

Certificate of Analysis (CoA)

Aug. 18, 2026

Product Name: Yttrium Oxide Powder
Chemical Formula: Y_2O_3
Purity: 99.9% (3N)
Particle Size: 500–800 nm
Morphology: Fine Powder
Quantity: 500 g
Lot Number: CSTB-260818B0028
Manufactured by: MetalsTek Engineering

Physical Description

Appearance: White powder
Theoretical Density: $\sim 5.01 \text{ g/cm}^3$
Molecular Weight: 225.81 g/mol
Melting Point: $\sim 2425 \text{ }^\circ\text{C}$

Chemical Composition

Component	Formula	Specification
Yttrium Oxide	Y_2O_3	$\geq 99.9\%$

Impurity Analysis (ICP-OES / ICP-MS)

Element	Symbol	Max. Content (ppm)
Lanthanum	La	≤ 100
Cerium	Ce	≤ 100

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Praseodymium	Pr	≤50
Neodymium	Nd	≤100
Samarium	Sm	≤50
Gadolinium	Gd	≤100
Dysprosium	Dy	≤50
Erbium	Er	≤50
Ytterbium	Yb	≤50
Iron	Fe	≤50
Calcium	Ca	≤50
Silicon	Si	≤50
Aluminum	Al	≤30
Total Impurities	—	≤1000

Particle Size & Visual Inspection

Item	Result
Nominal Particle Size	500–800 nm
Measurement Method	SEM / Laser Particle Size Analysis
Morphology	Fine Powder
Visible Foreign Matter	None observed
Package Quantity	500 g

Handling & Storage

- Store in a cool, dry, clean environment.
- Keep the package tightly sealed when not in use.

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- Avoid moisture, contamination, and prolonged exposure to air.
- Minimize dust generation and use suitable personal protective equipment when handling fine powder.

Declaration

The material described above has been manufactured, inspected, and released in accordance with internal quality control procedures and complies with the stated specification of 99.9% (3N) and nominal particle size 500–800 nm.

Authorized Signature:

Inspection Certificate by:

Nancy Liu

Approver by:

Chen Qiang

