

METATRON MINING CONSULTING PTY LTD

A: 39 Yallabee Rd Jindalee QLD 4074

M: +61 406 455 767

E: info@metatronmining.com.au

W: www.metatronmining.com.au

ABN: 34684809229



METATRON
MINING CONSULTING
MINING SOLUTIONS WITH PASSION AND PURPOSE!

HP Series – Alumina Grinding Balls

MMC's HP Series Al₂O₃ Alumina Grinding Balls are premium grade grinding media designed for ceramic body and glaze preparation. With outstanding wear resistance and high hardness, they are ideal for both wet and dry grinding applications in continuous as well as batch ball mills.

Manufactured from high-purity alumina powder (available in >92%, 95%, and 99% grades) and processed using advanced firing and microstructure control technologies, these balls deliver superior hardness, density, and grinding efficiency. Their low wear rate minimizes contamination, ensuring consistent quality and purity – essential for industries that demand precision and reliability.

Performance Product	HP92	HP95	HP95D	HP97
Al ₂ O ₃ (%)	≥92	≥95	≥92	≥97
Moh's hardness	9	9	9	9
Rate of Water Absorption (%)	≤0.01	≤0.01	≤0.01	≤0.01
Bulk Density (g/cm ³)	≥3.60	≥3.65	≥3.65	≥3.73
Self-Wearing Loss (%-24 hours)	≤0.0075	≤0.010	≤0.01	≤0.010
Application	Wet grinding	Wet grinding	Dry grinding	Wet grinding

Common sizes range from - Dia.10 Dia.20 Dia.30 Dia.40 Dia.45 Dia.50 Dia.60 Dia.70.

Bigger sizes - Dia.80 Dia.90 Dia.100 are available upon requests.

Key Features & Advantages:

Material Options: Manufactured from high-performance ceramics such as Alumina, Zirconia, and Steatite, each suited to specific applications.

High Density: Greater mass improves grinding efficiency and energy transfer.

Chemically Inert: Corrosion- and contamination-resistant, ensuring product purity.

Superior Wear Resistance: Extended media life and reduced replacement costs.

Versatile Sizes & Shapes: Available as spheres, cylinders, and other geometries for both wet and dry milling processes.

Cost-Effective: Longer service life delivers excellent overall value.

Energy Saving

Alumina grinding balls are lighter than steel media, which reduces the load on milling equipment. This can cut electricity consumption by 20–25%, lowering operating costs and improving overall grinding efficiency.

Low Wear Loss Rate

With wear loss as low as ≤0.01%, alumina grinding media last much longer than steel balls. Fewer replacements mean reduced operational costs, minimized downtime, and stable grinding performance.

Extended Grinding Mill Service Life

The lighter weight and smooth surface of alumina balls reduce stress and wear on mill liners and components. This can extend the service life of grinding mills by 30–40%, saving maintenance costs.

High Purity & Chemical Stability

Made from high-purity alumina (92–99%), these balls prevent contamination of the milled material and resist corrosion from acids, bases, and most chemicals. Ideal for industries requiring consistent product quality, such as ceramics, chemicals, and electronics.

Environmental Protection & Noise Reduction

Alumina balls do not release heavy metals like chromium and reduce mill noise by 10–15 dB. They help maintain a safer and cleaner working environment.



