



Australian Securities Exchange
Company Announcements Office

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MUNGLINUP EXPANDABLE GRAPHITE TESTWORK RESULTS POSITIVE

- *Excellent expansion volumes of 400 mL/g for coarse (+300 micron) flakes*
- *Expansion volumes of 305 mL/g for medium (+180 to -300 micron) flakes*
- *Finer flakes also show good expandable characteristics*
- *Munglinup graphite shown to be suitable for a broad range of expandable graphite markets, including high-end graphite foil*
- *Concept study on expandables plant to commence*

Mineral Commodities Ltd (ASX: MRC) ("the Company" or "MRC") is pleased to announce the results of its Expandable Graphite testing on Munglinup Graphite Concentrate by Dorfner ANZAPLAN in Germany.

Using conventional chemical treatment at room temperature for short durations produced the expansion volumes¹ below on thermal treatment:

Flake Size (microns)	Expansion Volume (mL/g) at 800°C	Expansion Volume (mL/g) at 1000°C
> 300	400	400
180-300	240	240
106-180	190	190
75-106	140	150
<75	100	120

Using an ancillary intercalation agent further increased the expansion volumes of the minus 300 micron flakes:

Flake Size (microns)	Expansion Volume (mL/g) at 800°C	Expansion Volume (mL/g) at 1000°C
180-300	290	305
106-180	205	240
75-106	145	160
<75	100	115

¹ Expansion volume calculated as volume of expanded graphite divided by mass of dried, intercalated (chemically treated) graphite. Expansion volumes calculated in terms of post thermal expansion mass will be higher, due to the release of gases from the intercalation agent and some volatilisation of the graphite.

Expansion started at 180°C to 250°C – within the typical range for standard expandable graphite products.

The results show that Munглинup concentrate is expandable across a broad range of flake sizes. A standard grade expandable graphite typically has an expansion volume of 250ml/g, with a range of grades with expansion volumes from sub 100ml/g up to 400ml/g, defining the end-market.



Figure 2 – SEM micrograph of expanded +180 micron/-300 micron graphite

High expansion volumes of 400mL/g are not easy to achieve, making the coarse flake material suitable for high-end uses such as graphite foil. Based on industry requirements, MRC will also be able to supply expandable graphite for insulation foam, fire retardants and gasket markets using the lower expansion volume flakes.

In addition, analysis of the concentrate confirmed an average TGC grade of 97.4%. Scanning electron microscopy (SEM) shows that impurities are surface alumino-silicates as well as some relatively free quartz. Consequently, there is potential to further upgrade the quality of the concentrate through optimization of the flotation circuit.

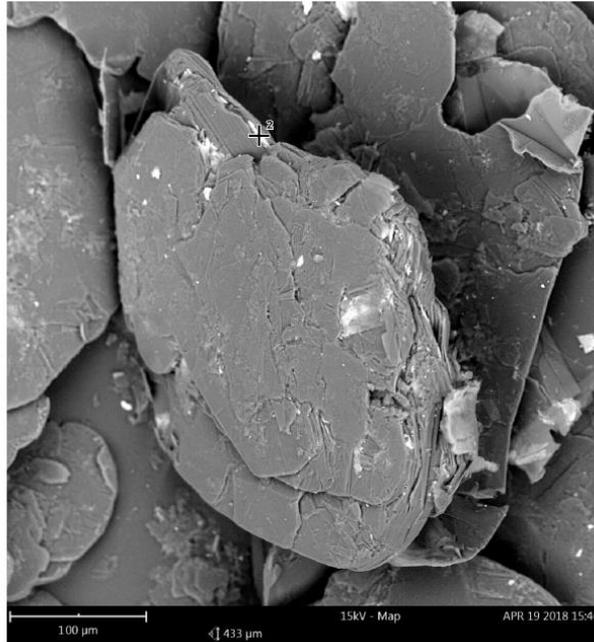


Figure 2 – SEM micrograph with energy dispersive X-ray (EDX) analysis with back-scatter detection (BSD) – impurity minerals appear bright.

Given the positive testwork results MRC's subsidiary MRC Graphite Pty Ltd ("MRCG") will conduct a concept study on the development of an expandable graphite plant. Results from the study will be released as it progresses.

MRC's Executive Chairman Mark Caruso commented "*These results validate our approach to look at a range of markets for Munglinup graphite concentrate and the associated value-adding opportunities.*

Our development work on expandable graphite, graphene and soon to commence battery anode materials studies, together with variability testing and optimisation of the Munglinup flowsheet, will provide the foundation for developing the Munglinup project as a secure, low risk, high quality supplier of graphite and related materials – a project that is not solely reliant on a single market. "

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