

SAFETY DATA SHEET

This SDS complies with 29 CFR 1910.1200 (Hazard Communication Standard)
IMPORTANT: Read this SDS before handling & disposing of this product. Pass this information on to employees, customers, and users of this product.

1. Identification

1.1. Product identifier

Product Identity	Lightning
Alternate Names	Lightning
Product Code	120-01

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

Intended use	Descaler and Delimer
Application Method	See Label Instructions

1.3. Details of the supplier of the safety data sheet

Company Name	United Formulas
	601 6th St SW, Unit 5
	Great Falls, MT 59404

Emergency

24 hour Emergency Telephone No.	Infotrac: 1 800-535-5053
	Emergency: (406) 727-4144

Customer Service: United Formulas

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Skin Corr. 1B;H314	Causes severe skin burns and eye damage.
Eye Dam. 1;H318	Causes serious eye damage.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Danger

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

[Prevention]:

P260 Do not breathe mist / vapors / spray.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+340 IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P310 Immediately call a POISON CENTER or doctor / physician.

P363 Wash contaminated clothing before reuse.

[Storage]:

P405 Store locked up.

[Disposal]:

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

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Phosphoric acid CAS Number: 0007664-38-2	25 - 50	Skin Corr. 1B;H314 (> 25%)	[1][2]
Hydrochloric acid CAS Number: 0007647-01-0	1.0 - 10	Skin Corr. 1B;H314 STOT SE 3;H335	[1][2]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures**General**

In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes

Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion Do NOT induce vomiting. Dilute product by giving large quantities of water or milk. Call your nearest poison control center for further action and seek medical attention immediately.

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

Overview

EFFECTS OF OVEREXPOSURE

Skin: Direct contact may result in irritation, reddening, swelling, and, if untreated, severe skin damage.

Eyes: Contact may cause severe irritation and corneal damage, if untreated.

Ingestion: May cause burns to the mouth, esophagus, and stomach.

Inhalation: Aerosols and mists may severely damage contacted tissue and produce scarring. Exposure to high concentrations may cause pulmonary edema and chemical pneumonia.

See section 2 for further details.

Eyes

Causes serious eye damage.

Skin

Causes severe skin burns and eye damage.

5. Fire-fighting measures

5.1. Extinguishing media

Not Applicable

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Hydrogen chloride vapors, hydrogen, toxic oxides of phosphorous

Do not breathe mist / vapors / spray.

5.3. Advice for fire-fighters

Neutralize with alkaline substances such as soda ash or lime. Wear full protective clothing including self-contained breathing apparatus.

ERG Guide No. 154

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Flush spills with copious quantities of water. Follow by neutralizing with sodium bicarbonate or soda ash, and rinse. Dispose of in accordance with local, state and federal regulations.

Neutralize residual product in the spill area using sodium carbonate or sodium bicarbonate.

7. Handling and storage

7.1. Precautions for safe handling

Avoid prolonged contact with skin. Avoid contact with strong alkalis, bleaches and light metals.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Do not store near chlorine-containing compounds.

Incompatible materials: Avoid contact with chlorinated products, reducing agents, alkalis, reactive metals, and metal oxides.

Store away from oxidizers and alkalines.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0007647-01-0	Hydrochloric acid	OSHA	C 5 ppm (7 mg/m3)
		ACGIH	Ceiling: 2 ppm Revised 2003
		NIOSH	C 5 ppm (7 mg/m3)
		Supplier	No Established Limit
0007664-38-2	Phosphoric acid	OSHA	TWA 1 mg/m3
		ACGIH	TWA: 1 mg/m3 STEL: 3 mg/m3
		NIOSH	TWA 1 mg/m3 ST 3 mg/m3
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0007647-01-0	Hydrochloric acid	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
0007664-38-2	Phosphoric acid	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory

Use acid gas respirator should hydrogen chloride vapors exceed 5 ppm.

Eyes

Wear a full face shield if mixing or pouring this material.

Skin

Safety boots and overalls which cover the body, arms and legs should be worn. Skin should not be exposed. All parts of the body should be washed after contact. Use neoprene or rubber gloves or PVC.

Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices

An eyewash fountain should be located in areas where the product is used. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Yellow Liquid
Odor	Irritating acidic
Odor threshold	Not Measured
pH	1% solution: 1.5
Melting point / freezing point	Not applicable
Initial boiling point and boiling range	220°F
Flash Point	Non-flammable
Evaporation rate (Ether = 1)	Not available
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not applicable Upper Explosive Limit: Not applicable
Vapor pressure (Pa)	Not available
Vapor Density	Not available
Specific Gravity	1.22 g/ml
Solubility in Water	Complete
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity (cSt)	Not available
VOC Content	Not available

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

Contact with common metals may produce hydrogen gas in explosive mixtures.

10.4. Conditions to avoid

High temperatures, flames, and incompatibles.

Do not store near chlorine-containing compounds.

10.5. Incompatible materials

Avoid contact with chlorinated products, reducing agents, alkalis, reactive metals, and metal oxides.

10.6. Hazardous decomposition products

Hydrogen chloride vapors, hydrogen, toxic oxides of phosphorous

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Phosphoric acid - (7664-38-2)	No data available	No data available	No data available	No data available	No data available
Hydrochloric acid - (7647-01-0)	900.00, Rabbit - Category: 4	5,010.00, Rabbit - Category: NA	781.00, Mouse - Category: NA	No data available	3,124.00, Rat - Category: 4

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	1B	Causes severe skin burns and eye damage.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Phosphoric acid - (7664-38-2)	Not Available	Not Available	Not Available
Hydrochloric acid - (7647-01-0)	282.00, Gambusia affinis	260.00, Crangon crangon	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)
14.1. UN number	NA1760
14.2. UN proper shipping name	NA1760, Compounds, cleaning liquid, (Phosphoric Acid), 8, III
14.3. Transport hazard class(es)	DOT Hazard Class: 8
14.4. Packing group	III
14.5. Environmental hazards	
IMDG	Marine Pollutant: No
14.6. Special precautions for user	No further information

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification	D2B E
US EPA Tier II Hazards	Fire: No Sudden Release of Pressure: No Reactive: No Immediate (Acute): Yes Delayed (Chronic): No
EPCRA 311/312 Chemicals and RQs (lbs):	
	Hydrochloric acid (5,000.00)
	Phosphoric acid (5,000.00)
EPCRA 302 Extremely Hazardous:	
	Hydrochloric acid

EPCRA 313 Toxic Chemicals:

Hydrochloric acid

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

New Jersey RTK Substances (>1%):

Hydrochloric acid

Phosphoric acid

Pennsylvania RTK Substances (>1%):

Hydrochloric acid

Phosphoric acid

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

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