1. Product Identification

SANILABS	Product Code:	6335
718-234-2900	Product Name:	DeScaler
5422 18th Avenue	Product Use:	Warewashing Descaling Agent
BROOKLYN, NY 11204	Emergency Phone:	CHEMTREC: 800-424-9300

2. Hazard Identification

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s).



GHS Classification:	
Skin Corrosion:	Category 2
Eye Damage:	Category 1
Signal Word:	Danger
Hazard Statements:	H318-Causes Serious Eye Damage
	H314-Causes severe skin burns and eye damage
	H300-Harmful if swallowed.
	H317-May casue an allergic skin reaction.
	H290-May be corrosive to metals.

GHS Precautionary Statement(s) – Prevention

P102- Keep out of reach of children

P101- If medical advice is needed, have product container or label at hand.

P103- Read label before use.

P264 - Wash skin and contaminated clothing thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P234 - Keep only in original container.

P280 - Wear gloves, protective clothing, eye and face protection.

P260 - Do not breathe mist, vapors, or spray.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

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.

P312 Call a POISON CENTER or doctor/ physician if you feel unwell.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

GHS Precautionary Statement(s) – Response

IF IN EYES - Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a physician if irritation persists.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call poison control/physician immediately.

IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water. Contact a physician immediately if irritation persists. Wash contaminated clothing before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Specific treatment (see First Aid information on product label and/or Section 4 of the SDS)

GHS Precautionary Statement(s) - Storage

Store in a secure manner. Store in a well-ventilated place. Keep cool.

GHS Precautionary Statement(s) - Disposal

Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations.

Potential Health Effects

Potential Acute Health Effects:

Very hazardous in case of skin contact (corrosive, irritant, permeator), of eye contact (irritant, corrosive), of ingestion, . Slightly hazardous in case of inhalation (lung sensitizer). Non-corrosive for lungs. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

Slightly hazardous in case of skin contact (sensitizer). CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Hydrochloric acid]. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, liver, mucous membranes, upper respiratory tract, skin, eyes, Circulatory System, teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

ECOLOGICAL HAZARDS: Keep out of water supplies and sewers. This material is alkaline and may raise the pH of surface waters. This material has exhibited moderate toxicity to aquatic organisms.

PRECAUTIONARY STATEMENTS: Avoid breathing vapors or mist. Avoid contact with skin, eyes, and clothing. Keep container tightly closed. Wash thoroughly after handling/ Use only with adequate ventilation.

3. Composition / Information on Ingredients

Chemical Name:	CAS Number	% By Weight
Hydrochloric Acid	7647-01-0	20-25
Phosphoric Acid	7664-38-2	15-20

Unless listed immediately above, the product contains no hazardous ingredients as listed on the Massachusetts Hazardous Substance List or under §1910.1200 of Title 29 of the Code of Federal Regulations.

4. First Aid Measures

Eyes	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses if present and easy to do. Washing eyes within several seconds is	
	essential to achieve maximum effectiveness. Get medical attention immediately.	
Skin	Immediately flush skin with plenty of water for at least 15 minutes while removing any contaminated	
	clothing and shoes. Discard contaminated clothing in a manner which limits further exposure, making sure	
	to wash before reuse. Contact a physician immediately if irritation persists.	

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IngestionDo not induce vomiting. If victim is conscious and alert, give 2-4 cups of water. Never give anything by
mouth to an unconscious person. Get medical attention immediately.InhalationRemove from exposure and move to fresh air immediately and keep comfortable for breathing. If
breathing is difficult, give oxygen. Call a doctor or poison control center if symptoms persist.
If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a
bag and a mask. Call a doctor or poison control immediately.

Notes to Physician: Treat symptomatically and supportively. Consult a doctor and/or the nearest Poison Control Centre for all exposures.

5. Fire Fighting Measures

Suitable extinguishing media:

Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Special Remarks On Fire Hazards:

Non combustible. Calcium carbide reacts with hydrogen chloride gas with incandescence. Uranium phosphide reacts with hydrochloric acid to release spontaneously flammable phosphine. Rubidium acetylene carbides burns with slightly warm hydrochloric acid. Lithium silicide in contact with hydrogen chloride becomes incandescent. When dilute hydrochloric acid is used, gas spontaneously flammable in air is evolved. Magnesium boride treated with concentrated hydrochloric acid produces spontaneously flammble gas. Cesium acetylene carbide burns hydrogen chloride gas. Cesium carbide ignites in contact with hydrochloric acid unless acid is dilute. Reacts with most metals to produce flammable Hydrodgen gas.

Special Remarks On Explosion Hazards:

Hydrogen chloride in contact with the following can cause an explosion, ignition on contact, or other violent/vigorous reaction: Acetic anhydride AgClO + CCl4 Alcohols + hydrogen cyanide, Aluminum Aluminum-titanium alloys (with HCl vapor), 2-Amino ethanol, Ammonium hydroxide, Calcium carbide Ca3P2 Chlorine + dinitroanilines (evolves gas), Chlorosulfonic acid Cesium carbide Cesium acetylene carbide, 1,1-Difluoroethylene Ethylene diamine Ethylene imine, Fluorine, HClO4 Hexalithium disilicide H2SO4 Metal acetylides or carbides, Magnesium boride, Mercuric sulfate, Oleum, Potassium permanganate, beta-Propiolactone Propylene oxide Rubidium carbide, Rubidium, acetylene carbide Sodium (with aqueous HCl), Sodium hydroxide Sodium tetraselenium, Sulfonic acid, Tetraselenium tetranitride, U3P4, Vinyl acetate. Silver perchlorate with carbon tetrachloride in the presence of hydrochloric acid produces trichloromethyl perchlorate which detonates at 40 deg. C.

6. Accidental Release Measures

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator. Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8. Eliminate potential sources of ignition. Handling equipment must be bonded and grounded to prevent sparking.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible sorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: U.S.A. regulations may require reporting spills of this material that could reach any surface waters. Report spills to local authorities and/or the National Response Center at (800) 424-8802 as appropriate or required.

7. Handling and Storage

(Continued On Next Page)

General Storage Information: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or disposed of properly. DO NOT USE OR STORE near heat, sparks or open flames. USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Store between the following temperatures: 45°F - 120°F (7°C - 49°C). Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Chemical Name:	PEL (OSHA)	TWA (ACGIH)	TLV (ACGIH)
Hydrochloric Acid	7 mg / m3 (ceiling)	5 mg / m3 (ceiling)	
Phosphoric Acid	1 mg / m3 (ceiling)	3ppm	

VENTILATION SYSTEM: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details. PERSONAL RESPIRATORS (NIOSH Approved): If exposure is anticipated to be greater than applicable exposure limits, wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this material. Use the following elements for air-purifying respirators: Air-Purifying Respirator for Organic Vapors Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection. SKIN PROTECTION: Wear chemical resistant protective clothing, including apron, boots or safety shoes depending on the concentration and quantity of the hazardous substance handled. The chemical resistance of the protective equipment should be inquired at the equipment supplier.

EYE PROTECTION: Use chemical safety glasses and/or full face shield where splashing is possible. Maintain eye wash fountain and quick drench facilities in work area.

9. Physical and Chemical Properties

Appearance	Green Liquid	
рН	1-2	
Volatile (% V.O.C. by volume):	0.00	
Flashpoint	>200F	
Freezing Point	32F	
Vapor Pressure (mm Hg	Not Known	
Lower Explosion Limits	Not Determined	

Odor	Acidic	
Specific Gravity	1.12	
Solubility In Water	Complete	
Melting Point	Not Known	
Vapor Density (Air=1):	Not Know	
Evaporation Rate (BuAc=1):	Slower Than Water	
Upper Explosion Limits	Not Determined	

10. Stability & Reactivity

STABILITY: Stable under ordinary conditions of use and storage. HAZARDOUS DECOMPOSITION PRODUCTS: Not known.

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HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITIES: Avoid mixing with other chemicals including metals, oxidizing materials, and acids. CONDITIONS TO AVOID: Mixing with water, acid, or incompatible materials may cause splattering and release of large amount of heat (under high concentrations).

11. Toxicological Information

Chemical Name:		Species	Dose
Phosphoric Acid	LD50 Oral	Rat	1536mg/ kg
Phosphoric Acid	LD50 Dermal	Rabbit	2740mg/kg
Phosphoric Acid	LC50	Rat	25.5mg/kg

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:

Acute oral toxicity (LD50): 900 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 1108 ppm, 1 hours [Mouse]. Acute toxicity of the vapor (LC50): 3124 ppm, 1 hours [Rat].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Hydrochloric acid]. May cause damage to the following organs: kidneys, liver, mucous membranes, upper respiratory tract, skin, eyes, Circulatory System, teeth.

Other Toxic Effects on Humans:

Very hazardous in case of skin contact (corrosive, irritant, permeator), of ingestion, . Hazardous in case of eye contact (corrosive), of inhalation (lung corrosive).

Special Remarks on Toxicity to Animals:

Lowest Published Lethal Doses (LDL/LCL) LDL [Man] -Route: Oral; 2857 ug/kg LCL [Human] - Route: Inhalation; Dose: 1300 ppm/30M LCL [Rabbit] - Route: Inhalation; Dose: 4413 ppm/30M

Special Remarks on Chronic Effects on Humans:

May cause adverse reproductive effects (fetoxicity). May affect genetic material.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Corrosive. Causes severe skin irritation and burns. Eyes: Corrosive. Causes severe eye irritation/conjuntivitis, burns, corneal necrosis. Inhalation: May be fatal if inhaled. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract. Inhalation of hydrochloric acid fumes produces nose, throat, and larryngeal burning, and irritation, pain and inflammation, coughing, sneezing, choking sensation, hoarseness, laryngeal spasms, upper respiratory tract edema, chest pains, as well has headache, and palpitations. Inhalation of high concentrations can result in corrosive burns, necrosis of bronchial epithelium, constriction of the larynx and bronchi, nasospetal perforation,

glottal closure, occur, particularly if exposure is prolonged. May affect the liver. Ingestion: May be fatal if swallowed. Causes irritation and burning, ulceration, or perforation of the gastrointestinal tract and resultant peritonitis, gastric hemorrhage and infection. Can also cause nausea, vomitting (with "coffee ground" emesis), diarrhea, thirst, difficulty swallowing, salivation, chills, fever, uneasiness, shock, strictures and stenosis (esophogeal, gastric, pyloric). May affect behavior (excitement), the cardiovascular system (weak rapid pulse, tachycardia), respiration (shallow respiration), and urinary system (kidneys- renal failure, nephritis). Acute exposure via inhalation or ingestion can also cause erosion of tooth enamel. Chronic Potential Health Effects: dyspnea, bronchitis.

12. Ecological Information

Environmental Fate: Not established Environmental Toxicity: Not available

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Large amounts should be given to a licensed disposal agency. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local regulations.

14. Transportation Information

Transportation Hazard Class	Corrosive	
Placard Required	STATE STATE	
DOT Classifiation (Domestic, Land)	NA 1760, Compounds, Cleaning, Liquid, (Contains Hydrochloric & Phosphoric	
	Acid) 8, PGIII	

Emergency Response Guide No: 154

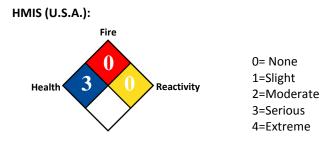
15. Regulatory Information

Not Known Not Known.

16. Regulatory Information

DISCLAIMER:

See the product label for proper use directions.



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OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees and customers.