

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

1.1. Product identifier

Product form : Mixture
Product name : H-Klenz® II Instrument Detergent
Product code : 1208

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

Use of the substance/mixture : Instrument Detergent. For professional use only.

1.3. Details of the supplier of the safety data sheet

STERIS Corporation
Official Mailing Address:
P.O. Box 147
St. Louis, MO 63166 USA

Street Address:
7501 Page Avenue
St. Louis, MO 63133 USA

Telephone Number for Information: 1-800-548-4873 (Customer Service-Healthcare Products)
web: www.steris.com
email: asksteris_msds@steris.com

1.4. Emergency telephone number

Emergency number : 1-314-535-1395 or CHEMTREC: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Skin Corr. 1B H314
Eye Dam. 1 H318
STOT SE 3 H335

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

GHS07

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H335 - May cause respiratory irritation

Precautionary statements (GHS-US) : P260 - Do not breathe vapors, spray, mist.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves, protective clothing, eye protection.
P284 - In case of inadequate ventilation, wear respiratory protection.
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 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.

2.3. Other hazards

Other hazards not contributing to the classification : May be corrosive to respiratory tract.

2.4. Unknown acute toxicity (GHS-US)

No data available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Sodium metasilicate	(CAS No) 6834-92-0	15 - 25	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335
Aminotri(methylenephosphonic acid)	(CAS No) 6419-19-8	4 - 10	Met. Corr. 1, H290 Skin Irrit. 2, H315 Eye Irrit. 2A, 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 if possible).
- First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Remove contaminated clothing and shoes. Immediately flush skin with plenty of water for at least 60 minutes. Immediately call a POISON CENTER or doctor.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

- Symptoms/injuries : Corrosive to eyes, respiratory system and skin.
- Symptoms/injuries after inhalation : May be corrosive to the respiratory tract.
- Symptoms/injuries after skin contact : Causes skin burns.
- Symptoms/injuries after eye contact : Causes serious eye damage.
- Symptoms/injuries after ingestion : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

If medical advice is needed, have product container or label at hand.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not flammable.
- Explosion hazard : Product is not explosive.
- Reactivity : Violent exothermic reaction with water (moisture): release of corrosive gases/vapours. Reacts exothermically with (some) acids.

5.3. Advice for firefighters

- Precautionary measures fire : Exercise caution when fighting any chemical fire.
- Firefighting instructions : Do not allow run-off from fire fighting to enter drains or water courses. Do not get water inside containers. Do not apply water stream directly at source of leak.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray. Do not allow contact with incompatible materials (see section 10).

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6.1.1. For non-emergency personnel

- Protective equipment : Use appropriate personal protection equipment (PPE).
Emergency procedures : Evacuate unnecessary personnel. Eliminate ignition sources.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Cautiously neutralize spilled liquid. Absorb and/or contain spill with inert material, then place in suitable container.
Methods for cleaning up : Clear up spills immediately and dispose of waste safely.

6.4. Reference to other sections

See heading 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Corrosive vapors are released. May be corrosive to metals.
Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store away from incompatible materials. Storage areas should be periodically checked for corrosion and integrity.
Incompatible products : Strong acids, strong bases, strong oxidizers.

7.3. Specific end use(s)

- Use of the substance/mixture : Instrument Detergent. For professional use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sodium metasilicate (6834-92-0)		
USA ACGIH	TLV	Not applicable
USA OSHA	PEL	Not applicable
USA NIOSH	REL	Not applicable
USA NIOSH	IDLH	Not applicable

8.2. Exposure controls

- Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide sufficient ventilation to keep vapors below permissible exposure limit. Ensure all national/local regulations are observed.
Personal protective equipment : Protective clothing. Safety goggles. Gloves. Insufficient ventilation: wear respiratory protection.



- Materials for protective clothing : Chemically resistant materials and fabrics.
Hand protection : Wear chemically resistant protective gloves. Rubber gloves.
Eye protection : Chemical goggles.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.
Other information : When using, do not eat, drink or smoke.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Pale Orange
Odor	: Slight Amine
Odor threshold	: No data available
pH	: 11.3 - 11.9
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Specific Gravity	: 1.287g/ml (water = 1)
Solubility	: Complete in water.
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
Oxidizing properties	: No data available
Explosive limits	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

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

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂). Corrosive vapors. Sodium oxides. Phosphorus oxides. Silicon oxides. Nitrogen compounds. Hydrogen gas.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

H-Klenz® II Instrument Detergent	
LD50 oral rat	2000 - 5000
LD50 dermal rat	2000 - 5000
Aminotri(methylenephosphonic acid) (6419-19-8)	
LD50 oral rat	2100 mg/kg

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Aminotri(methylenephosphonic acid) (6419-19-8)	
LD50 dermal rabbit	> 6310 mg/kg

Sodium metasilicate (6834-92-0)	
LD50 oral rat	1153

Skin corrosion/irritation	: Causes severe skin burns and eye damage pH: 11.3 - 11.9
Serious eye damage/irritation	: Causes serious eye damage pH: 11.3 - 11.9
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause respiratory irritation
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May be corrosive to the respiratory tract
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

SECTION 12: Ecological information

12.1. Toxicity

Aminotri(methylenephosphonic acid) (6419-19-8)	
LC50 fish 1	8132 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	297 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	330 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Sodium metasilicate (6834-92-0)	
LC50 fish 1	210 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static])
LC50 fish 2	210 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Aminotri(methylenephosphonic acid) (6419-19-8)	
BCF fish 1	18 - 24
Log Pow	-3.53 (at 25 °C)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer	: No additional information available
Effect on the global warming	: No known ecological damage caused by this product.
Other information	: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Dispose of waste material in accordance with all local, regional, national, and international regulations.
Additional information	: RCRA Waste Code: D002 (Corrosive Material).

SECTION 14: Transport information

In accordance with DOT	
Transport document description	: UN 3266, Corrosive Liquid, Basic, Inorganic, N.O.S. (sodium metasilicate) 8, PGIII

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DOT NA no. : UN 3266
 DOT Proper Shipping Name : Compounds, cleaning liquid
 (Contains Aminotri(methylenephosphonic acid) and Sodium metasilicate)
 Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136
 Hazard labels (DOT) : 8 - Corrosive



DOT Symbols : D - Proper shipping name for domestic use only, G - Identifies PSN requiring a technical name
 Packing group (DOT) : III - Danger

Additional information

Transport by sea

UN-No. (IMDG) : 3266
 Proper Shipping Name (IMDG) : Corrosive Liquid, Basic, Inorganic, N.O.S. (sodium metasilicate)
 Class (IMDG) : 8 - Corrosive substances
 Packing group (IMDG) : III - Danger

Air transport

UN-No. (IATA) : 3266
 Proper Shipping Name (IATA) : Corrosive Liquid, Basic, Inorganic, N.O.S. (sodium metasilicate)
 Class (IATA) : 8 - Corrosives
 Packing group (IATA) : III - Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

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SARA Section 311/312 Hazard Classes : Immediate (acute) health hazard

15.2. International regulations

No additional information available

15.3. US State regulations

Not applicable

SECTION 16: Other information

Revision Date : 10/30/2015
 Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Full text of H-phrases: see section 16:

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. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory 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.



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NFPA Reactivity

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

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.