



NIOSH Pocket Guide to Chemical Hazards

[NPG Home](#) | [Introduction](#) | [Synonyms & Trade Names](#) | [Chemical Names](#) | [CAS Numbers](#) | [RTECS Numbers](#) | [Appendices](#) | [Search](#)**Oxalic acid**

CAS 144-62-7

RTECS [RO2450000](#)**Synonyms & Trade Names**

Ethanedioic acid, Oxalic acid (aqueous), Oxalic acid dihydrate

DOT ID & Guide

Exposure LimitsNIOSH REL: TWA 1 mg/m³ ST 2 mg/m³OSHA PEL†: TWA 1 mg/m³IDLH 500 mg/m³ See: [144627](#)**Conversion****Physical Description**Colorless, odorless powder or granular solid. [Note: The anhydrous form (COOH)₂ is an odorless, white solid.]

MW: 126.1

BP: Sublimes

MLT: 215°F (Sublimes)

Sol: 14%

VP: <0.001 mmHg

IP: ?

Sp.Gr: 1.90

Fl.P: ?

UEL: ?

LEL: ?

Combustible Solid

Incompatibilities & Reactivities

Strong oxidizers, silver compounds, strong alkalis, chlorites [Note: Gives off water of crystallization at 215°F and begins to sublime.]

Measurement Methods

None available

See: [NMAM](#) or [OSHA Methods](#)**Personal Protection & Sanitation** ([See protection](#))

Skin: Prevent skin contact
 Eyes: Prevent eye contact
 Wash skin: When contaminated
 Remove: When wet or contaminated
 Change: Daily
 Provide: Eyewash

First Aid ([See procedures](#))

Eye: Irrigate immediately
 Skin: Water flush promptly
 Breathing: Respiratory support
 Swallow: Medical attention immediately

Respirator Recommendations NIOSH/OSHA**Up to 25 mg/m³:**(APF = 25) Any supplied-air respirator operated in a continuous-flow mode[£](APF = 25) Any powered air-purifying respirator with a high-efficiency particulate filter.[£]**Up to 50 mg/m³:**(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter. [Click here](#) for information on selection of N, R, or P filters.

(APF = 50) Any self-contained breathing apparatus with a full facepiece

(APF = 50) Any supplied-air respirator with a full facepiece

Up to 500 mg/m³:

(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter. [Click here](#) for information on selection of N, R, or P filters./Any appropriate escape-type, self-contained breathing apparatus
[Important additional information about respirator selection](#)

Exposure Routes inhalation, ingestion, skin and/or eye contact

Symptoms Irritation eyes, skin, mucous membrane; eye burns; localized pain, cyanosis; shock, collapse, convulsions; kidney damage

Target Organs Eyes, skin, respiratory system, kidneys

See also: [INTRODUCTION](#) See ICSC CARD: [0529](#) See MEDICAL TESTS: [0170](#)

[NIOSH Home](#) | [NIOSH Search](#) | [Site Index](#) | [Topic List](#) | [Contact Us](#)