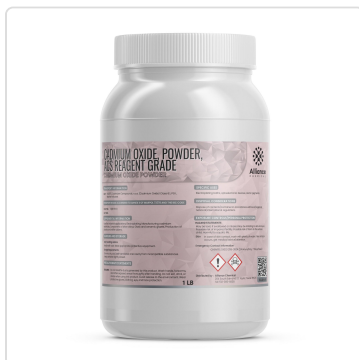


PRODUCT IDENTIFICATION



Product Name: Cadmium Oxide Powder ACS Reagent

CAS Number: 1306-19-0

Molecular Formula: CdO

Molecular Weight: 128.41 g/mol

Grade: ACS Grade

Purity / Concentration: Not Available

Synonyms: Cadmium(II) oxide, Cadmium oxide

PRODUCT OVERVIEW

Cadmium Oxide Powder is a high-purity inorganic compound with the formula CdO. This fine powder is characterized by its distinctive yellow to red color and is primarily used in various industrial applications, including ceramics and electronics.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay	%	100.0	99.5	100.5	Titration/Gravimetric
Iron	ppm	≤ 30 ppm	—	—	ICP
Lead	%	≤ 50 %	—	—	Per specification
Manganese Mn	ppm	≤ 10 ppm	—	—	ICP-OES
Nickel Ni	ppm	≤ 15 ppm	—	—	ICP-OES
Chloride (Cl ⁻)	ppm	0.0030	—	0.01	Ion chromatography
Sulfate (SO ₄ ²⁻)	ppm	0.015	—	0.05	Ion chromatography
Cadmium Cd	ppm	≥ 870000 ppm	—	—	ICP-MS
Loss On Ignition	%	≤ 0.5 %	—	—	Gravimetric (1000°C)
Particle Size	µm	1 – 2 µm	—	—	Sieve Analysis

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Off-white to gray fine crystalline powder	Form	Solid
Boiling Point	2838 °F at 760 mmHg (sublimes) (NTP, 1992)	Melting / Freezing Point	Greater than 2732 °F (EPA, 1998)
Specific Gravity	1.5	Solubility	Slightly soluble in water, soluble in acids
Molecular Formula	CdO	Molecular Weight	128.41 g/mol
Decomposition Temp.	Above 600°C (thermally stable under 20°C conditions)		

APPLICATIONS

1. **Ceramics** — Used as a pigment and flux in ceramic glazes to achieve desired colors and properties.
2. **Electronics** — Serves as a component in the production of semiconductors and other electronic materials.
3. **Energy** — Utilized in the manufacture of cadmium-based batteries, providing high energy density.
4. **Chemical Industry** — Acts as a catalyst in various chemical reactions, enhancing reaction rates and yields.
5. **Coatings** — Incorporated as a pigment in paints and coatings for its color properties.

STORAGE & HANDLING

- Store in a cool, dry place away from incompatible materials.
- Use appropriate personal protective equipment (PPE) such as gloves and goggles.
- Ensure adequate ventilation in the storage area to avoid dust accumulation.
- Avoid exposure to moisture to maintain product integrity.
- Compatible with HDPE containers and glass.

AVAILABLE PACKAGING

- 1 lbs.
- 4 lbs.
- 25 lbs.
- 50 Lbs.

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- H330: Fatal if inhaled [Danger Acute toxicity, inhalation]
- H341: Suspected of causing genetic defects [Warning Germ cell mutagenicity]
- H350: May cause cancer [Danger Carcinogenicity]
- H361fd: Suspected of damaging fertility; Suspected of damaging the unborn child [Warning Reproductive toxicity]
- H372 **: Causes damage to organs through prolonged or repeated exposure [Danger Specific target organ toxicity, repeated exposure]
- H400: Very toxic to aquatic life [Warning Hazardous to the aquatic environment, acute hazard]
- H410: Very toxic to aquatic life with long lasting effects [Warning Hazardous to the aquatic environment, long-term hazard]

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com

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