

Oxalic Acid

CAS 6153-56-6 · $C_2H_2O_4 \cdot 2H_2O$ · 99.6% min

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1. Product identity

Product name	Oxalic Acid
Synonyms	oxalic acid powder, ethanedioic acid, oxalic acid dihydrate, acid of sugar
C.A.S. number	6153-56-6 (oxalic acid dihydrate). The anhydrous acid is CAS 144-62-7 - a 99.6 % commercial product is the dihydrate and must carry 6153-56-6.
Molecular formula	$C_2H_2O_4 \cdot 2H_2O$ ($HOOC-COOH \cdot 2H_2O$)
Molecular weight	126.07 g/mol (dihydrate); 90.03 g/mol (anhydrous)
Grade supplied against	99.6% min
Appearance	Hygroscopic colourless or white crystals, or white crystalline powder. Odourless.
Product group	Mineral & Organic Acids
HSN code	2917 11 10
Country of origin	As stated on the producer's documents for the lot supplied; confirmed at offer stage
Packing	25 kg bag · 1 MT jumbo
Storage	Store in a dry, cool, well-ventilated place with the container tightly closed. Keep separated from strong oxidising agents, from silver and silver compounds, from alkalis, and from food and feedstuffs. Protect from moisture (the material is hygroscopic and will cake). Store in the original container; keep locked up. Do not store in or transfer with equipment containing silver.

2. Analytical specification

S. No.	Test parameter	Specification	Method
1	Description	Hygroscopic colourless or white crystals, or white crystalline powder. Odourless.	Visual
2	Identification	Conforms to the substance supplied	Instrumental or chemical test, per method agreed
3	Assay / grade	99.6% min	Titrimetry or instrumental, per method agreed
4	Physical state	Solid (crystalline)	Visual
5	Solubility in water	Soluble. 118 g/L at 25 C (Loba Chemie SDS); ICSC 0529 gives 9-10 g/100 mL at 20 C, described as moderate. Also soluble in ethanol.	Per the test method agreed

S. No.	Test parameter	Specification	Method
6	pH	1.5 in a 10 % w/w aqueous solution at 20 C (Loba Chemie SDS). The Univar 99.6 % dihydrate SDS gives 1.3 at 20-25 C but does not state the concentration, so that figure should not be published without the qualifier. Strongly acidic - oxalic acid is a considerably stronger acid than acetic acid.	Potentiometry on an aqueous suspension
7	Relative density	1.65 g/cm ³ at 20 C (dihydrate, Loba Chemie SDS). ICSC 0529 gives 1.9 g/cm ³ , which refers to the anhydrous acid. The Univar 99.6 % dihydrate SDS states 'no data available'.	Pyknometry or gas displacement
8	Melting / freezing point	101.5 C for the 99.6 % dihydrate (Univar/Hill Brothers SDS); Loba Chemie gives 104-106 C for dihydrate AR grade. The dihydrate loses its water of crystallisation on heating, so reported values scatter. ILO ICSC 0529 gives 189.5 C, which is the ANHYDROUS acid - do not apply it to a dihydrate product.	Thermal analysis
9	Boiling point	Not available - the substance sublimates and decomposes rather than boiling. Univar reports 149-160 C (decomposition); ICSC 0529 notes that oxalic acid may sublime above 100 C at reduced pressure, with an optimal sublimation temperature of 157 C.	Not applicable
10	Flash point	Not applicable (Univar 99.6 % dihydrate SDS). The material is a combustible solid that decomposes on heating rather than flashing; it is not classified as a flammable solid.	Closed cup
11	Additional parameters	To the specification agreed before order	As agreed

3. Transport classification

Divergent and traceable to the classification split above. ILO ICSC 0529 and the ADR/UN Model Regulations route give UN 3261. Producer SDS for the 99.6 % dihydrate frequently declare it NOT REGULATED: Univar/Hill Brothers states 'Not regulated as a dangerous good' for DOT, IATA and the IMDG Code, and Loba Chemie states 'Not regulated' for UN number, shipping name, class and packing group. · Class 8 (Corrosive) where UN 3261 is declared; none where the producer declares the material not regulated. · Packing group III where UN 3261 is declared (ICSC 0529); not applicable where the producer declares the material not regulated.

Proper shipping name: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (Oxalic acid) where UN 3261 Class 8 PG III is declared. The reason for the divergence is logical rather than an error by either party: UN 3261 is a Class 8 entry and only applies where the substance is classified as skin-corrosive. Under the EU harmonised entry - Acute Tox. 4 oral and dermal only, with no H314 - oxalic acid dihydrate does not meet Class 8 criteria and is therefore not a dangerous good. Producers who self-classify H314 (as ICSC and Loba Chemie do) reach Class 8 and declare UN 3261. Declare transport consistently with the classification you have adopted in Section 2 of your own SDS, and state which position you have taken.

What this document is. This is a product specification sheet. It states the grade this material is supplied against, its packing and its identity. **It is not a certificate of analysis, it carries no test results, and it certifies no batch.** Tested values for the consignment actually loaded appear on the batch certificate of analysis issued against that batch, which travels with the despatch documents. Identity and physical data are drawn from PubChem, the ECHA CLP inventory and ILO safety cards; the producer's documents for the grade quoted govern. Velora Chemicals Private Limited is a bulk supplier and trader, not a manufacturer.