

Agreed 17/9/25



TENNANTS DISTRIBUTION LIMITED
HAZELBOTTOM ROAD, CHEETHAM, MANCHESTER M8 0GR TEL 44(0)161 205 4454 FAX 44(0)161 203

PRODUCT: OXALIC ACID (OXACDI) REVISION: 6 DATED: 20/09/2023 PAGE 1 OF 7

PRODUCT SPECIFICATION

Product Name	Oxalic Acid
Alternative Name	Oxalic Acid Dihydrate
Specification Reference	OXACDI/2 (06/11)

SALES SPECIFICATION

Description	Limits
Appearance	Snow white crystal
Assays as (COOH) ₂ · 2H ₂ O	99.5% min
Sulphated Ash	Max 0.04%
Chloride	Max 0.03%
Sulphate	Max 0.04%
Heavy Metals as Pb	Max 0.001%
Nitrogen Compounds	Max 0.008%
Iron	Max 0.004%
Calcium	Max 0.007%

NOTES

Exclusion of Liability

Information contained in this publication is accurate to the best of the knowledge and belief of Tennants.

Any information or advice obtained from Tennants otherwise than by means of this publication and whether relating to Tennants materials or other materials, is also given in good faith. However, it remains at all times the responsibility of the customer to ensure that Tennants materials are suitable for the particular purpose intended.

Tennants accepts no liability whatsoever (except as otherwise provided by law) arising out of the use of information supplied, the application, adaptation or processing of the products described herein, the use of other materials in lieu of Tennants materials or the use of Tennants materials in conjunction with such other materials.

Health and Safety

A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on the handling precautions and emergency procedures. This must be consulted fully before handling, storage and use.



PRODUCT: OXALIC ACID (OXACDI) REVISION: 6 DATED: 20/09/2023 PAGE 2 OF 7

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

1.1 Product Identifier

Substance Name Oxalic Acid
Synonyms Ethanedioic acid
Chemical Name and Formula Oxalic acid dihydrated— $C_2O_4H_2 \cdot 2H_2O$
CAS Number 6153-56-6
EINECS Number 205-634-3
Molecular Weight 126.07 g/mol
HMRC Commodity Code 2917 1110
REACH Registration number 01-2119534576-33-XXXX

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use(s) No further information

1.3 Details of the supplier of the safety data sheet

Tennants Distribution Limited
Hazelbottom Road
Cheetham
Manchester
M8 0GR
Tel: 44(0)161 205 4454
Fax: 44(0) 161 203 4298
Email: msds@tennantsdistribution.com

1.4 Emergency telephone number

Tel: 44(0)844 335 0001 (24 hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) 1272/2008

Acute toxicity cat 4 oral and dermal

Eye Damage 1

2.1.2 Classification according to Directive 67/548/EEC

Xn – harmful

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard Pictograms



Signal word: Danger

Hazard statements

H302 Harmful if swallowed
H312 Harmful in contact with skin
H318 Causes serious eye damage

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash skin thoroughly after handling.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P501 Dispose of contents/container to hazardous waste collection point.

2.3 Other hazards

The substance does not meet the criteria for PBT or vPvB substance.
No other hazards identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

- Main Constituent: Oxalic acid dihydrated



PRODUCT: OXALIC ACID (OXACDI) REVISION: 6 DATED: 20/09/2023 PAGE 3 OF 7

CAS Number	EINECS Number	REACH registration number	ECC Index Number
6153-56-6	205-634-3	01-2119534576-33-XXXX -	607-006-00-8
Impurities: No impurities relevant for classification and labelling			
4. FIRST AID MEASURES			
4.1 Description of first aid measures			
General Information Never make an unconscious person vomit or drink fluids.			
Inhalation Remove to fresh air.			
Skin contact Wash affected area immediately with plenty of water and continue to do so for 15 minutes. Remove contaminated clothing. If necessary seek medical advice.			
Eye contact Rinse eyes immediately with plenty of water for at least 15 minutes and seek medical advice.			
Ingestion Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Obtain medical attention.			
4.2 Most important symptoms and effects, both acute and delayed Prolonged or repeated skin contact may cause dermatitis. If inhaled can cause a burning sensation of nose and throat, coughing, shortness of breath, sore throat.			
4.3 Indication of any immediate medical attention and special treatment needed No further information			
5. FIRE FIGHTING MEASURES			
5.1 Extinguishing Media Suitable extinguishing media: Use Water spray, powder, foam or carbon dioxide as extinguishing media. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.			
5.2 Special hazards arising from the substance or mixture Keep away from sources of ignition. In case of fire toxic fumes may form CO, CO2.			
5.3 Advice for fire-fighters The fire-fighters must use individual breathing equipment. In case of fire keep drums cool by spraying with water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.			
6. ACCIDENTAL RELEASE MEASURES			
6.1 Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation. Keep dust levels to a minimum. Keep unprotected persons away. Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8). Avoid inhalation of dust – ensure that sufficient ventilation or suitable respiratory protective equipment is used, wear suitable protective equipment (see section 8).			
6.2 Environmental precautions Contain the spillage. Keep the material dry if possible. Cover area if possible to avoid an unnecessary dust hazard. Avoid uncontrolled spills to watercourses and drains. Any large spillage into watercourses must be alerted to the Environment Agency or other regulatory body.			
6.3 Methods and material for containment and cleaning up Collect up dry and deposit in waste containers for later disposal according to regulations. Rinse with water. (Extra personal protection: P2 filter respirator for harmful particles).			
6.4 Reference to other sections For more information on exposure controls/personal protection or disposal considerations, please check section 8 and 13 and the annex of this safety data sheet.			
7. HANDLING AND STORAGE			
7.1 Precautions for safe handling Advice on safe handling Avoid contact with skin and eyes. Wear protective equipment (refer to section 8 of this safety data sheet). Do not wear contact lenses when handling this product. Keep dust levels to a minimum. Minimize dust generation. Enclose dust sources, use exhaust ventilation.			
7.2 Conditions for safe storage, including any incompatibilities Requirements to be met by storerooms and receptacles: The substance should be stored under dry conditions. Store at room temperature. Keep material separated from strong bases, oxidizing materials, food and feed.			
7.3 Specific end use(s)			



No further information	
8. EXPOSURE CONTROLS/PERSONAL PROTECTION	
8.1 Control parameters	
Ingredients with limit values that require monitoring at the workplace:	
OEL (TWA): 1 mg/m ³ (ACGIH 1990-1991).	
OEL (como STEL): 2 mg/m ³ (ACGIH 1990-1991).	
DNEL for workers:	
Local effects - acute: DNEL (derived not effect level) dermal: 0.69 mg / cm ²	
Systemic effects - long term: DNEL (derived not effect level) dermal: 2.29 mg / kg bw / day	
Systemic effects - long term: DNEL (derived not effect level) inhalation: 4.03 mg / m ³	
DNEL for the general population:	
Local effects - acute: DNEL (derived not effect level) Dermal: 0.35 mg / cm ²	
Systemic effects - long term: DNEL (derived not effect level) Dermal: 1.14 mg / kg bw / day	
Systemic effects - long term: DNEL (derived not effect level) Oral: 1.14 mg / m ³	
PNEC	
PNEC water (freshwater): 0.1622 mg / L	
PNEC water (sea water): 0.01622	
PNEC water (intermittent spills): 1.622 mg / L	
8.2 Exposure controls	
To control potential exposure, generation of dust should be avoided. Further, appropriate protective equipment is recommended. Eye protection equipment (e.g. goggles or visors) must be worn, unless potential contact with the eye can be excluded by the nature and type of application (i.e. closed process). Additionally, face protection, protective clothing and safety shoes are required to be worn as appropriate.	
Engineering measures	
If user operations generate dust, use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne dust levels below recommended exposure limits.	
Eye protection	
Do not wear contact lenses. Tight fitting goggles with side shields, or wide vision full goggles.	
Skin protection	
Dermal exposure should be minimized to the extent technically feasible. Wear suitable gloves (nitrile, neoprene, natural rubber, polyvinyl), standard work clothes, long pants, long sleeves, coveralls, closing with accessories and shoes openings resistant to corrosive chemicals and prevent penetration of dust.	
Respiratory protection	
Local ventilation to keep levels below established threshold values is recommended. A suitable particle filter mask is recommended, depending on the expected exposure levels	
Thermal hazards	
The substance does not represent a thermal hazard, thus special consideration is not required.	
Environmental exposure controls	
Avoid releasing to the environment. Contain the spillage. Any large spillage into watercourses must be alerted to the regulatory authority responsible for environmental protection or other regulatory body.	
9. PHYSICAL AND CHEMICAL PROPERTIES	
9.1 Information on basic physical and chemical properties	
Form	Crystals
Odour	Odourless
Odour threshold	Not applicable
pH	~0.7 (50 g/l)
Melting point	Not applicable (sublimes at >160°C)
Boiling point/boiling range	Not applicable (sublimes at >160°C)
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability	Non-flammable (study result, EU A.10 method)
Explosive limits	non explosive (void of any chemical structures commonly associated with explosive properties)
Vapour pressure	0.0312 Pa at 25°C
Vapour density	Not applicable
Relative density	0.813 (study result, EU A.3 method)
Water solubility	108 g/l at 25°C (study results)
Partition co-efficient	-1.7 at 23°C (study results, OECD Guideline 107)
Auto ignition temperature	No relative self-ignition temperature below 400°C (study result EU A.16)



PRODUCT: OXALIC ACID (OXACDI) REVISION: 6 DATED: 20/09/2023 PAGE 5 OF 7

	method)
Decomposition temperature	>160°C
Viscosity	Not applicable
Oxidising properties	No oxidising properties
9.2 Other information	
Not available	
10. STABILITY AND REACTIVITY	
10.1 Reactivity	
On contact with hot surfaces or flames this substance decomposes forming formic acid and carbon monoxide. The solution in water is a medium strong acid.	
10.2 Chemical stability	
Under normal conditions of use and storage, oxalic acid is stable.	
10.3 Possibility of hazardous reactions	
Reacts violently with strong oxidants causing fire and explosion hazard. Reacts with some silver compounds to form explosive silver oxalate. Attacks some forms of plastic.	
10.4 Conditions to avoid	
Minimise exposure to air and moisture to avoid degradation.	
10.5 Incompatible materials	
Alkaline solutions. Ammonia. Halogenates. Oxidizing agents. Metals. Water. Heat.	
10.6 Hazardous decomposition products	
Formic acid. Carbon dioxide. Carbon monoxide.	
11. TOXICOLOGICAL INFORMATION	
11.1 Information on toxicological effects	
Oxalic acid is classified as harmful by oral and dermal route and it entails a risk of serious damage to the eye. Acute toxicity: Oxalic acid is Oral and Dermal Acutely toxic cat. 4. Oral: LD50 > 375 mg/kg bw (according to the method of Smyth, rat) Dermal: LD50 > 20000 mg/kg bw (Pesticide Action Network, North America, rabbit) Inhalation: no data available Classification for acute toxicity is category 4 for oral and dermal route.	
Irritation/Corrosion	
Eye irritation: Oxalic acid entails a risk of serious damage to the eye (OECD 405, rabbit). Skin irritation: Oxalic acid is not irritating to skin (OECD 404, rabbit). Based on experimental results, oxalic acid requires classification as severely irritating to the eye [R41, Risk of serious damage to eye; Eye Damage 1 (H318 - Causes serious eye damage)].	
Sensitisation	
Oxalic acid is not a skin sensitiser (OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)).	
Repeated dose toxicity	
Toxicity of oxalic acid via the oral route is addressed by LOAEL of 150 mg/kg bw/day. Toxicity of Oxalic acid via the dermal route is not considered as relevant in view of the anticipated insignificant absorption through skin. Toxicity of Oxalic acid via inhalation is not considered as relevant. Therefore, classification of Oxalic acid for toxicity upon prolonged exposure is not required.	
Mutagenicity	
Bacterial reverse mutation assay (Ames test, OECD 471): Negative. Mammalian chromosome aberration test: Negative Oxalic acid is void of any genotoxic potential. Classification for genotoxicity is not warranted.	
Carcinogenicity	
Oxalic acid is not considered as carcinogenic. Human epidemiological data support lack of any carcinogenic potential of oxalic acid. Classification for carcinogenicity is not warranted.	
Toxicity for reproduction	
Oxalic acid is not toxic to reproduction (experimental result, mouse). Human epidemiological data support lack of any potential for reproductive toxicity of oxalic acid. Classification for reproductive toxicity according to regulation (EC) 1272/2008 is not required.	
Further information	
No data available	



12. ECOLOGICAL INFORMATION	
12.1 Aquatic Toxicity LC50 (96h) for freshwater fish: 160 mg/l (Deutsche Einheitsverfahren zur Wasser, Abwasser und Schlamm-Untersuchung) EC50 (48h) for freshwater invertebrates: 162.2mg/l (OECD 202, Daphnia) Toxicity threshold (8 days) for freshwater algae: 80.0 mg/l Chronic toxicity to aquatic organisms The long-term aquatic toxicity study on aquatic invertebrates shall be considered if the substance is poorly water soluble and oxalic acid is soluble in water. Also oxalic acid presents a low toxicity for the short term test. Toxicity to soil dwelling organisms The oxalic acid is not supposed to be directly applied to soil and an indirect exposure to soil via sewage sludge transfer is unlikely since the substance is readily biodegradable. As oxalic acid is considered as "readily biodegradable", it can be assumed that it will be biodegraded within the STP process and as a consequence a transfer to the soil compartment is not expected. Therefore, no tests on terrestrial organisms are provided. Toxicity to terrestrial plants EC50 (72 h) for terrestrial plants: 8 mM General effect Oxalic acid has a low log Kow and is readily biodegradable. The substance is not be classified as hazardous for the environment.	
12.2 Persistence and degradability Biodegradability Oxalic acid is readily biodegradable, meeting the 10-d window. The biodegradation in seawater occurs at the same rate. Also anaerobic biodegradation occurs rapidly.	
12.3 Bio accumulative potential Not relevant for oxalic acid because this substance is ready biodegradable and highly soluble in water, and LogKow is negative.	
12.4 Mobility in soil Transport through the medium is rate-limiting. Degradation after 30 days at 20°C is up to 73% (based on CO ₂ evolution). Oxalic acid is easily biodegradable in soil.	
12.5 Results of PBT and vPvB assessment The hazard assessment of oxalic acid reveals neither a need to classify the substance as dangerous to the environment, nor is it a PBT or vPvB substance, nor are there any further indications that the substance may be hazardous to the environment.	
13. DISPOSAL CONSIDERATIONS	
Product Disposal of oxalic acid should be in accordance with local and national legislation. Processing, use or contamination of this product may change the waste management options. Must not be disposed together with household garbage. Do not allow product to reach sewage system. Packaging Dispose of container and unused contents in accordance with federal, state and local requirements. The used packing is only meant for packing this product. After usage, empty the packing completely.	
14. TRANSPORT INFORMATION	
14.1 UN Number ADR, RID, IMDG, IATA	ADR/RID/IMDG/IATA Not classified as dangerous goods
14.2 Proper Shipping Name ADR, RID, IMDG, IATA	ADR/RID/IMDG/IATA Not classified as dangerous goods
14.3 Land transport hazard class ADR, RID	ADR/RID/IMDG/IATA Not classified as dangerous goods
14.4 Maritime transport packing group IMDG	ADR/RID/IMDG/IATA Not classified as dangerous goods
14.5 Air transport ICAO-TI and IATA-DGR	ADR/RID/IMDG/IATA Not classified as dangerous goods
14.6 Special precautions for users	ADR/RID/IMDG/IATA Not classified as dangerous goods
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not classified as dangerous goods	



PRODUCT: OXALIC ACID (OXACDI) REVISION: 6 DATED: 20/09/2023 PAGE 7 OF 7

15. REGULATORY INFORMATION
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Authorisations: Not required Restrictions on use: None Control of Explosive Precursors and Poisons Regulations 2023: This product is classified as a regulated poison. Other EU regulations: Oxalic acid is not a SEVESO substance, not an ozone depleting substance and not a persistent organic pollutant.
15.2 Chemical safety assessment A chemical safety assessment has been carried out for this substance.
16. OTHER INFORMATION
Source of key data used to compile the data sheet Supplier information
Modifications from last revision Section 15 of this datasheet has been updated. Date: 20/09/2023 Copyright© Tennants Distribution Ltd (2023)

