OXALIC ACID 2hydr

Safety Data Sheet

According to SANS 10234:2019 and SANS 11014:2010

Issue date:13/02/2020 Revision date: 13/02/2025 : Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Trade name	:	OXALIC ACID 2hydr
EC-No.	:	205-634-3
EC Index-No.	:	607-006-00-8
CAS-No.	:	6153-56-6
UN-No. (ADR)	:	3261
Product code	:	115030xxx
Formula	:	C2H2O4.2H2O

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

Recommended uses and restrictions : For laboratory use only

1.3. Supplier's details

Labchem (Pty)Ltd
6 Wakefield Road
Founders Hill
1609 Johannesburg - South Africa
T +27 11 452 1116 - F +27 86 588 0293
techlab@labchem.co.za - www.labchem.co.za

1.4. Emergency telephone number

Emergency number : +27 11 452 1116

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Acute toxicity (oral), Category 4	H302
Acute toxicity (dermal) Not classified	
Skin corrosion/irritation, Category 1	H314
Hazardous to the aquatic environment - Acute Hazard Not classified	

Full text of H statements : see section 16

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS-ZA) :

GHS05

GHS07

Signal word (GHS-ZA) : Danger

Hazard statements (GHS-ZA) : H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.

Precautionary statements (GHS-ZA) : P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects : Harmful if swallowed,Causes severe skin burns and eye damage.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance identification codes: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
oxalic acid, dihydrate (Main constituent)	(CAS-No.) 6153-56-6	≥ 99.6	Acute Tox. 4 (Oral), H302 Acute Tox. Not classified (Dermal) Skin Corr. 1, H314 Aquatic Acute Not classified

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists. Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist. Do not apply neutralizing agents. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth with water. Call Poison Information Centre (www.big.be/antigif.html). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : No effects known.

Symptoms/effects after skin contact : Red skin. Burns.

Symptoms/effects after eye contact : Corrosion of the eye tissue. Serious damage to eyes.

Symptoms/effects after ingestion : Gastrointestinal complaints. Diarrhoea. Feeling of weakness. Headache. Mental confusion. Drunkenness. Slurred speech. Burns.

Chronic symptoms : No effects known.

Potential adverse human health effects and symptoms : Harmful if swallowed. Harmful in contact with skin. Causes serious eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam. Water spray. Dry powder. Foam.

Unsuitable extinguishing media : Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD: Not easily combustible. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD: Heating increases the fire hazard. Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard : DIRECT EXPLOSION HAZARD: Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD: Dust cloud can be ignited by a spark. Reactions with explosion hazards: see "Reactivity Hazard".

Hazardous decomposition products in case of fire : Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

Precautionary measures fire	:	Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	:	Cool tanks/drums with water spray/remove them into safety.
Protection during firefighting	:	Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.1.1. For non-emergency personnel

Protective equipment	:	Gloves. Face shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit. Reactivity hazard: compressed air/oxygen apparatus. Reactivity hazard: gas-tight suit.
Emergency procedures	:	Ventilate spillage area. Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	:	Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Powdered form: no compressed air for pumping over spills. Hazardous reaction: measure explosive gas-air mixture. If reacting: dilute combustible/toxic gases/vapours. Take account of toxic/corrosive precipitation water.
Methods for cleaning up	:	Mechanically recover the product. Prevent dispersion by covering with dry sand/earth. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
Other information	:	Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Avoid raising dust. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Powdered form: no compressed air for pumping over. Keep container tightly closed. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
Hygiene measures	:	Observe normal hygiene standards. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Store locked up. Store in a well-ventilated place. Keep cool.
Storage area	:	Store in a dry area. Store in a dark area. Keep container in a well-ventilated place. Meet the legal requirements.
Heat and ignition sources	:	KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Information on mixed storage	:	KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. metals. water/moisture.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. watertight. dry. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	:	SUITABLE MATERIAL: polyethylene. MATERIAL TO AVOID: iron. copper. bronze.
Storage temperature	:	20 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OXALIC ACID 2hydr (6153-56-6)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	oxalic acid, dihydrate

OXALIC ACID 2hydr (6153-56-6)	
OEL TWA (mg/m³)	1 mg/m³ 1
OEL STEL (mg/m³)	2 mg/m³ 2
Regulatory reference	Government Notice. R: 1179

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Materials for protective clothing : GIVE GOOD RESISTANCE: neoprene. nitrile rubber. PVC

Hand protection : Gloves

Eye protection : Face shield. In case of dust production: protective goggles

Skin and body protection : Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing

Respiratory protection : Dust production: dust mask with filter type P2. On heating: full face mask

Personal protective equipment symbol(s):

8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Crystalline solid.

Molecular mass : 126.07 g/mol

Colour : Colourless to white.

Odour : Odourless.

Odour threshold : No data available

pH : 1 (13 %)

pH solution : No data available

Relative evaporation rate (butylacetate=1) : No data available

Relative evaporation rate (ether=1) : No data available

Melting point : Not applicable (decomposes)

Freezing point : Not applicable

Boiling point : Not applicable

Flash point : Not applicable

Auto-ignition temperature : > 400 °C (1013 hPa, Equivalent or similar to EU Method A.16)

Decomposition temperature : 98 – 100 °C (Loss of water, Equivalent or similar to OECD 102, 1013 hPa)

Flammability (solid, gas) : Non flammable.

Vapour pressure : < 0.1 hPa (25 °C)

Vapour pressure at 50 °C : No data available

Relative vapour density at 20 °C : 4.3

Relative density : 1.9 (25 °C, Anhydrous form, Calculated)

Relative density of saturated gas/air mixture : No data available

Density : 1900 kg/m³ (25 °C, Anhydrous form, OECD 108: Complex Formation Ability in Water)

Relative gas density : No data available

Solubility : Soluble in water. Soluble in ethanol.
Water: 10.8 g/100ml (25 °C, Calculated)
Ethanol: 40 g/100ml

Partition coefficient n-octanol/water (Log Pow) : -1.7 (Anhydrous form, Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 23 °C)

Partition coefficient n-octanol/water (Log Kow) : No data available

Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	Not applicable
Lower explosive limit (LEL)	:	No data available
Upper explosive limit (UEL)	:	No data available

9.2. Other information

Sublimation point	:	≥ 160 °C (1013 hPa, Anhydrous form, Equivalent or similar to OECD 102)
VOC content	:	0 %
Other properties	:	May sublimate. Acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with (strong) oxidizers. Reacts violently with alkali metals, mercury and furfuryl alcohol. Reacts with silver.

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Harmful if swallowed.
Acute toxicity (dermal)	:	Not classified.
Acute toxicity (inhalation)	:	Not classified

OXALIC ACID 2hydr (6153-56-6)	
LD50 oral rat	475 mg/kg bodyweight (Rat, Male, Experimental value, Anhydrous form, Oral)
LD50 dermal rabbit	20000 mg/kg bodyweight (Rabbit, Experimental value, Anhydrous form, Dermal)

Skin corrosion/irritation	:	Causes severe skin burns. pH: 1 (13 %)
Serious eye damage/irritation	:	Assumed to cause serious eye damage pH: 1 (13 %)
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified
Potential adverse human health effects and symptoms	:	Harmful if swallowed. Harmful in contact with skin. Causes serious eye damage.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	:	Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008. Before neutralisation, the product may represent a danger to aquatic organisms.
Ecology - air	:	Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Photolysis in the air. Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water	:	Slightly harmful to crustacea. Slightly harmful to fishes. Groundwater pollutant. Slightly harmful to algae. pH shift. Photolysis in water.
Hazardous to the aquatic environment, short-term (acute)	:	Not classified.
Hazardous to the aquatic environment, long-term (chronic)	:	Not classified

OXALIC ACID 2hydr (6153-56-6)	
LC50 fish 1	160 mg/l (48 h, Leuciscus idus, Static system, Fresh water, Experimental value, Anhydrous form)
LC50 other aquatic organisms 1	5330 mg/l (96 h, Xenopus laevis, Fresh water, Experimental value, Anhydrous form)
EC50 Daphnia 1	162.2 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Fresh water, Experimental value, Anhydrous form)
Partition coefficient n-octanol/water (Log Pow)	-1.7 (Anhydrous form, Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 23 °C)

12.2. Persistence and degradability

OXALIC ACID 2hydr (6153-56-6)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water. Readily biodegradable in water in anaerobic conditions.

12.3. Bioaccumulative potential

OXALIC ACID 2hydr (6153-56-6)	
Partition coefficient n-octanol/water (Log Pow)	-1.7 (Anhydrous form, Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 23 °C)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

OXALIC ACID 2hydr (6153-56-6)	
Mobility in soil	No additional information available
Surface tension	70.1 N/m (25 °C, 0.015 mol/l)
Partition coefficient n-octanol/water (Log Pow)	-1.7 (Anhydrous form, Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 23 °C)
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

Ozone	:	Not classified
Other adverse effects	:	No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	:	Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery.
Additional information	:	Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
3261	3261	3261
14.2. Proper Shipping Name		
CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.	Corrosive solid, acidic, organic, n.o.s.
14.3. Transport hazard class(es)		
8	8	8
		

SANS	IMDG	IATA
		Not applicable
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No :	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

- SANS

Transport regulations (UN)	: Not subject
Special provisions (SANS)	: 274
Limited quantities (SANS)	: 1 kg
Limited quantities (SANS)	: 1 kg
Packagings, large packagings and IBCs Packing instructions (SANS)	: P002, IBC08
Packagings, large packagings and IBCs Special packing instructions (SANS)	: B2, B4
Portable tank and bulk containers instructions (SANS)	: T3
Portable tank and bulk container special provisions (SANS)	: TP33

- IMDG

Transport regulations (IMDG)	: Not subject
Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 1 kg
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B21, B4
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	: B
Properties and observations (IMDG)	: Causes burns to skin, eyes and mucous membranes.

- IATA

Transport regulations (IATA)	: Not subject
PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y844
PCA limited quantity max net quantity (IATA)	: 5kg
PCA packing instructions (IATA)	: 859
PCA max net quantity (IATA)	: 15kg
CAO packing instructions (IATA)	: 863
CAO max net quantity (IATA)	: 50kg
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

Regulatory reference : SANS 10234:2008; SANS 11014:2010; SANS 10228:2012;SANS 10229:2010; SANS 10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National Road Traffic Act 93 of 1996.

SECTION 16: Other information

Issue date : 13/02/2020

Revision date : 13/02/2025

Full text of H-statements:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

SDS South Africa

The data provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The data relates to the specific product as named and is ntended as a guide to the safe handling of the product in all its facets. The data may no longer be valid if the product is used in any process or in combination with other products.This SDS is not a quality specification nor any form of guarantee.