The Manager Companies - ASX Limited
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ASX Announcement
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(7 pages)

# PRODUCT MARKETING UPDATE

## HIGHLIGHTS

### UPDATED LOI VOLUME NOW >12,000 TONNES

- **4 new Letters of Intent received for:**
  - **2 x further LOI's for HPA for thermal fillers in semiconductor encapsulation**
  - **High purity alumina hydrates for specialty catalysts, and;**
  - **High purity aluminium products for the LiB battery sector**

### SEMICONDUCTOR SECTOR MARKETING

- **Rapidly expanding AI/semiconductor sector continues to positively impact HPA material demand**
- **Continued US, Japan and South Korean focus for end-user marketing**
- **Thermal filler demand continues to build based on Alpha's unique capability to deliver:**
  - ***Ultra-high purity (+99.995%) with <1ppb Uranium and Thorium***
  - ***A bespoke range of alpha and gamma phase aluminas and alumina hydrates***
- **Chemical Mechanical Polishing (CMP) sector engagement advances:**
  - **Commercial supply terms accepted for Al-Nitrate use in CMP**
  - **Building demand, and first commercial orders for HPA nano slurry**
  - **Increasing HPA adoption for 'hard to polish' semiconductor substrates, particularly within High Bandwidth Memory (HBM) chips used for AI**
  - **Geopolitical supply chains de-risking**
- **Tier #1 equipment manufacturers confirm increasing adoption of higher purity alumina in semiconductor equipment components**
  - **Fine ceramics: Alumina tools and components**
  - **Thermal Spray Coating: Semiconductor etch chamber linings**

### PRODUCT DEMAND MODEL EXCEEDS 50,000 TONNES

- **Alpha has updated its internal market demand model based on refreshed end-user engagement and industry interviews.**
  - **Demand model is for Alpha's HPA and High Purity ATH only**
  - **Forecast demand model exceed 50,000 tonnes per annum by 2030**

The Board of Alpha HPA Limited (**Alpha** or **the Company**) is pleased to provide an update on product marketing activities for the **HPA First Project**, representing the commercialisation of the Company's proprietary, exclusively licensed solvent extraction and HPA refining technology and production of critical high purity aluminium products into high technology markets. Alpha's ultra-high purity product capability includes:

- High purity aluminas (**HPA**),
- High purity alumina hydroxides (**ATH**)
- High purity aluminium nitrate precursors (**Al-Nitrate**), and;
- High purity synthetic sapphire glass

Alpha is in continuous production at its HPA First Project Stage 1, Precursor Production Facility (**Stage 1**) across the Company's full range of high purity aluminium materials and in construction of the full commercial scale **Stage 2** of the HPA First Project. Stage 2 of the HPA First Project will be the world's largest, single site facility for the manufacture of high purity aluminium materials.

# UPDATED LOI VOLUME NOW >12,000 TONNES

As product marketing, testing and multi-year product qualification continues to mature, Alpha has been completing a range of non-binding Letters of Intent (LOI's) to reserve Stage 2 capacity for selected end-users.

Within the last month, Alpha has received a further four end-user LOI's including:

- For up to 300 metric tonnes pa of HPA products from SK based end-user, for the production of a discrete spherical alumina filler product for a dedicated Tier #1 South Korean based semiconductor manufacturer
- An initial 24 metric tonnes pa of HPA products from a new Japan based manufacturer of spherical alumina thermal fillers for semiconductors
- For up to 180 metric tonnes pa for the Company's high purity ATH from a global, specialty materials end-user, across a range of catalyst applications
- For up to 5,000 metric tonnes pa of the Company's high purity aluminium products to the Lithium-ion battery sector

**These LOIs take the aggregate total product volumes received under non-binding LOI to up to approximately 12,350 tonnes per annum.**

# SEMICONDUCTOR SECTOR MARKETING

Product marketing has continued to validate the continued **rapid expansion of the adoption of high-purity alumina materials with the semiconductor supply chain**. Product demand is directly linked to the hyper-scale capital expenditure build-out of AI data centres, and the attendant demand for high bandwidth memory (HBM) and AI processors/GPU's/CPU's – **Refer Appendix 1**.

The Company's agents and sales team are responding with extensive in-person visits and engagements including Germany, US, Japan and South Korea, together with representation at multiple trade shows.

## Chemical Mechanical Polishing (CMP)

Marketing to the CMP sector continues to expand in parallel with the Company's development of its HPA nano-slurry, which has now reached it final generation of development. Alpha is also actively marking its ultra-high purity Al-Nitrate product, which is an additive chemical in a number of existing and next-generation CMP slurries.

Alpha has been engaging with each of the global major CMP slurry manufacturers and is at varied range of engagement, from early sampling stage through to advanced qualification.

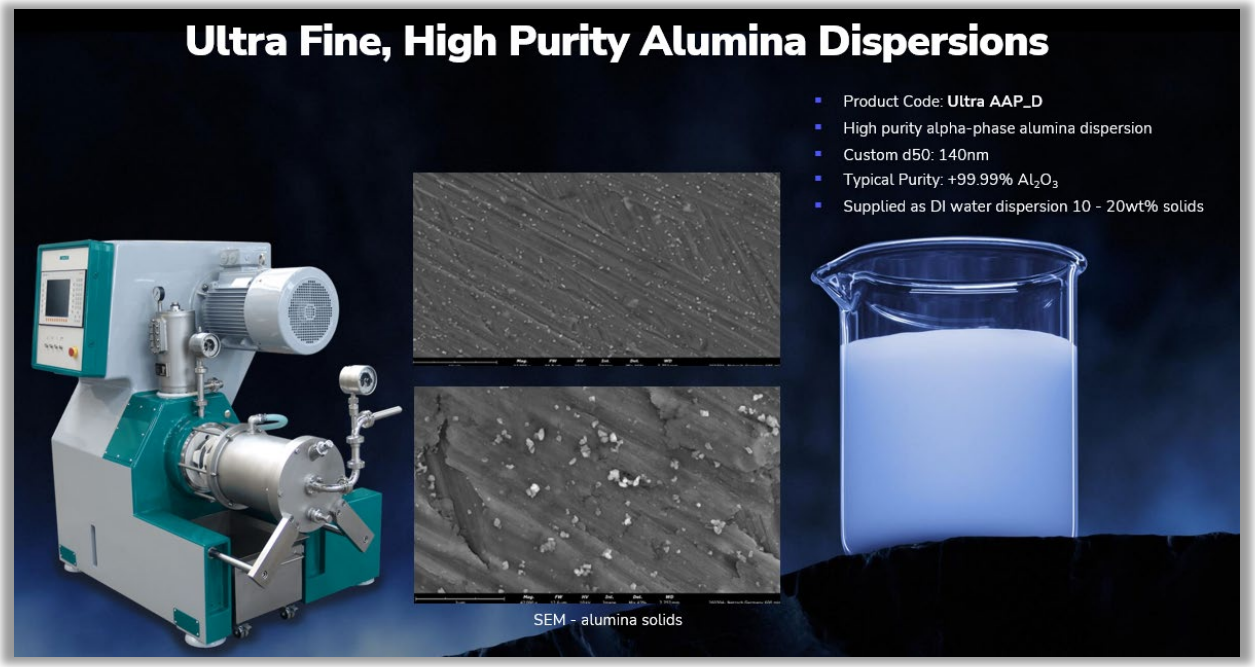
Activity growth is based on the Company's capability to offer:

- A 4N5 (+99.995%) purity alpha-phase alumina particle with novel crystallinity, as a nano sized dispersion (slurry). This product has proven to deliver dramatic out-performance, particularly in removal rate, when used as a CMP abrasive and applied to a number of 'hard to polish' and 'slow to polish' substrates, including:
    - Hard carbon mask layers; widely used in the manufacture of HBM and Dynamic Random Access Memory (DRAM) semiconductors;
    - Layers within the semiconductor production process including:
        - Alumina dielectric layers
        - Tungsten and copper layers
- An ultra-pure, 5N (+99.999%) Al-Nitrate product, produced at commercial volumes.

Alpha is now in the final stages of installation of the first nano-milling unit into the Stage 1 facility, with the expectation of completion of commissioning in June. Alpha will then hold 100% in-house production capability for the nano-alumina dispersion material (see below)

Recent highlight marketing highlights to the CMP sector includes:

- Acceptance of commercial terms for the supply of Al-Nitrate to a Tier #1 CMP slurry formulator based in the US. Alpha expects commercial supply commence in late CY2026.
- Visits to all major US based end-users
- First commercial orders for the +4N5 purity nano slurry received from an EU based end user, with supply to commence this month
- Final generation of HPA nano slurries distributed to 7 separate end-users within the last month
- Confirmation from a range of US based end-users that they have a renewed focus on shifting materials supply to geographically secure jurisdictions




*Alpha's nano alumina mill (LHS), and SEM images of Alpha's high purity alumina dispersion for the CMP sector*

## Thermal Fillers and Thermal Interface Materials (TIM)

The Company continues to observe exciting growth in end-user testing and qualification of both high purity aluminas and high purity ATH, aligned with the adoption of high purity alumina for spherical thermal fillers, which is increasingly used in the packaging of advanced node semiconductors.

Activity growth is based on the Company's novel capability to offer:

- **Ultra-high purity alumina materials**, combined with;
- **Zero-alpha radiation emission materials** now considered critical for use within advanced node semiconductor manufacturing, processing and high-density packaging. The Company delivers this specification with the ability to deliver **<1ppb Uranium and Thorium impurities.**
- **Bespoke product range to match end-user requirements,** including alpha and gamma phase HPA and alumina hydrates

Recent marketing highlights to the thermal fillers and TIM sectors includes:

- Ongoing sales from the Stage 1 facility to existing Japanese and SK based customers
- Visits to all major existing Japan and SK based customers
- As described above, 2 new LOI's for up to 324 metric tonnes pa of HPA products from a Japanese and South Korean based end-users
- Commencement of testwork with a leading SK based thermal filler manufacturer, with a view to reach rapid qualification and support their recent capital investment to supply an initial 1,200 metric tonnes pa of low, alpha, high-purity alumina fillers to the semiconductor packaging sector
- Confirmation of new demand points from two major Japanese thermal filler manufacturers. Testwork with these counterparties is expected to commence during June
- Commencement of testwork to supply fine powder fillers to a global leading manufacturer of thermal pastes, used for the HBM stack within AI accelerator chiplets. Although early, demand for this application is strongly suggestive that high purity, 'low alpha' demand is rapidly expanding is usage within the AI/GPU environment.

## Semiconductor Ceramics

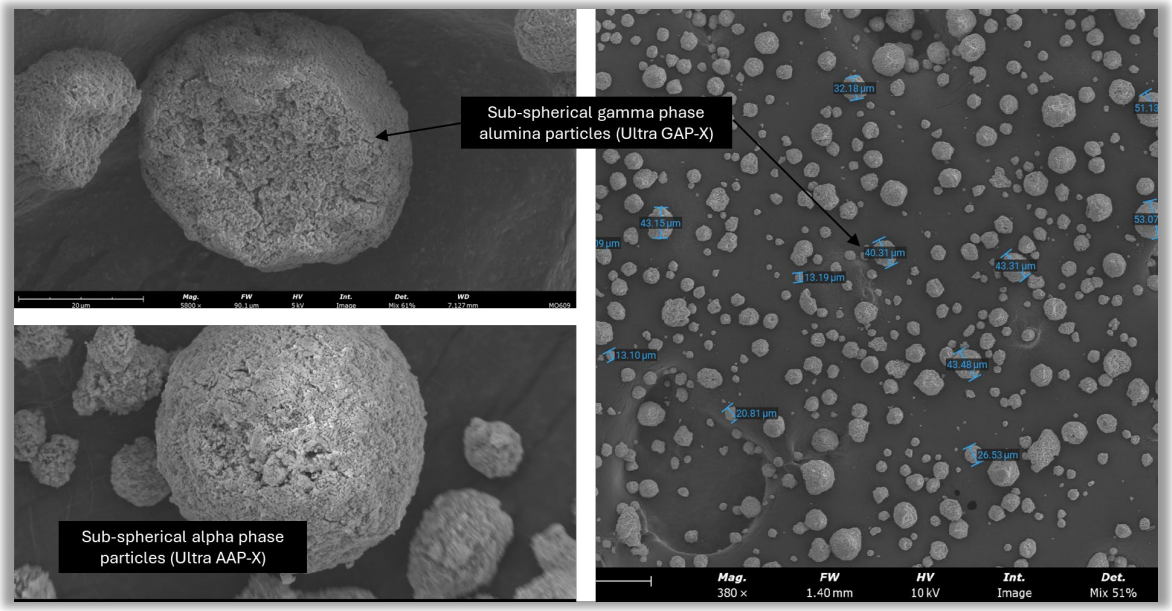
Alpha continues to steadily expand it marketing activities within the semiconductor ceramics sector. The use of alumina ceramics within the specialist manufacturing equipment is well established, with an increasing trend toward the use of higher purity aluminas (4N+) for the manufacture of advanced node semiconductors, which are increasingly sensitive to impurities during manufacture.

The dominant applications include:

- HPA for ceramic tool components, including electrostatic chucks, hold down rings and lifting arms
- The use of alumina thermal spray coating within semiconductor etch and lithography chambers

Activity growth in this sector is based on the Company's capabilities for:

- The recently developed, high purity (+4N5), high-sintering alpha-phase alumina powder, optimised for ceramic tooling,
- The ability to deliver rounded-shape, tightly controlled alumina powders required for thermal spray (see SEM image below)




*SEM images of Alpha's rounded-shape, tightly controlled alumina powders for thermal spray.*

Recent marketing developments in the sector include:

- Attendance at the Ceramitec 2026 trade show (Germany) and the Thermal Management and Ceramics Expos (US)
- Commencement of multiple qualification pathways with semiconductor ceramics manufacturers in Taiwan and the EU
- Site visits to more advanced end-user sites in SK
- Second round testwork commenced with thermal spray end-users in Japan and SK
- Multiple visits with Tier #1 semiconductor equipment manufacturers in the US, to confirm specifications for adoption of higher purity aluminas, particularly ceramic hardware for semiconductor etch equipment.

## LITHIUM-ION BATTERY SECTOR

Following a multi-year cycle of product qualification and testwork, Alpha is pleased to have now completed an LOI for up to 5,000tpa of high purity aluminium products to a Tier 1 end-user within the lithium-ion battery sector.

The Company is now working with the end-user to agree product delivery schedule to align with Stage 1 capability and Stage 2 ramp-up.

## OTHER SECTOR DEMAND

In parallel to the activities described above, the Company also continues to support sales and qualification within the following sectors:

- *Synthetic Sapphire:* Alpha maintains regular sales shipment to apriority customer in the sapphire glass sector
- *Catalysts:* As noted above, Alpha has advanced qualification to now receiving LOI for up to 180 metric tonnes pa for the Company's high purity ATH from a global, specialty materials end-user, across a range of catalyst applications
- *Pharmaceutical:* The Company continues to support qualification and testwork for the pharmaceutical sector, with an increasing focus on bio-ceramics. In addition, the Company continues to maintain regular, low volume, high value sales of gamma-phase aluminas to a pharmaceutical customer in SK.

# DEMAND MODEL EXCEEDS 50,000 TONNES

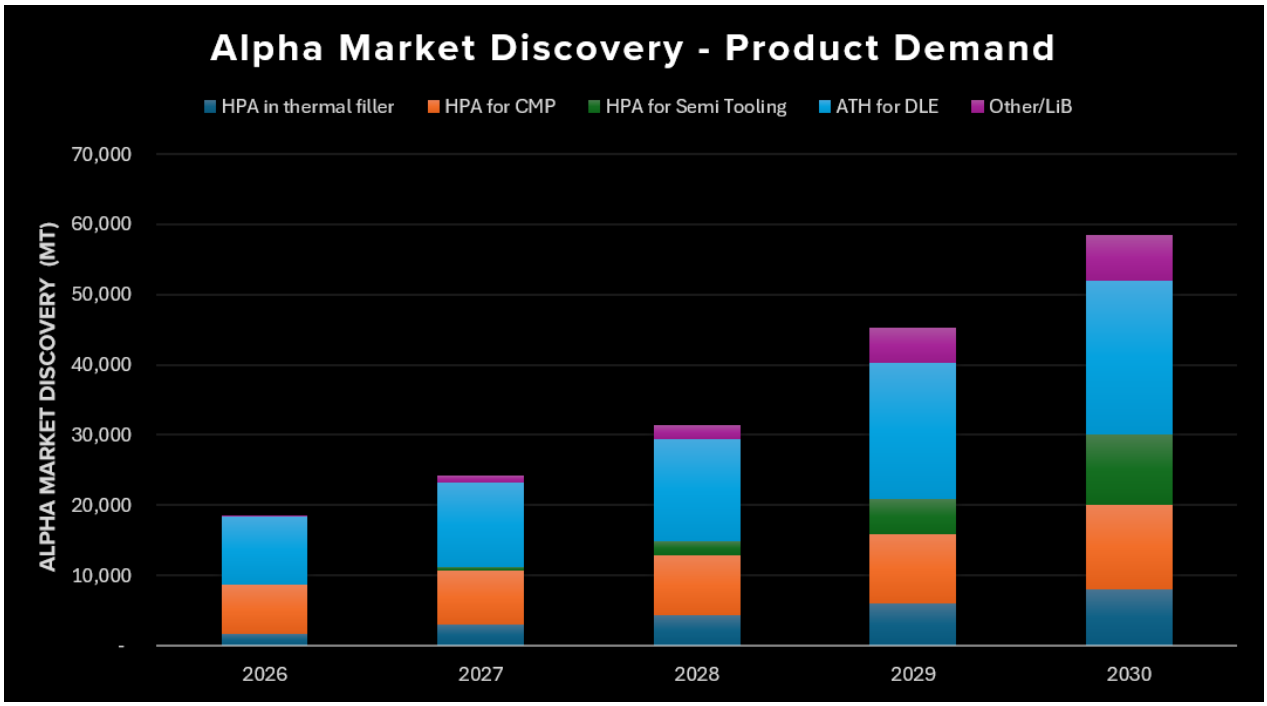
Alpha has updated projections for forward demand based on:

- first-hand discussions with >150 customers that have tested or are testing our products,
- Alpha's sales agents and;
- Market growth rates supported by independent research reports underpinning demand for product sectors.

This product demand model represented in the chart below.

This market size assessment is for Alpha's HPA and High Purity ATH products only (i.e.: does not in include Al-Nitrate), and only for demand referable to the specific end-users with whom Alpha is currently in discussions and specific to applications that Alpha actively holds a distinct technological advantage.

Accordingly, the demand data in the above chart represents only a sub-set of the total addressable market.

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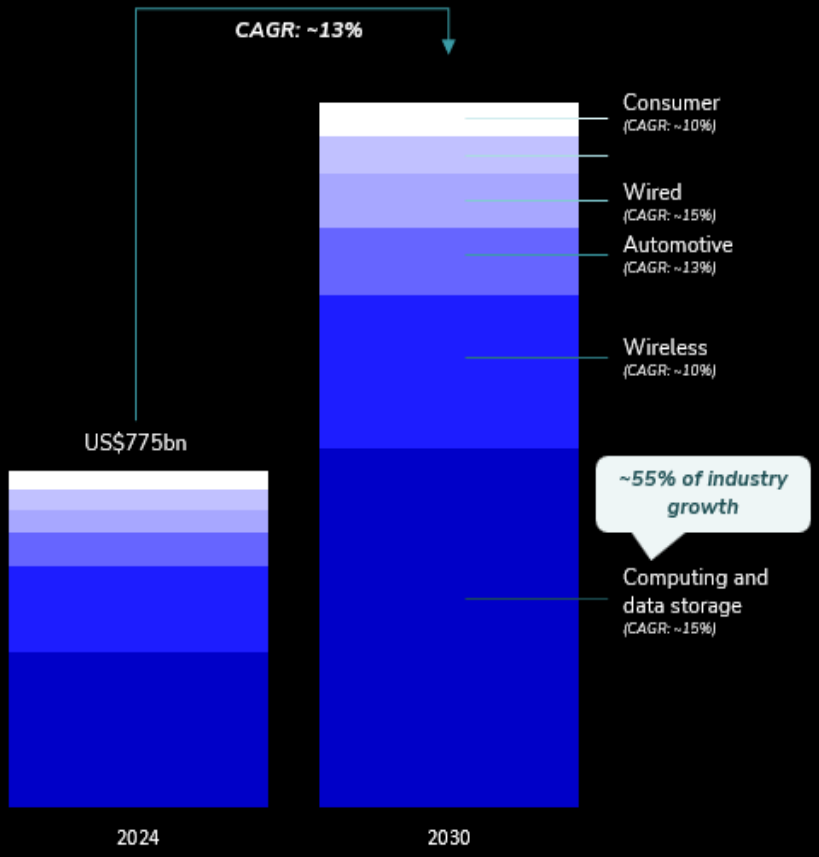
# APPENDIX 1: GLOBAL SIGNIFICANCE OF THE SEMICONDUCTOR BOOM

Alpha HPA

## Surging AI adoption driving demand across the semiconductor sector – with compute and data driving majority of the scale and growth

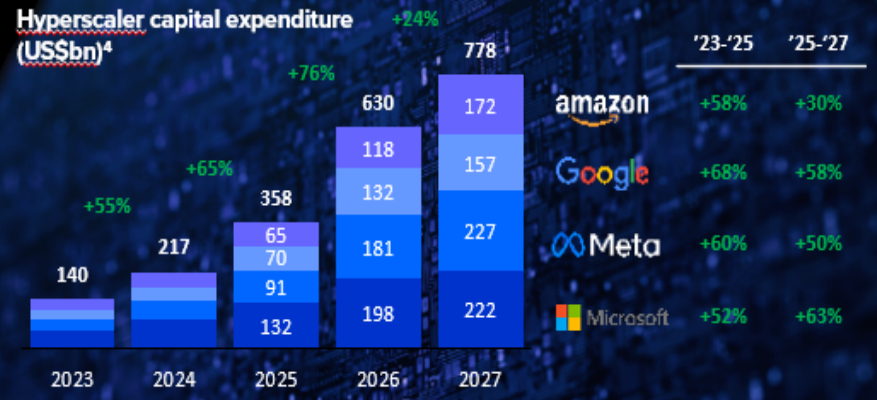
### Global semiconductor market projected growth[1]




### AI predominant driver of demand growth...

- The rapid growth of AI, connectivity, and customer adoption of advancing technology is driving advancements in semiconductors
- Global chip sales recorded a **~26% increase** in 2025 driven by the computer end-market which **surged ~60%**[2]
- The global server market is projected to grow at a **~12% CAGR** to over US$300n by 2030[3]

### ... underwriting an unprecedented surge in capital spend




***Total global AI infrastructure spend projected to grow at a CAGR of 35% to US$1.75 trillion by 2027[5]***

*Advanced packaging, high bandwidth memory (HBM), and wide-bandgap power semiconductors are the focus areas of next generation semiconductor advancement*

Source: McKinsey & Company, World Semiconductor Trade Statistics, Gartner, Statista, PwC analysis, NextMSC, Financial Times, Factset as at 6 May 2026, Gartner. Note: 1. McKinsey & Company (January 2026). 2. World Semiconductor Trade Statistics. 3. 'Semiconductor and beyond 2026' PwC. CAGR from 2024 to 2030. 4. Factset consensus as at 6 May 2026. 5. Gartner (January 2026).