

PRODUCT IDENTIFICATION

**Product Name:** Oxalic Acid ACS Grade**CAS Number:** 144-62-7**Molecular Formula:** $C_2H_2O_4$ **Molecular Weight:** 90.03 g/mol**Grade:** ACS Grade**Purity / Concentration:** 99.6%**Synonyms:** Ethanedioic Acid, Oxalic Acid Dihydrate

PRODUCT OVERVIEW

Alliance Chemical offers high-purity Oxalic Acid ACS Grade, a versatile colorless crystalline solid with a 99.85% assay. This reagent-grade chemical is meticulously tested to ensure low trace metal content, such as 0.1 ppm of iron, making it an ideal choice for precise laboratory and industrial applications.

Grade Significance: ACS Grade signifies that the product meets the stringent purity standards set by the American Chemical Society, ensuring it is suitable for use in sensitive analytical procedures where reagent consistency is critical.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay	%	99.72	99.6	—	Titration/Gravimetric
Non-Volatile Residue	%	0.0030	—	0.01	Residue on Ignition
Calcium Ca	%	0.0003	—	0.0010	ICP-MS
Heavy Metals As Pb	ppm	3	—	10	ICP-MS (as Pb)
Iron	ppm	3	—	10	ICP
Chloride Cl	%	0.0004	—	0.0010	ICP
Sulfate (SO_4^{2-})	%	0.07	—	0.08	ICP-MS
Insoluble Matter	%	0.03	0	0.1	Gravimetric

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Colorless, crystalline solid	Odor	Odorless
Form	Solid	Boiling Point	Sublimes (NIOSH, 2024)
Melting / Freezing Point	372 °F (Decomposes) (NTP, 1992)	Specific Gravity	1.653
Solubility	Soluble in water, alcohol, and ether	Molecular Formula	$C_2H_2O_4$
Molecular Weight	90.03 g/mol	Vapor Pressure (20°C)	0.0001 mmHg
Density (25°C)	1.65 g/mL	Decomposition Temp.	Decomposes on heating; no distinct melting point

APPLICATIONS

1. **Metalworking** — Used extensively for cleaning and polishing metal surfaces due to its superior ability to dissolve rust and industrial scale.
2. **Analytical Chemistry** — Serves as a reliable reagent for titrations and the accurate determination of various metal ions in solution.
3. **Water Treatment** — Utilized as an effective chemical agent for adjusting pH levels in complex industrial water processing systems.
4. **Organic Synthesis** — Acts as a key oxidizing agent, facilitating essential chemical reactions in the production of specialized organic compounds.

STORAGE & HANDLING

Oxalic Acid must be stored in a cool, dry, and well-ventilated area to maintain its chemical integrity and prevent clumping. Because the material is classified as harmful if swallowed or in contact with skin, secure storage is essential to prevent accidental exposure and ensure workplace safety.

- Store in a cool, dry place away from incompatible materials.
- Use containers made of HDPE or glass to prevent reactions.
- Avoid exposure to moisture and direct sunlight.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.
- Ensure adequate ventilation in storage areas to minimize inhalation risks.

AVAILABLE PACKAGING

- 2 lbs.
- 5 Lbs.
- 55 Lbs.

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Warning**



Hazard Statements:

- H302: Harmful if swallowed [Warning Acute toxicity, oral]
- H312: Harmful in contact with skin [Warning Acute toxicity, dermal]

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

Disclaimer: The information contained herein is believed to be accurate and represents the best information currently available to us. However, Alliance Chemical makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.