



TECHNICAL DATA SHEET

Product Name: Ammonium Oxalate Monohydrate

Chemical Name: Diammonium oxalate monohydrate

Synonyms: Diammonium oxalate; Ammonium ethanedioate

CAS No.: 6009-70-7 (monohydrate) / 1113-38-8 (anhydrous)

Molecular Formula: $(\text{NH}_4)_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{O}$

Molecular Weight: 142.11 g/mol

EINECS No.: 214-185-2

EC Number: 214-185-2

Chemical Structure:

$\text{HOOC-COONH}_4 \rightarrow (\text{NH}_4)_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{O}$

1. Product Description

Ammonium oxalate monohydrate is a white, odorless, crystalline powder, soluble in water and commonly used as a complexing agent, analytical reagent, and intermediate in pharmaceutical and chemical industries.

2. Specification

Parameter	Specification	Test Method
Appearance	White crystalline powder	Visual inspection
Assay (as $(\text{NH}_4)_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{O}$)	$\geq 99.0\%$	Titration
Chloride (Cl^-)	$\leq 0.002\%$	ICP/MS or Ion Chrom.
Sulfate (SO_4^{2-})	$\leq 0.005\%$	ICP/MS
Heavy Metals (Pb)	$\leq 0.001\%$	AAS
Iron (Fe)	$\leq 0.001\%$	UV-Vis Spectroscopy
Water-Insoluble Matter	$\leq 0.01\%$	Gravimetric Method
Loss on Drying	11.5 – 13.0%	105°C, 2 hours
pH (5% aqueous solution)	6.0 – 8.0	pH meter

3. Applications

- Analytical reagent (precipitation of calcium and rare earth metals)
- Complexing agent in metal finishing and electroplating
- Intermediate in pharmaceutical synthesis
- Used in photographic chemicals
- Laboratory chemical and buffer component
- Research & development

4. Packaging & Storage

- **Standard Packaging:**

25 kg net weight in fiber drums or PE-lined kraft paper bags

Custom packaging available upon request

- **Storage Conditions:**

Store in a cool, dry, and well-ventilated area

Keep container tightly closed

Avoid direct sunlight and moisture

- **Shelf Life:**

24 months from the date of production if stored properly

5. Safety & Handling

Product is non-flammable but should be handled with care

Avoid inhalation, ingestion, or contact with eyes and skin

Refer to the Material Safety Data Sheet (MSDS) for full handling and safety instructions