SAFETY DATA SHEET

Section 1: Identification

Product identifier: Lustro
Other means of identification: Descaler
SDS number: 48
Recommended use: Descaler
Recommended restrictions: Not for personal care

Manufacturer/Importer/Supplier/Distributor information

Company name:	UNX Industries, Inc.
Address:	707 Arlington Blvd Greenville, NC 27858
Telephone:	Office hours (Mon-Fri) 8:00a.m. – 4:00p.m. (Eastern Time) OFFICE NUMBER: 252-756-8616
E-mail:	unx@unxinc.com

Emergency phone number: CHEMTEL (800) 255-3924 (24 HOURS)

Section 2: Hazard(s) identification

Classification of the Substance or Mixture:

Physical hazards

Corrosive to metals	Category 1

Health hazards

Acute toxicity, Oral, Dermal, Inhalation	Category 4
Skin corrosion/irritation:	Category 1B
Serious eye damage/eye irritation:	Category 1

Label elements:

Signal word: Danger

Hazard statements

H290	May be corrosive to metals.
H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Section 2: Hazard(s) identification (continued)

Precautionary statements

Prevention:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P234	Keep only in original packaging.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands, arms, face and exposed skin thoroughly after handling.
P265	Do not touch eyes.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301+317	IF SWALLOWED: Get medical help.
P302+P361+P354	IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P304+P340	IF INHALED: Remove person to fresh air and keep 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.
P362+P364	Take off contaminated clothing and wash it before reuse.

Storage:

P405	Store locked up.
P406	Store in a corrosive resistant container with a resistant inner liner.

Disposal:

P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

Hazard(s) not otherwise Classified (HNOC): Not classified

Section 3: Composition/information on ingredients

Substance/Mixtures

Chemical name	CAS Number	Concentration (%)
Water	7732-18-5	55-75
Phosphoric Acid	7664-38-2	15-25
2-Hydroxyl- 1,2,3, propanetricarbocylic acid	77-92-9	0-10

Section 4: First-aid measures

Non-emergency personnel

General advice: Safely remove victims from the danger zone. Provide emergency services with this safety data sheet.

Eye contact: Rinse with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin contact: Rinse with plenty of water while removing any contaminated clothing. For small amounts of exposure, get medical attention if any discomfort or symptoms persists. For large amounts of exposure, get medical attention immediately.

Ingestion: Rinse mouth with plenty of water if the person is conscious. Do not induce vomiting unless directed by medical personnel. Get medical attention immediately.

Inhalation: Bring victim out to fresh air. If the victim is not breathing, give artificial respiration. In case of unconsciousness, place the person on their side for transport, get medical attention immediately

Emergency personnel

Personal Protection: Refer to Section 8 for specific personal protective equipment

Notes to physician: The concentration and length of exposure impacts the severity of the symptoms.

Most important symptoms/effects, acute and delayed:

Refer to Section 2 for hazards and Section 11 for information on health effects and symptoms. Treat symptomatically.

Indication of immediate medical attention and special treatment needed, if necessary: Provide general supportive measures. Eye contact, inhalation, and ingestion cases should be treated immediately. Have procedures and facilities in place to treat these cases of exposure.

Section 5: Fire-fighting measures

Suitable extinguishing media: In case of a small fire, use dry chemicals, carbon dioxide, foam, or inert gas. In case of a large fire, use foam, water fog or water spray. Water fog and spray both effective in cooling containers and adjacent structures, but there is a potential for it to cause frothing and/or not extinguish the fire. Water can be used to cool external walls of vessels to prevent excessive pressure, autoignition and/or explosion.

Unsuitable extinguishing media: Do not use a water jet as this can spread the fire. Do not use carbon dioxide in enclosed spaces with insufficient ventilation.

Specific hazards arising from the chemical: Flammable liquid and vapors that can be ignited by static spark. Do not breathe in any fumes caused by the fire/explosion. Containers can melt from the heat of fire and the combustible packaging material may provide fuel for the fire. Withdraw immediately in cases of rising sound from venting safety device or discoloration of tanks. For massive fire in cargo, use unmanned hose holder or monitor nozzles. If not, withdraw and let fire burn out.

Section 5: Fire-fighting measures (continued)

Special protective equipment for fire fighters: wear full protective airtight garment and NIOSH approved self-contained breathing apparatus with independent air-supply. Fight the fire in early stages if safe to do so. Provide sufficient ventilation and be aware of hydrogen generation upon reactions with some metals. Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Ventilate and restrict access to the area of leak or spill. Have emergency procedures in place for treating incidents, evacuation and informing the emergency services. Refer to Section 8 for personal protective equipment.

Environmental precautions: Clean up spills/leaks immediately and prevent it from spreading. Large or uncontrolled spills to water systems must be reported to appropriate regulatory body.

Methods and materials for containment and cleaning up: Absorb spills with non-combustible absorbent. Dam and absorb with sand, earth or other inert material for large spills/leaks. Collect spillage in containers with labeled contents and dispose according to local regulations. Flush the contaminated area with lots of water.

Section 7: Handling and storage

Precautions for safe handling: Refer to Section 8 for personal protective equipment. Do not eat, drink or smoke when handling the product. Avoid skin and eye contact. Follow general hygiene routines after working with the product. When handling large amounts of the product, be sure to have a safety shower nearby.

Conditions for safe storage: Store in a suitable, closed and labeled container upright at temperature between 40°F and 100°F in a well-ventilated area. Opened containers must be properly resealed to avoid spillage. Store away from heat, direct sunlight and moisture. It is preferred to keep the container on sump pallets. Store in high-density polyethylene containers. See Section 10 for incompatible materials.

Section 8: Exposure control/personal protection

Control Parameters

Occupational exposure limits

U.S.OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Chemical Name	CAS-No.	Type	ppm	mg/m^3
Phosphoric Acid	7664-38-2	PEL		1 mg/m^3
Ethylene glycol monobutyl ether	111-76-2	PEL	50 ppm	240 mg/m^3

U.S. ACGIH Threshold Limit Values

Chemical Name	CAS-No.	Type	ppm	mg/L
Phosphoric Acid	7664-38-2	STEL		3 mg/m^3
		TLV		1 mg/m^3
Ethylene glycol monobutyl ether	111-76-2	TWA	20 ppm	

Section 8: Exposure control/personal protection (continued)

Appropriate engineering controls/ventilation system:

A general exhaust system is recommended to keep employee exposures below the limits. An additional local exhaust system is preferred in order to control emissions at its source.

Personal Protective Equipment (PPE)

Respiratory protection: A NIOSH approved full-face respirator with high efficiency dust/mist filter is recommended. For emergencies or when dealing with unknown exposure measures, use a full-face piece positive-pressure, air-supplied respirator fitted with a suitable cartridge for the chemical. Consult respirator supplier regarding the compatibility of the equipment.

CAUTION: Air purifying respirators do not protect the user in oxygen deficient atmospheres, use an air supply system.

Hand protection: Impervious gloves, with suitable protection for workplace, are recommended any time the product is being handled. Consult glove supplier for details on suitability, breakthrough time and permeability. Frequent change of the glove is advisable. Be aware that latex gloves can trigger an allergic reaction to sensitive individuals.

Eye protection: Use chemical safety goggles and/or full-face shield when handling the product.

Skin/body protection: Wear impervious protective clothing, boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Take additional precaution if handling amounts past the exposure limits.

Thermal hazard: Wear thermal protective clothing when necessary.

General hygiene: Change out of clothes, thoroughly wash your hands and clothes, and shower/bathe as soon as possible. Do not eat, drink, smoke or use the bathroom while handling the product.

Other protective measures: Have an eye wash and safety shower station close by. Routinely wash all equipment to remove contaminants.

Section 9: Physical and chemical properties

Appearance: Liquid
Color: Green liquid
Odor: No odor
Odor Threshold: No data available
pH: 1.5 ± 0.5
Melting point/range: No data available
Boiling point/range: No data available
Flash point: No data available
Evaporation rate: No data available
Flammability (solid, gas): No data available
Upper/lower flammability of explosive limits: No data available
Vapor pressure (mm Hg): No data available

Section 9: Physical and chemical properties (continued)

Vapor density (Air=1): No data available
Relative density: No data available
Solubility(ies): Excellent
Partition coefficient (n-octanol/water): No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity, dynamic: 25

Other Information: This product contains phosphates.

Section 10: Stability and reactivity

Reactivity: No hazardous reactions are known under normal storage conditions and if handled according to standard industrial practices.

Chemical Stability: Stable if under normal storage conditions and handled according to standard industrial practices.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: No hazardous conditions are known.

Incompatible materials: Avoid contact with acids, oxidizing agents, combustible materials, flammable materials and metals.

Hazardous decompositions products: Mild decomposition, resulting in giving off hydrogen

Section 11: Toxicological information

Acute toxicity: Toxicological testing has not been conducted with this material. The toxicology information listed below us based on the components of this material.

Category 4-: Harmful if swallowed.
Harmful in contact with skin.
Harmful if inhaled.

Phosphoric Acid Acute Toxicity Estimate (ATE)		
Oral LD50 1,530 mg/kg (Rat)	Dermal LD50 2,740 mg/kg (Rabbit)	Inhalation: Dust LC50 850 mg/m (Rat)

Citric Acid Acute Toxicity Estimate (ATE)	
Acute Toxicity (Oral LD50) 3,000 mg/kg (Rat) 5,040 mg/kg (Mouse)	Acute Toxicity (Dermal LD50) 5,500 mg/kg (Rat) 2,700 mg/kg (Mouse)

Section 11: Toxicological information (continued)

Skin Corrosion/ irritation: Category 1: Causes severe skin burns and eye damage due to an acidic pH.

Serious eye damage/irritation: Category 1: Causes serious eye damage due to an acidic pH.

Respiratory or skin sensitization: Classification not possible.

Germ cell mutagenicity: Classification not possible**.**

Carcinogenicity: Classification not possible.

Reproductive toxicity: Classification not possible.

Specific target organ toxicity - single exposure: Classification not possible.

Specific target organ toxicity - repeated exposure: Classification not possible.

Aspiration hazard: Classification not possible.

Section 12: Ecological information

Toxicity: Do not allow to escape into waterways, wastewater or soil. Ecotoxicological studies of the product are not available. Please find below the data available to us from raw materials:

Citric Acid		
Acute EC50	Acute EC_0	Acute LD100
-(Daphnia Magna): 80 mg/L Fresh Water -Long-time exposure in soft water -Daphnia: 100 mg/L: period of survival at pH 4.0 -Daphnia magna: 120 mg/l long: time exposure in soft water; toxic	-Microcystis aeruginosaalgae: 8 days = 80 mg/L -Scenedesmus quadricaudagreen algae 7 days = 640 mg/L	-goldfish: 625 mg/L: long-time exposure in hard water -goldfish: 894 mg/l: long-time exposure in hard water -goldfish: 48 hours: 894 mg/L: period of survival at pH 4.5

Aquatic ecotoxicity: Citric Acid is a naturally occurring chemical and is biodegradable. With high probability acutely not harmful to aquatic organisms.

Persistence and degradability: Expected to be readily biodegradable.

Bioaccumulative potential: Accumulation in organism is not to be expected.

Section 12: Ecological information (continued)

Mobility in soil: When spilled onto soil, phosphoric acid will infiltrate downward, the rate being greater with lower concentration because of reduced viscosity. During transport through the soil, phosphoric acid will dissolve some of the soil material, in particular, carbonate-based materials. The acid will be neutralized to some degree with adsorption of the proton and phosphate ions also possible. However, significant amounts of acid will remain for transport down toward the groundwater table. Upon reaching the groundwater table, the acid will continue to move in the direction of groundwater flow. *Information obtained from US National Library of Medicine.*

Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Section 13: Disposal considerations

General Information: Do not allow the product to contaminate any body of water. Refer to Section 8 for personal protection equipment.

Disposal Methods: Avoid unauthorized disposal. Do not dump into any body of water. Comply with federal, state/provincial and local laws/regulations. Do not reuse empty containers.

Section 14: Transport information

UN Number:	NA 1760
UN Proper Shipping Name:	Compound, Cleaning liquid (Phosphoric Acid)
Transport hazard class(es):	
DOT Hazard Class:	8
DOT Subsidiary Hazard Class:	Not Available
Label:	Corrosive
Packing group, if available:	II
Environmental Hazards:	No
Special precautions for user:	Not available.

Transport in bulk according to Annex II of MARPOL 73/78[3] and the IBC Code [3]: Not applicable

Section 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Unless otherwise noted, no components are SARA TITLE III, SECTION 313, 40 CFR listed materials.
The ingredients of this product are listed on the TSCA inventory.
This product is not made with VOC'S that could cause damage to the ozone layer.

Connecticut hazardous material survey.: Phosphoric Acid Illinois toxic substances disclosure to employee act: Phosphoric acid Illinois chemical safety act: Phosphoric acid New York release reporting list: Phosphoric acid Rhode Island RTK hazardous substances: Phosphoric acid Pennsylvania RTK: Phosphoric acid Minnesota: Phosphoric acid Massachusetts RTK: Phosphoric acid Massachusetts spill list: Phosphoric acid New Jersey: Phosphoric acid New Jersey spill list: Phosphoric acid Louisiana spill reporting: Phosphoric acid California Director's list of hazardous substances: Phosphoric acid TSCA 8(b)

Section 15: Regulatory information (continued)

inventory: Phosphoric Acid; Water SARA 313 toxic chemical notification and release reporting: Phosphoric acid CERCLA: Hazardous substances: Phosphoric acid: 5000lbs. (2268 kg)

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

DSCL (EEC):
R34- Causes burns. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45-In case of accident or if you feel unwell, seek medical advice immediately.

Section 16: Other information including date of preparation or last revision

Chemical State: Liquid
Chemical Type: Mixture

Issue Date: 05-01-2022
Revision Date: -
Version #: 01

3	Health
0	Flammability
0	Physical Hazard
D	Personal Protection

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