

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

1.1. Product identifier

Product form : Mixture
 Trade name : ProKlenz® TWO – High Performance Acid Detergent
 Product code : 1422
 Product group : Trade product

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Product for industrial use only
 Use of the substance/mixture : High Performance Acid Detergent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer:

STERIS Corporation
 P. O. Box 147, St. Louis, MO 63166, US
 Telephone Number for Information: 1-800-444-9009 (Customer Service-Scientific Products)
 US Emergency Telephone No.1-314-535-1395 (STERIS); 1-800-424-9300 (CHEMTREC)

Supplier:

STERIS Ireland Limited
 IDA Business and Technology Park
 Tullamore
 County Offaly
 R35 X865
 Ireland.
 Product/Technical Information Phone No: +44 (0) 116 276 8636
 Email: asksteris_msds@steris.com

1.4. Emergency telephone number

Emergency number : +44 (0) 1895 622 639

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

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

Full text of H-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger
 Hazard statements (CLP) : H290 - May be corrosive to metals (Aluminum)
 H314 - Causes severe skin burns and eye damage
 Precautionary statements (CLP) : P234 - Keep only in original container
 P260 - Do not breathe dust, mist, vapours
 P264 - Wash hands thoroughly after handling

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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 victim to fresh air and keep at rest in a position 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

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	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Citric acid	(CAS No) 77-92-9 (EC no) 201-069-1 (REACH No) 01-2119457026-42-0067	15 - 40	Eye Irrit. 2, H319
Oxalic acid	(CAS No) 144-62-7 (EC no) 205-634-3 (EC index no) 607-006-00-8	0,1 - 1,5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Dam. 1, H318

Full text of H-phrases: see section 16

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
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

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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

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. Neutralise 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

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

Precautions for safe handling : Product for industrial use only. Read label before use. Provide good ventilation in process area to prevent formation of vapour. Avoid all eye and skin contact and do not breathe vapour and mist. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact during pregnancy/while nursing

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

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)		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³
Italy - Portugal - USA ACGIH	ACGIH STEL (mg/m ³)	2 mg/m ³
USA IDLH	US IDLH (mg/m ³)	500 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	2 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³
United Kingdom	WEL TWA (mg/m ³)	1 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	2 mg/m ³

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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. The following pictograms represent the minimum requirements for personal protective equipment. 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
- Colour : Light straw
- odour : Slight chemical odor
- Odour 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
- Vapour pressure : No data available
- Relative vapour 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

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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

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LD50 oral rat	> 2000 mg/kg
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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
Based on available data, the classification criteria are not met

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

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)

Oxalic acid (144-62-7)

EC50 Daphnia 1	125 - 150 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
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12.2. Persistence and degradability

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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
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established
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according to Regulation (EC) No. 453/2010

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. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

: Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations
Additional information : Unused product : Hazardous waste (corrosive) based on pH
Ecology - waste materials : Avoid release to the environment

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No : 3265
UN-No.(IATA) : 3265
UN-No. (IMDG) : 3265

14.2. UN proper shipping name

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Transport document description : UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Organic N.O.S. (Citric Acid Solution)), 8, III, (E)

14.3. Transport hazard class(es)

Class (UN) : 8
Class (IMDG) : 8
Hazard labels (UN) : 8



14.4. Packing group

Packing group (UN) : III

14.5. Environmental hazards

Other information : Corrosive

14.6. Special precautions for user

Special transport precautions : 4 x 1 gal package not approved for air shipment

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 80
Classification code (UN) : C3
Orange plates :



Special provision (ADR) : 274
Transport category (ADR) : 3
Tunnel restriction code : E
Limited quantities (ADR) : 5L
Excepted quantities (ADR) : E1

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EAC code : 2X

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

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 regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Contains no REACH candidate substance

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Revision Date : 10/25/2018

Sources of Key data : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Other information : None

Full text of H- and EUH-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. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H290	May be corrosive to metals
H302	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

SDS EU (REACH Annex II)

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.