

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

1.1. Product identifier

Product form : Mixture
 Trade name : Cage-Klenz™ 200
 Product code : 1K20

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 : Acid-Based Process and Research Cleaner

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
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Corr. 1B	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

GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H290 - May be corrosive to metals
 H302+H312+H332 - Harmful if swallowed or in contact with skin or if inhaled
 H314 - Causes severe skin burns and eye damage

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Precautionary statements (CLP)	: P234 - Keep only in original container P260 - Do not breathe dust, mist, vapours P261 - Avoid breathing mist, vapours P264 - Wash hands thoroughly after handling P270 - Do not eat, drink or smoke when using this product P280 - Wear protective gloves/protective clothing and eye/face protection P301+P312 - If swallowed, call a doctor if you feel unwell P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting 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. P363 - Wash contaminated clothing before reuse P390 - Absorb spillage to prevent material damage P406 - Store in corrosive resistant container with a resistant inner liner P501 - Dispose of contents/container to comply with applicable local, national and international regulation.
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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]
Phosphoric acid	(CAS No) 7664-38-2 (EC no) 231-633-2 (EC index no) 015-011-00-6 (REACH No) 01-2119485924-24-0098	30 - 60	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation:dust,mist), H331 Skin Corr. 1B, H314
Citric acid	(CAS No) 77-92-9 (EC no) 201-069-1 (REACH No) 01-2119457026-42-0067	3 - 7	Eye Irrit. 2, H319

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.

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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. Phosphorous oxide.

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.

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.
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

Phosphoric acid (7664-38-2)		
USA ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³
USA ACGIH	ACGIH STEL (mg/m ³)	3 mg/m ³
USA IDLH	US IDLH (mg/m ³)	1000 mg/m ³

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Phosphoric acid (7664-38-2)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	3 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

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 of suitable material, such as butyl, natural, neoprene, nitrile, polyethylene, polyvinyl chloride
- 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 to hazy
- Colour : Colourless
- Odour : Mild odor, characteristic
- Odour threshold : No data available
- pH : No data available
- pH solution : Approximately 2 (1% solution)
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- 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. 1,34 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.

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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 : Harmful if swallowed. Harmful if inhaled.

Cage-Klenz™ 200	
LD50 oral rat	> 1000 mg/kg
ATE (oral)	500,000 mg/kg bodyweight
ATE (dust,mist)	1,500 mg/l/4h

Phosphoric acid (7664-38-2)	
LD50 oral rat	1530 mg/kg
LD50 dermal rabbit	2730 mg/kg
LC50 inhalation rat (mg/l)	> 0,85 mg/l (Exposure time: 1 h)
ATE (oral)	1530,000 mg/kg bodyweight
ATE (dermal)	2730,000 mg/kg bodyweight
ATE (dust,mist)	0,850 mg/l/4h

Skin corrosion/irritation	: Causes severe skin burns and eye damage pH: 2
Serious eye damage/irritation	: Causes serious eye damage Causes severe skin burns and eye damage pH: 2
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)

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Phosphoric acid (7664-38-2)	
LC50 fishes 1	3 - 3,5 mg/l (Exposure time: 96 h - Species: Gambusia affinis)
EC50 Daphnia 1	4,6 mg/l (Exposure time: 12 h - Species: Daphnia magna)

12.2. Persistence and degradability

Cage-Klenz™ 200	
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

Cage-Klenz™ 200	
Bioaccumulative potential	Not established.

Citric acid (77-92-9)	
Log Pow	-1,72 (at 20 °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

Other Information : 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 : 1805
UN-No.(IATA) : 1805
UN-No. (IMDG) : 1805

14.2. UN proper shipping name

Proper Shipping Name : PHOSPHORIC ACID, LIQUID
Transport document description : UN 1805 PHOSPHORIC ACID, LIQUID, 8, III

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) : C1

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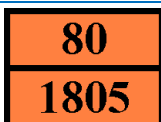
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Orange plates

:



Transport category (ADR)

: 3

Tunnel restriction code

: E

Limited quantities (ADR)

: 5L

Excepted quantities (ADR)

: E1

EAC code

: 2R

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

: 10/24/2018

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. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) 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. 1B	Skin corrosion/irritation Category 1B
H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled

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.