

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
 Trade name : ProKlenz® TWO Acid Cleaner and Disinfectant
 Product code : 1425

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

Use of the substance/mixture : Acid Cleaner and Disinfectant

1.3. Details of the supplier of the safety data sheet

STERIS Corporation
 P. O. Box 147, St. Louis, MO 63166, US
 Telephone Number for Information: 1-800-444-9009 (Customer Service-Scientific Products)

1.4. Emergency telephone number

Emergency number : US Emergency Telephone No.1-314-535-1395 (STERIS); 1-800-424-9300 (CHEMTREC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Met. Corr. 1 H290
 Skin Corr. 1A H314
 Eye Dam. 1 H318

2.2. Label elements – This label is regulated by the EPA under FIFRA. Refer to Section 15.

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Danger
 Hazard statements (GHS-US) : H290 - May be corrosive to metals
 H314 - Causes severe skin burns and eye damage.
 Precautionary statements (GHS-US) : P234 - Keep only in original container
 P260 - Do not breathe mist, spray, vapours
 P264 - Wash hands thoroughly after handling
 P280 - Wear protective gloves/protective clothing and eye/face protection
 P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water
 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
 P390 - Absorb spillage to prevent material damage
 P405 - Store locked up.

2.3. Other hazards

No additional information available.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable.

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Citric acid	(CAS No) 77-92-9 (REACH No) 01-2119457026-42-0067	15 - 40	Eye Irrit. 2A, H319
Oxalic acid	(CAS No) 144-62-7	0.1 – 1.5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Dam. 1, H318

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
 First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Get medical attention.

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First-aid measures after skin contact	: Immediately flush skin with plenty of water for at least 15 minutes. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention.
First-aid measures after eye contact	: In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately get medical attention.
First-aid measures after ingestion	: If victim completely conscious/alert. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. Give water or milk if the person is fully conscious.

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

Symptoms/injuries	: Symptoms may be delayed. Corrosive to eyes and skin. Causes severe skin burns and eye damage.
Symptoms/injuries after inhalation	: Toxic if inhaled.
Symptoms/injuries after skin contact	: Corrosive to eyes and skin.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. Irritating to the respiratory system, may cause throat pain and cough.

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

No additional information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire. Foam. Dry powder. Carbon dioxide. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Thermal decomposition generates: Fume. Carbon monoxide. Carbon dioxide. Sulfur oxides. Nitrogen oxides.
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5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protective equipment for firefighters	: Use self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Very flammable gas (hydrogen) may be formed on contact with metals.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Do not breathe fumes, vapors. Avoid contact with skin, eyes and clothes.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear protective gloves and eye/face protection. For further information refer to Section 8: "Exposure controls/personal protection".
Emergency procedures	: Stop leak if safe to do so. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Leftovers: Neutralize with sodium bicarbonate. Neutralize with dry sodium carbonate. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Absorb spillage to prevent material damage. Collect spillage. Store away from other materials. Comply with applicable local, national and international regulation.
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6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: May be corrosive to metals.
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Precautions for safe handling : Product for industrial use only. Read label before use. Provide good ventilation in process area to prevent formation of vapor. Avoid all eye and skin contact and do not breathe vapor and mist. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene measures : Take care for general good hygiene and housekeeping. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.

Storage conditions : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use. Always store pesticides in the original container. If a leaky container, must be contained with another, mark outer container and identify the contents.

Incompatible materials : Strong oxidizing agents. Strong bases. Aluminium.

Storage area : Store in dry, cool, well-ventilated area.

Special rules on packaging : Correctly labelled.

Packaging materials : Keep only in the original container. Store in corrosive resistant container with a resistant inner liner.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Oxalic acid (144-62-7)		
USA ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³
USA ACGIH	ACGIH STEL (mg/m ³)	2 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³

8.2. Exposure controls

Appropriate engineering controls : Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Avoid all unnecessary exposure. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Protective clothing. Gloves. Protective goggles.



Hand protection : Wear rubber gloves.

Eye protection : Wear chemical splash goggle.

Skin and body protection : Wear suitable protective clothing. Wear long sleeves. Boots.

Respiratory protection : Work in well-ventilated zones or use proper respiratory protection. Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear

Color : Light straw

Odor : Slight chemical odor

Odor threshold : No data available

pH : 1.2 Approximately

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

Melting point : No data available

Freezing point : No data available

Boiling point : 99 °C (210.2 °F)

Flash point : No data available

Self ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

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Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: ca. 1.18 g/ml Specific Gravity
Solubility	: Water: Completely soluble
Log Pow	: No data available
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	: No data available.

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizers. Strong bases. Aluminium.

10.6. Hazardous decomposition products

Thermal decomposition generates: Corrosive vapours. Phosphorous oxide. Fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

ProKlenz® TWO Acid Cleaner and Disinfectant	
LD50 oral rat	> 2000 mg/kg

Sodium xylene sulfonate (1300-72-7)	
LD50 oral rat	7200 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE (oral)	7200.000 mg/kg bodyweight

Oxalic acid (144-62-7)	
LD50 oral rat	7500 mg/kg
LD50 dermal rat	20000 mg/kg
ATE (oral)	500.000 mg/kg bodyweight
ATE (dermal)	1100.000 mg/kg bodyweight

Skin corrosion/irritation	: Causes severe skin burns and eye damage pH: 1.2 Approximately
Serious eye damage/irritation	: Causes serious eye damage pH: 1.2 Approximately
Respiratory or skin sensitisation	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified.

Sodium xylene sulfonate (1300-72-7)	
National Toxicity Program (NTP) Status	1

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Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Harmful if swallowed
Symptoms/injuries after inhalation	: Toxic if inhaled
Symptoms/injuries after skin contact	: Corrosive to eyes and skin
Symptoms/injuries after eye contact	: Causes serious eye damage
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. Irritating to the respiratory system, may cause throat pain and cough.

SECTION 12: Ecological information

12.1. Toxicity

Citric acid (77-92-9)	
LC50 fishes 1	1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [Static])
EC50 Daphnia 1	120 mg/l (Exposure time: 72 h - Species: Daphnia magna)
Sodium xylene sulfonate (1300-72-7)	
EC50 Daphnia 1	> 1020 mg/l 48 hours
NOEC (acute)	470 48 hours- daphnia
Oxalic acid (144-62-7)	
EC50 Daphnia 1	125 - 150 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

12.2. Persistence and degradability

ProKlenz® TWO Acid Cleaner and Disinfectant	
Persistence and degradability	The surfactant(s) contained in this preparation complies (comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

12.3. Bioaccumulative potential

ProKlenz® TWO Acid Cleaner and Disinfectant	
Bioaccumulative potential	Not established.
Citric acid (77-92-9)	
Log Pow	-1.72 (at 20 °C)
Oxalic acid (144-62-7)	
BCF fish 1	(no bioaccumulation)
Log Pow	-0.81 (at 30 °C)

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Pesticide Disposal : Pesticide wastes may be hazardous. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

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- Container Disposal : (For ≤5 gal.) Nonrefillable container. Do not reuse or refill this container. Triple rinse container promptly after emptying. Triple rinse as follows: Fill container ¼ full with water and recap. Shake for 10 seconds. Drain for 10 seconds after the flow begins to drip. Follow Pesticide Disposal instructions for rinsate disposal. Repeat procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill by incineration.
(For > 5 gal.) Nonrefillable container. Do not reuse this container. Triple rinse container promptly after emptying. Triple rinse as follows: Empty remaining content into application equipment or mix tank. Fill container ¼ full with water. Replace and tighten closure. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank and store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill by incineration.
- Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

- UN-No.(DOT) : 3265
DOT NA no. UN3265

14.2. UN proper shipping name

- DOT Proper Shipping Name : UN3265, Corrosive Liquid, Acidic, Organic, N.O.S. (Citric Acid Solution), 8, PG III
Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT) : 8 - Corrosive substances.



- DOT Symbols : G - Identifies PSN requiring a technical name
Packing group (DOT) : III - Minor Danger
DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 241

14.3. Additional information

- Other information : Corrosive.
Special transport precautions : 4 x 1 gal package not approved for air shipment.

Overland transport

- Packing group (ADR) : III
Class (ADR) : 8 - Corrosive substances.
Hazard identification number (Kemler No.) : 80
Classification code (ADR) : C3

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Danger labels (ADR) : 8 - Corrosive substances.



Orange plates :



Tunnel restriction code : E

Excepted quantities (ADR) : E1

Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 5 L
(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 4 x 1 gal package not approved for air shipment

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture

EPA FIFRA Pesticide Product Notice	This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.
EPA FIFRA Signal Word	Danger.
EPA FIFRA Hazard Statements	Keep Out of Reach of Children.
EPA FIFRA Precautionary Statements	Hazard to Humans and Domestic Animals.
	Corrosive.
	Causes irreversible eye damage and skin burns.
	Harmful if inhaled.
	Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.
	Do not get in eyes, on skin, or on clothing.
	Avoid breathing spray mist.
	Wear protective eyewear such as goggles, face shield, or safety glasses.
	Coveralls worn over long-sleeve shirt and long pants, socks, chemical-resistant footwear, chemical resistant gloves (Barrier Laminate, or Butyl Rubber, or Neoprene Rubber or Polyvinyl Chloride (PVC), or Vitron).
	Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
	Remove and wash contaminated clothing before reuse.

15.2. US Federal regulations

Citric acid (77-92-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sodium xylene sulfonate (1300-72-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Oxalic acid (144-62-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.3. International regulations

Not applicable.

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15.4. US State regulations

Not applicable.

SECTION 16: Other information

Revision Date : 11/07/2019

Sources of Key data : None.

Other information : None.

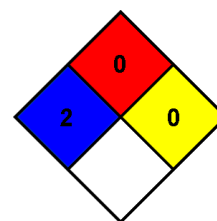
Full text of H-phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H290	May be corrosive to metals
H302	May be harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



SDS US (GHS HazCom 2012)

The information on this sheet is not a specification and does not guarantee specific properties. The information is intended to provide general knowledge as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product or where instruction or recommendations are not followed.