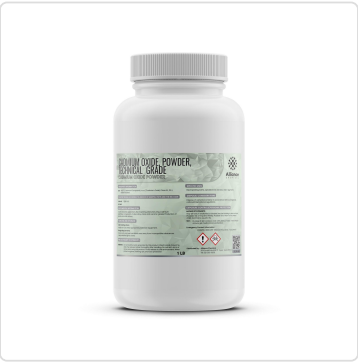
TECHNICAL DATA SHEET

Cadmium Oxide Powder Technical

Revised: 04/27/2026

PRODUCT IDENTIFICATION



Product Name: Cadmium Oxide Powder Technical
CAS Number: 1306-19-0
Molecular Formula: CdO
Molecular Weight: 128.41 g/mol
Grade: Technical
Purity / Concentration: Not Available
Synonyms: Cadmium(II) oxide, Cadmia

PRODUCT OVERVIEW

Cadmium Oxide Powder (CAS 1306-19-0) is a high-purity technical grade inorganic compound featuring a 97.5% assay and minimal impurity levels, including lead at 10 ppm. This crystalline solid is widely utilized as a pigment, semiconductor material, and catalyst in demanding industrial applications.

Grade Significance: Technical grade signifies that this product is formulated to meet reliable industrial standards, providing the necessary purity for manufacturing processes while maintaining cost-effectiveness for bulk applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	97.5	95	—	Titration
Iron (Fe)	ppm	5	—	20	ICP-OES
Lead (Pb)	ppm	10	—	50	ICP-OES
Chloride (Cl^-)	ppm	5	—	20	Ion Chromatography
Sulfate (SO_4^{2-})	ppm	10	—	50	Ion Chromatography
Appearance	—	Yellow-Brown Powder	—	—	Visual
Loss On Drying	%	0.2	—	0.5	Gravimetric

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Crystalline solid	**Odor**	Odorless
Form	Solid	**Boiling Point**	240°C (464°F)
Melting / Freezing Point	125°C (257°F)	**Specific Gravity**	1.5
Solubility	Soluble in water	**Molecular Formula**	CdO
Molecular Weight	128.41 g/mol	**Density (25°C)**	8.15 g/mL

APPLICATIONS

1. **Ceramics and Glass** — Used as a pigment to provide vibrant colors and exceptional thermal stability in glass and ceramic glazes.
2. **Electronics** — Functions as a semiconductor material, leveraging its unique electrical properties for specialized electronic components.
3. **Battery Manufacturing** — Utilized in the production of cadmium-based batteries to achieve high energy density and performance.
4. **Chemical Synthesis** — Acts as a highly effective catalyst to enhance reaction rates in specific industrial chemical processes.

STORAGE & HANDLING

Due to its status as a hazardous material, Cadmium Oxide must be stored in a secure, well-ventilated area to prevent accidental inhalation or exposure. Maintaining a controlled environment is essential to mitigate the health risks associated with its carcinogenic and mutagenic profile.

- Store in a cool, dry place away from incompatible materials.
- Use appropriate PPE, including gloves and masks, to avoid inhalation and skin contact.
- Keep containers tightly closed when not in use to prevent contamination.
- Avoid exposure to moisture and light to maintain product stability.
- Material compatibility includes HDPE and glass containers.

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.

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