SAFETY DATA SHEET

1 IDENTIFICATION

GHS Product Identifier

VETSCAN SA Cleaner

Other means of identification

Abaxis PN: 1550-9102

Recommended use of the chemical and restriction on use

A cleaning agent for use with the Abaxis VetScan SA analyzer

Supplier's details

Company Information:	Abaxis, Inc. 3240 Whipple Road Union City, CA 94587, USA Tel: +1-510-675-6500 Fax: +1-510-441-6150	ABAXIS Europe GmbH Bunsenstr. 9-11 64347 Griesheim, Germany Tel: +49 6155 780 21 0 (EU) Fax: +49 6155 780 21 111
Customer Support:	+1-800-822-2947 (US), abaxis@abaxis.com	Tel: +49 6155 780 21 0 (EU) abaxis@abaxis.de
Emergency phone number	+1-800-822-2947 (US)	+49 6155 780 21 0 (EU) This number is available only during business hours (9:00am to 5:00pm UTC)

2 HAZARD(S) IDENTIFICATION

Classification of the substance or mixture: liquid mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Health Hazards

- Skin Corrosion/Irritation Category 1B
- Serious Eye Damage/Irritation Category 1

Physical Hazards

Corrosive to Metals Category 1

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS label elements

DANGER

H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

May be corrosive to metals
Causes severe skin burns and eye damage
Keep only in original container.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.
IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.
Dispose of contents/container to in accordance with all federal, provincial, and/or local regulations

3 COMPOSITION/INFORMATION ON INGREDIENTS

Description	CAS Number	EINECS Number	%	Note
Sodium Hypochlorite	7681-52-9		0 – 20.00	Skin corrosion (Category 1B), H314 Serious eye damage (Category 1), H318 Acute aquatic toxicity (Category 1), H400 Chronic aquatic toxicity (Category 1), H410
Other non-hazardous ingredients			0-80.00	Not applicable

4 FIRST-AID MEASURES

Inhalation

Can release corrosive chlorine gas. Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure. Seek immediate medical attention.

Skin Contact / Absorption

Immediately flush with lukewarm, gently flowing water for at least 30 minutes. Under running water, remove contaminated clothing, shoes and leather goods. Seek immediate medical attention. Completely decontaminate clothing, shoes and leather goods before reuse, or discard.

Eye Contact

Immediately flush eye(s) with lukewarm, gently flowing water for 30 minutes while forcibly holding the eyelids open to ensure complete irrigation of the eye tissue. If a contact lens is present, remove only if easy to do so. Seek immediate medical attention.

Ingestion

NEVER give anything by mouth if victim is rapidly losing consciousness, is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 240 to 300 mL (8 to 10 oz.) of water to dilute material in stomach. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Rinse mouth and repeat administration of water. Quickly transport victim to an emergency care facility.

Additional Information

Provide general supportive measures (comfort, warmth, rest). Consult a doctor and/or the nearest Poison Control Center for all exposures except minor instances of inhalation or skin contact.

Most important symptoms/effects, acute and delayed

When ingested or inhaled, nausea and vomiting, these symptoms may be delayed. When in contact with skin or eyes; acute pain and burns or blisters will occur.

5 FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Sodium hypochlorite solutions do not burn. Extinguish fire using extinguishing agents suitable for the surrounding fire and not contraindicated for use with sodium hypochlorite. Cool exposed containers with water.

Unsuitable Extinguishing Media

DO NOT use dry chemical fire extinguishing agents containing ammonium compounds (such as some A:B:C agents), since an explosive compound can be formed.

Specific hazards arising from the chemical

Sodium hypochlorite decomposes when heated, giving off corrosive chlorine and hydrogen chloride. Solutions decompose when exposed to sunlight, giving off oxygen gas. However, the amount of oxygen produced is not sufficient to cause combustion. Explosive decomposition may occur under fire conditions and closed containers may rupture violently due to a rapid decomposition, if exposed to fire or excessive heat for a sufficient period of time.

Special protective actions for fire-fighters

Wear NIOSH-approved self-contained breathing apparatus and protective clothing. The decomposition products of sodium hypochlorite, such as chlorine and hydrogen chloride are extremely hazardous to health. Do not enter without wearing specialized protective equipment suitable for the situation. Firefighter's normal protective equipment. (Bunker Gear) will not provide adequate protection.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions

Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so.

Environmental Precautions

Prevent material from entering sewers or confined spaces. Notify local health and wildlife officials. Notify operators of nearby water intakes.

Methods for Containment and Clean Up

SMALL SPILLS: Clean up spill with non-reactive absorbent and place in suitable, covered, labelled containers. Flush area with water. Contaminated absorbent material may pose the same hazards as the spilled product. Small spills of sodium hypochlorite solutions can be broken down by covering it with a reducing agent such as sodium thiosulfate, sodium metabisulfite, or a ferrous salt. With the sulfite or ferrous salt, add some dilute (2 M) sulfuric acid to speed up the reaction. Transfer the mixture into large containers of water and neutralize with soda ash (sodium carbonate).

LARGE SPILLS: Contact fire and emergency services and supplier for advice.

7 HANDLING AND STORAGE

Precautions for safe handling

This material is a CORROSIVE liquid. Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Avoid generating mists. Prevent the release of mists into the workplace air. Inspect containers for damage or leaks before handling. Label containers. Never add water to a corrosive. Always add corrosives to water. When mixing with water, stir small amounts in slowly. Use cold water to prevent excessive heat generation. Never return contaminated material to its original container. Have suitable emergency equipment for fires, spills and leaks readily available.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Strong solutions (greater than 10% available chlorine) may slowly give off chlorine during storage, especially when warm (above 18°C). Vent caps may be required to prevent a build-up of pressure that could cause containers to burst. Always store in original labelled container. Keep containers tightly closed when not in use and when empty. Empty containers may contain hazardous residues. Protect label and keep it visible.

Incompatibilities

Primary amines, aromatic amines, ammonium salts, phenylacetonitril, ammonia, urea, phenylacetonitrile, acids, metals, reducing agents, ethyleneimine, methanol, formic acid, furfuraldehyde, ethandiol, sodium ethylenedioaminetetracetate solution, sodium hydroxide solution.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Sodium hypochlorite	AIHA	WEEL-STEL	2mg/m3 (15 min)
Chlorine	ACGIH	TLV-TWA	0.5 ppm

Appropriate engineering controls

Ventilation Requirements

Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.

Other

Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

Individual protection measures

Personal protective equipment

Eyes/Face

Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should never be worn; they may contribute to severe eye injury.

Hand Protection

Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.

Skin and Body Protection

Body suite, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.

Guidelines for sodium hypochlorite, less than 30%:
RECOMMENDED (resistance to breakthrough longer than 8 hours): Butyl rubber, Natural rubber, Neoprene rubber, Nitrile rubber, Polyethylene, Polyvinyl chloride, Viton(TM), Silver Shield/4H(TM) (polyethylene/ethylene vinyl alcohol), Tychem(TM) SL (Saranex(TM)). There is evidence that this material can cause serious skin injury (e.g. corrosion or absorption hazard). Recommendations are NOT valid for very thin natural rubber, neoprene, nitrile and PVC gloves (0.3 mm or less). Resistance of specific materials can vary from product to product. Breakthrough times are obtained under conditions of continuous contact, generally at room temperature. Evaluate resistance under conditions of use and maintain clothing carefully. Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.

Respiratory Protection

No specific guidelines are available. Contact chemical manufacturer/supplier for advice. Respiratory protection guidelines for chlorine gas are available.

NIOSH RECOMMENDATIONS FOR CHLORINE CONCENTRATIONS IN AIR:
Up to 5 ppm: (APF = 10) Chemical cartridge respirator*; SAR*.
Up to 10 ppm: (APF = 25) SAR operated in a continuous-flow mode;* Powered, air-purifying respirator with cartridge(s)*.
(APF = 50) Chemical cartridge respirator with a full facepiece and cartridge(s); Airpurifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister; SCBA with a full facepiece; Full facepiece SAR. A NIOSH approved respirator suitable for chlorine is recommended. Where a higher level of protection is required, use a self-contained breathing apparatus.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties

Physical State Liquid
Color Clear, greenish-yellow solution.
Odor Strong chlorine odor
Odor Threshold Not Available

Properties

pH 11-13

Melting Point/Freezing Point -15°C (12% solution)

Initial Boiling Point and Boiling Range

Slowly decomposes above 40°C

Flash Point Not Applicable

Evaporation Rate Not Available; probably very low

Flammability Non-Flammable

Upper Flammable Limit Not Applicable

Lower Flammable Limit Not Applicable

Vapor Pressure (mm Hg, 20oC) Does not form a vapour

Vapor Density (Air=1) Not Available

Relative Density Not Available

Solubility(ies) Completely soluble in water

Partition Coefficient: noctanol/water

Log POW = -3.42 (estimated)

Auto-ignition Temperature Not Applicable

Decomposition Temperature Slowly decomposes above 40°C

Viscosity Not Available

Explosive Properties Pressure buildup in containers could result in an explosion when heated or in contact with acidic fumes. Vigorous reaction with oxidizable organic materials may result in a fire.

Specific Gravity (Water=1) 1.1-1.2

% Volatiles by Volume Not Available

Formula NaOCl

Molecular Weight 74.44 g/mol

10 STABILITY AND REACTIVITY

Reactivity

Sodium hypochlorite solution gives off oxygen when heated or when exposed to sunlight. However, the amount is small and will not cause or contribute to combustion. The solutions are, therefore, not considered to be oxidizing agents.

Chemical Stability:

Sodium hypochlorite solutions decompose slowly at normal temperatures releasing low concentrations of corrosive chlorine gas.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Thermal Decomposition: Will decompose when burned

Conditions to avoid

Heat, sunlight, acidic conditions, the presence of metals and other impurities.
Primary amines, aromatic amines, ammonium salts, phenylacetonitril, ammonia, urea, phenylacetonitrile, acids, metals, reducing agents, ethyleneimine, methanol, formic acid, furfuraldehyde, ethandiol, sodium ethylenedioaminetetracetate solution, sodium hydroxide solution.

Incompatible materials

Chlorine, sodium chlorate.

11 TOXICOLOGICAL INFORMATION

Toxicological (health) effects

Acute Toxicity

Component Oral LD_{50} Dermal LD_{50} Inhalation LC_{50}
Sodium Hypochlorite (20%) 44.5 g/kg (rat) > 50 g/kg (rabbit) > 26.25 g/m_3 (rat, 4hr)

Chronic Toxicity – Carcinogenicity
Component IARC
Sodium Hypochlorite Group 3: Not classifiable as to it's carcinogenicity to humans. [hypochlorite salts]

Symptoms related to the physical, chemical and toxicological characteristics

Skin Corrosion/Irritation
Very dilute solutions have caused negligible irritation, while more concentrated solutions have caused acute corrosive injury to skin. Prolonged exposure may lead to permanent scarring of skin.

Ingestion

Acute exposure may lead to burning of the mouth and throat, abdominal cramps, nausea, vomiting, diarrhea, shock. May lead to convulsions, coma, and even death.

Inhalation

Irritant of the nose and throat, causing coughing, difficulty breathing, and pulmonary edema.

Serious Eye Damage/Irritation

Very dilute solutions have caused no irritation. Acute exposure of more concentrated solutions have caused corrosive injury, which did not heal within 21 days.

Respiratory or Skin Sensitization

Negative results (0/20 guinea pigs sensitized) have been obtained for 8% sodium hypochlorite solution in a skin sensitization test. Insufficient details are available to evaluate a report of a positive result (positive reactions in 2/10 animals) obtained using 6% sodium hypochlorite (pH 11.2) with the guinea pig ear swelling test for nonimmunological contact urticaria.

Delayed and immediate effects and also chronic effects from short and long term exposure

Germ Cell Mutagenicity
The available information does not suggest that sodium hypochlorite is mutagenic.

Reproductive Toxicity
There is insufficient information available to draw conclusions.

STOT-Single Exposure May cause respiratory irritation.
STOT-Repeated Exposure Not Available
Aspiration Hazard Prolonged or repeated overexposure causes lung damage.
Synergistic Materials Not Available

12 ECOLOGICAL INFORMATION

Toxicity

Toxicity to Algae
EC_{50}(Red algae, 96hr): 46mg/L

Toxicity to Fish
LC_{50}(Salmo gairdneri, 48hr): 0.07mg/L

Toxicity to Daphnia and Other Aquatic Invertebrates
LC_{50}(Daphnia magna, 48hr): 0.032mg/L

Persistence and degradability
Not Available

Bioaccumulative potential
No evidence to support any rating.

Mobility in soil
Not Available

Other adverse effects
Not Available

13 DISPOSAL CONSIDERATIONS

Disposal methods

Waste Treatment Methods: Check regional waste requirements

Waste Treatment Options: Treatment options approved by local authorities

Sewage Disposal Options: Check with local authorities before discharge to the sewer

Other Disposal Recommendations: Dispose of according to local, state, and national regulatory requirements.

U.S. Waste Classification: Non-RCRA Waste

California Waste Codes: N/A

14 TRANSPORT INFORMATION

UN Number UN 1791
UN Proper Shipping Name: HYPOCHLORITE SOLUTION

Transport hazard class(es) 8

Packing group, if applicable III

Environmental hazards

Listed as a marine pollutant

Special precautions for user
Not Available

TDG

Other
Secure containers (full and/or empty) with suitable hold down devises during shipment and ensure all caps, valves, or closures are secured in the closed position.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15 REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

- Sodium hypochlorite solution CAS-No. 7681-52-9 Revision Date 2007-03-01

Pennsylvania Right To Know Components

- Sodium hypochlorite solution CAS-No. 7681-52-9 Revision Date 2007-03-01
- Sodium chloride CAS-No. 7647-14-5

New Jersey Right To Know Components

- Sodium hypochlorite solution CAS-No. 7681-52-9 Revision Date 2007-03-01
- Sodium chloride CAS-No. 7647-14-5

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

EU Regulations: This material safety data sheet conforms to Regulation (EC) No 1272/2008, 1907/ 2006, and other requirements established by the European Union

National Regulations: Germany: Water Hazard Class I

Chemical Safety Assessment: A Chemical Safety Assessment has not been completed for this product

16 OTHER INFORMATION

HMIS Rating
Health hazard: 1
Chronic Health Hazard:
Flammability: 0
Physical Hazard 0

NFPA Rating
Health hazard: 1
Fire Hazard: 0
Reactivity Hazard: 0

Full text of H-Statements referred to under sections 2 and 3.

- Eye Dam. Serious eye damage
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- Skin Corr. Skin corrosion

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Abaxis shall not be held liable for any damage resulting from handling or from contact with the above product.

Date of Preparation: March 22, 2018