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Manganese Sulphate Special Report Offering Document

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The report is split into two sections: section 1 covers the market for high-purity manganese sulphate monohydrate (HPMSM), while section 2 covers the agricultural grade manganese sulphate market.

Section 1 – high-purity manganese sulphate monohydrate (HPMSM)

○ Overview and Intro to Manganese Sulphate	- Major applications, value chain and key processing routes (battery grade)
○ Battery applications for manganese and BG MnSO₄	- Manganese metal intensities for key battery technologies - Overview of electric vehicle and battery demand (2025-2035) - Overview of demand for manganese containing cathodes (2025-2035) - Development trends for battery cathode types - Global HPMSM demand by end-use (2025-2031) - Regional analysis of pCAM production, and where HPMSM use is concentrated (2025-2031)
○ HPMSM supply and market balance	- Overview of key HPMSM suppliers, and key Chinese producers (2025) - Market balance analysis from committed production and potential supply from uncommitted projects (2023-2031) - Analysis of probable projects that may fill potential supply gap - Analysis of key risks to project pipeline
○ HPMSM price outlook	- FOB China price and delivered prices (Europe and USA) to 2031 - USA Greenfield incentive price (2031) - Europe Greenfield and Brownfield incentive prices (2031)

Section 2 – agricultural grade manganese sulphate (AG MnSO₄)

○ Demand for AG MnSO₄	- Overview of manganese sulphate in agricultural - Demand for AG MnSO ₄ by major region and major end use
○ AG MnSO₄ supply and market balance	- Supply by major region (2025-2030) - Market balance (2025-2031)
○ AG MnSO₄ price	- China FOB price for AG MnSO ₄ (2025-2031)

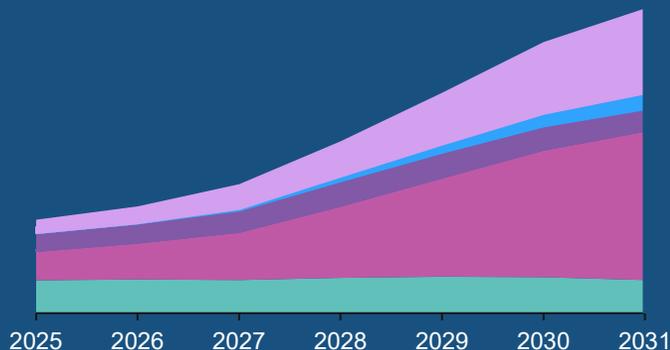
Key takeaways

This report offers a comprehensive understanding of the manganese sulphate market, including both battery grade (HPMSM specifically) and agricultural grade manganese sulphate. The report covers supply, demand and prices both end uses of manganese sulphate, with a particular focus on the battery market, as this is the most rapidly growing end-use for manganese sulphate (or high-purity manganese sulphate monohydrate – HPMSM). Our evaluation of HPMSM in battery production includes analysis of trends in the electric vehicle (EV) and energy storage markets, manganese intensity in batteries, and battery cathode adoption trends, all of which have a significant impact on manganese sulphate demand.

Demand for HPMSM will rise significantly over the next decade

CRU estimates that demand for HPMSM will grow more than 600 kt between 2025 and 2031. Overall demand growth is driven by battery demand in e-Transportation, which will account for more than 70% of battery demand in 2030, and absolute growth of manganese-containing batteries.

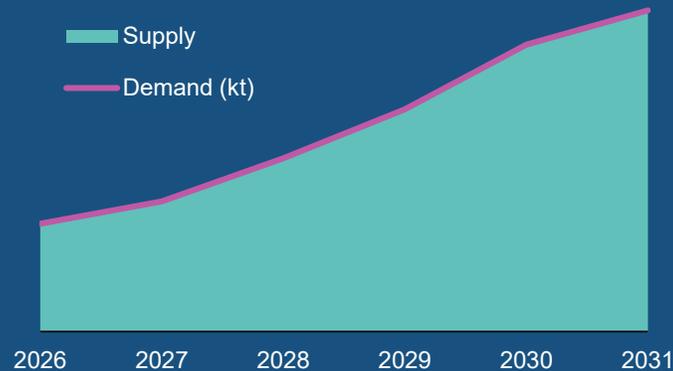
Global HPMSM demand by cathode type, kt



Supply will be sufficient to meet demand in the medium-term

CRU forecasts that rising demand can be met by both current Chinese supply and any existing and/or committed ex.China supply in the medium-term. Therefore, insufficient supply will not be the primary motivator of new ex.China supply.

HPMSM market balance, kt



China HPMSM prices will rise in the medium-term as utilization increases

Prices will rise considerably between 2025 and 2031, as demand growth accelerates and utilization rates in China increase from a low base. Increasing energy, labour and reagent cost will also contribute to rising prices.

New ex.China production is likely achievable only with support from targeted policy or tariffs

Chinese producers are able to supply Western buyers at low delivered prices due to structurally lower costs, and more variable product quality.

New ex-China capacity typically sits higher on the cost curve, so it becomes viable only when prices rise sufficiently above China delivered prices. This can come from low-emissions and quality/consistency premiums, ESG/traceability requirements, and/or targeted tariffs and policy support. However, barriers to entry remain high.



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