasion resistance by 100% to 500% in high performance polyurethanes.

newGen has now issued a purchase order for 2,000kg (2 tonnes) of PureGRAPH™ to be drawn down as it wins tenders during 2019. There is one final regulatory approval required before the first sale is effected, being the registration of graphene by the National Industrial Chemicals Notification and Assessment Scheme (NICNAS) in Australia. Similarly, the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) needs to be completed for sales in the European Union. These registration processes are currently underway and they are not expected to provide any meaningful delays.

The National Industrial Chemicals Notification and Assessment Scheme (NICNAS) registration process is required for all chemicals used in industry in Australia.

Within the European Union REACH registration is required if an organisation plans to sell greater than one tonne of a chemical within the EU or United Kingdom. First Graphene Ltd has already joined the consortium which is registering graphene as a new chemical. The consortium consists of three graphene organisations, one from China, one from Canada and one European producer.

Managing Director, Craig McGuckin, stated: *"We said that we were the world's leading graphene company, and we are now proving it with this sales order – the start of many. We do not believe there is another company which could deliver both the volume and the consistent quality this order requires. We are now entering an exciting growth phase as industries all around the world are starting to look at ways in which they can use graphene to improve their products and lower their operating costs".*

newGen Managing Director, Ben Walker stated: *"My Company has had considerable interest generated for our new Armour-GRAPH™ range since we started developing PureGRAPH enhanced products with First Graphene. The graphene enhanced resin was added seamlessly into our mixing procedure. It is not labour intensive or complicated with regard to our standard operating practices."*

About First Graphene Ltd (ASX: FGR)

First Graphene produces high quality graphene from high grade Sri Lankan vein graphite.

First Graphene seeks to develop graphene production methods and acquire graphene related intellectual property which can provide further revenue related opportunities.

About Graphene

Graphene, the well-publicised and now famous two-dimensional carbon allotrope, is as versatile a material as any discovered on Earth. Its amazing properties as the lightest and strongest material, compared with its ability to conduct heat and electricity better than anything else, means it can be integrated into a huge number of applications. Initially this will mean graphene is used to help improve the performance and efficiency of current materials and substances, but in the future, it will also be developed in conjunction with other two-dimensional (2D) crystals to create some even more amazing compounds to suit an even wider range of applications.

One area of research which is being very highly studied is energy storage. Currently, scientists are working on enhancing the capabilities of lithium ion batteries (by incorporating graphene as an anode) to offer much higher storage capacities with much better longevity and charge rate. Also, graphene is being studied and developed to be used in the manufacture of supercapacitors which can be charged very quickly, yet also be able to store a large amount of electricity.

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