

KlorShield LF

SAFETY DATA SHEET

Preparation Date: 13-May-2021

Revision Date: 14-Mar-2022

Revision Number: 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name KlorShield LF

Other means of identification

Item#: 4430

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Soft metal safe chlor-alkaline CIP detergent

Uses advised against All other

Details of the supplier of the safety data sheet

Supplier DeLaval Manufacturing
11100 N. Congress Ave.
Kansas City, MO 64153 : 816-891-7700, 8am – 5pm M-F

Emergency Telephone Number

Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Corrosion/Irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Corrosive to metals	Category 1

Label Elements

Emergency Overview

DANGER

Hazard Statements

Causes severe skin burns and eye damage

May be corrosive to metals



Appearance Light yellow

Physical state Liquid

Odor Odorless

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Keep only in original container

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

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.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Absorb spillage to prevent material damage.

Precautionary Statements - Storage

Store locked up
 Store in corrosive resistant container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Sodium hypochlorite	7681-52-9	1 - 10
Potassium hydroxide	1310-58-3	1 - 10

If a concentration range is shown, the exact concentration has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first-aid measures

Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation	Move to fresh air. Call a physician or Poison Control Center immediately.
Ingestion	Do not induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms and effects, both acute and delayed

Corrosive. The product causes burns of eyes, skin and mucous membranes.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

The product is not flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available.

Specific hazards arising from the chemical

Corrosive to metals. The product causes burns of eyes, skin and mucous membranes.

Sensitivity to static discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health hazards 3

Flammability 0

Instability 1

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. For personal protection see section 8.

Environmental Precautions

Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling**Handling**

Avoid contact with skin, eyes and clothing.

Conditions for safe storage, including any incompatibilities**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. Store in corrosive resistant container with a resistant inner liner.

Incompatible Materials

Although diluted solutions (up to 1oz/gal) of this product are safe for use on soft metals, concentrated product is incompatible with soft metals (e.g. aluminum, copper, brass, zinc galvanized) and acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Only constituents with exposure limits are listed. Any constituent not listed has no known exposure limit.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	-

Appropriate engineering controls**Engineering Controls**

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face Protection	Goggles.
Skin and body protection	Wear protective gloves and protective clothing.
Respiratory Protection	In case of inadequate ventilation wear respiratory protection.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Odorless
Appearance	Light yellow	Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks/ Method</u>
pH	12.1	
Melting point/freezing point	No information available	
Boiling Point/Range	No information available	
Flash Point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	Non flammable	
Flammability Limit in Air		
Upper flammability limit	No information available	
Lower flammability limit	No information available	
Vapor Pressure	No information available	
Vapor Density	No information available	
Specific Gravity	1.20	
Water Solubility	soluble	
Partition coefficient: n-octanol/water	No information available	
Autoignition Temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	

Other information

Liquid Density	No information available
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10. STABILITY AND REACTIVITY

Reactivity

May react with other chemicals. Do not mix with other chemicals except as directed on label.

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

May develop chlorine if mixed with acidic solutions. May spatter and release heat if mixed with acids. May react with and cause damage to soft metals such as aluminum, copper, brass or zinc (galvanized) to produce flammable, potentially explosive, hydrogen gas.

Conditions to Avoid

Product may degrade if exposed to long-term high temperature.

Incompatible Materials

Although diluted solutions (up to 1oz/gal) of this product are safe for use on soft metals, concentrated product is incompatible with soft metals (e.g. aluminum, copper, brass, zinc galvanized) and acids.

Hazardous decomposition products

Chlorine.

11. TOXICOLOGICAL INFORMATION**Principal Routes of Exposure** Eye contact, Skin contact, Ingestion**Information on likely routes of exposure**

Eyes Corrosive to the eyes and may cause severe damage including blindness.
Skin Extremely corrosive and destructive to tissue.
Ingestion Ingestion causes burns of the upper digestive and respiratory tracts.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin Corrosion/Irritation Causes burns.
Serious eye damage/eye irritation Causes eye burns.
Sensitization Product is not identified as a sensitizer according to OSHA regulations.
Mutagenic effects Product is not identified as a mutagen according to OSHA regulations.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite 7681-52-9	Not Listed	Group 3	Not Listed	Not Listed

Legend:

IARC (International Agency for Research on Cancer)
Group 3 - Not classifiable

Reproductive Effects Product is not identified as having reproductive effects according to OSHA regulations.
STOT - single exposure Product is not identified as having single target organ toxicity (single exposure) according to OSHA regulations.
STOT - repeated exposure Product is not identified as having single target organ toxicity (repeated exposure) according to OSHA regulations.
Aspiration Hazard Product is not identified as an aspiration hazard according to OSHA regulations.

Numerical measures of toxicity

If available, toxicity values of individual components are shown below.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hypochlorite 7681-52-9	= 8.91 g/kg (Rat)	10000 mg/kg (Rabbit)	No data available
Potassium hydroxide 1310-58-3	= 284 mg/kg (Rat)	No data available	No data available

6.31% of the mixture consists of ingredient(s) of unknown toxicity

12. ECOLOGICAL INFORMATION**Ecotoxicity**

If available, ecotoxicity values of individual components are shown below.

Chemical name	Algae/aquatic plants	Fish	Microtox	Waterflea
Sodium hypochlorite 7681-52-9	0.095: 24 h Skeletonema costatum mg/L EC50	LC50 (96 h) 0.06 mg/l	No data available	0.033 - 0.044: 48 h Daphnia magna mg/L EC50 Static 2.1: 96 h Daphnia magna mg/L EC50
Potassium hydroxide 1310-58-3	No data available	80: 96 h Gambusia affinis mg/L LC50 static	No data available	No data available

Persistence and degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Waste Disposal Method**

Contact your local waste disposal authority for advice, or pass to a chemical disposal company.

Contaminated Packaging

Triple rinse containers. Avoid contamination of any water supply with product or empty packaging. Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION**DOT**

UN-No	3266
Proper Shipping Name	Corrosive liquid, basic, inorganic, n.o.s (Sodium hypochlorite, Potassium hydroxide)
Hazard Class	8
Packing Group	II

15. REGULATORY INFORMATION

State Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium hypochlorite 7681-52-9	X	X	X
Potassium hydroxide 1310-58-3	X	X	X

U.S. EPA Label information

EPA Pesticide registration number Not applicable

16. OTHER INFORMATION

Preparation Date: 13-May-2021

Revision Date: 14-Mar-2022

Revision Note: None

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the

date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of SDS