

# **FGR secures Pacific Urethanes production order for mining fire-retardant application**

## **Highlights**

- **First production order secured from Pacific Urethanes for PureGRAPH® use in polyurethane systems targeting the mining industry**
- **New customer and new commercial application for PureGRAPH® as a fire-retardancy performance enhancer**
- **Initial applications targeting the Australian mining and resources sector**
- **Addresses a recognised polyurethane performance challenge by targeting improved fire retardancy while maintaining durability and wear performance**
- **Creates a pathway for PureGRAPH® into an established and growing global mining materials market**

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First Graphene Limited (ASX: FGR, FRA: M11 and OTCQB: FGPHF) (“First Graphene” or “the Company”) is pleased to announce its first production purchase order from Australian polyurethane manufacturer Pacific Urethanes Pty Ltd (“Pacific Urethanes”) for PureGRAPH®.

The order represents a new commercial customer and new application for PureGRAPH®, with the material being incorporated into polyurethane formulations to enhance fire-retardant performance for applications targeting the Australian mining and resources sector.

The production order follows successful development work and represents the progression of the application into commercial manufacture.

### **First Graphene Managing Director and CEO, Michael Bell, said:**

*“Securing our first production order from Pacific Urethanes represents an important commercial milestone, introducing a new customer and a new application for PureGRAPH®.*

*PureGRAPH® provides an opportunity to enhance fire retardancy while retaining the properties that make polyurethane highly valuable to the mining industry.*

*The commercial opportunity is significant. The global urethane mining products market is estimated at approximately US\$2.6 billion annually and forecast to approach US\$3.8 billion by 2032.*

*Importantly, we’re enhancing an established material extensively used across the mining industry and addressing a recognised performance requirement.*

*This provides a pathway for the technology to be applied across a broad range of polyurethane mining applications and exemplifies our strategy of converting PureGRAPH® into commercial applications with potential to generate ongoing demand.*

*We're delighted to be working with Pacific Urethanes and look forward to supporting the commercial rollout of PureGRAPH®-enhanced polyurethane to the Australian mining industry."*

### **PureGRAPH® enhanced polyurethane for mining**

Pacific Urethanes is an Australian-owned manufacturer and developer of high-performance polyurethane systems servicing mining, resources, infrastructure and other industrial markets.

Polyurethane is used extensively throughout mining and mineral processing because of its combination of abrasion resistance, toughness, flexibility and impact performance.

Applications include screening media, wear liners, slurry systems, conveyor components, pumps and piping, chute and hopper liners, seals and protective coatings.

While these properties make polyurethane particularly valuable in harsh mining environments, fire performance can be a limitation, particularly in underground applications where fire, smoke and potentially hazardous gases present heightened safety risks.

PureGRAPH® is being incorporated into Pacific Urethanes' polyurethane formulations to enhance this important performance characteristic.

Graphene's highly planar structure can provide a barrier effect within the polymer matrix, restricting heat and decomposition-product transfer and supporting the formation of a more protective char layer during exposure to fire.

Published research into graphene-enhanced polyurethane systems has demonstrated improvements in measures including heat release, thermal degradation and smoke generation.

This provides an opportunity to enhance polyurethane's fire-retardant performance while maintaining the wear and mechanical characteristics that have driven its widespread adoption throughout the mining industry.

### **Significant global mining market**

The global urethane mining products market is estimated at approximately US\$2.6 billion annually and forecast to reach approximately US\$3.8 billion by 2032<sup>1</sup>.

The market encompasses polyurethane and urethane products used across mineral screening, slurry handling, pumps and piping, transfer points, liners and other high-wear mining applications.

Pacific Urethanes' initial focus is the Australian mining sector; however, the requirement for materials combining wear resistance, durability and enhanced fire performance extends globally.

For First Graphene, while this initial production order is not financially material, it creates a commercial pathway into an established materials market by enhancing a product already extensively used throughout mining, rather than requiring customers to adopt an entirely new material system.

It also expands PureGRAPH® into a new commercial performance application – fire-retardancy enhancement – with potential relevance to other polyurethane applications where improved fire performance is required.

**-Ends-**

**This announcement has been approved 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.*

### References

<sup>1</sup> [360iResearch, Urethane Mining Products Market – Global Forecast 2026–2032](#)