

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

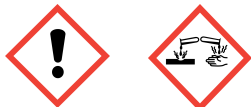
Product ID : CFIS-A-Lume 301256
Product Name : CFIS-A-Lume 301256
Revision Date : Dec 03, 2014 **Supersedes Date :** N.A.
Version: 1.0
Distributor's Name : Columbus Fleet (CFIS GROUP)
Address : 3426 Manchester Ave NW North Lawrence, Ohio 44666 USA
Emergency Phone : 1-800-535-5053
Information Phone : (330) 408-7374
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Product/Recommended Uses:

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Skin Corrosion - Category 1A
Serious Eye Damage - Category 1
Corrosive to metals Category 1

Pictograms:



Hazardous Statements - Physical:

H290 - May be corrosive to metals

Hazardous Statements - Health:

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

Precautionary Statements - General:

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.

Precautionary Statements - Prevention:

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234 - Keep only in original packaging.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash thoroughly after handling.

Precautionary Statements - Response:

P390 - Absorb spillage to prevent material damage.
P370 + P378 - In case of fire: Use water fog, dry chemical or carbon dioxide to extinguish.
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P363 - Wash contaminated clothing before reuse.

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310 - Immediately call a POISON CENTER or doctor/physician.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary Statements - Storage:

P406 - Store in a corrosive resistant container with a resistant inner liner.

P403 - Store in a well-ventilated place.

P405 - Store locked up.

Precautionary Statements - Disposal:

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% by Weight
0007732-18-5	WATER	44% - 74%
0007664-93-9	SULFURIC ACID	18% - 30%
0007664-38-2	PHOSPHORIC ACID	4% - 11%
0001341-49-7	AMMONIUM BIFLUORIDE	3% - 7%

SECTION 4) FIRST-AID MEASURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing.

Get medical advice/attention if you feel unwell or are concerned.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 30 minutes or until medical aid is available. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER/doctor.

Skin Contact:

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse skin with lukewarm, gently flowing water/shower for a duration of 30 minutes or until medical aid is available. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before re-use or discard.

Ingestion:

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If swallowed, concentrate may be corrosive to gastrointestinal system. Dilute stomach by giving water or milk. If vomiting occurs naturally, lie on your side, in the recovery position.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

No data available.

Specific Hazards in Case of Fire:

As with any acidic solution, a chemical reaction with some metals (i.e. copper and zinc) will generate hydrogen gas which is flammable/explosive in the presence of an ignition source. Therefore, extinguish all nearby ignition sources.

Fire-Fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel.

Special Protective Actions:

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure:

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

Small spills: Neutralize with mild base (i.e. sodium bicarbonate). Wash neutralized product to sewer with large amounts of water in accordance with all federal, state, and local regulations.

Large spills: Absorb material using sand, clay, earth, floor absorbent, or other absorbent material and place into polyethylene containers.

Recommended Equipment:

Positive pressure, full-face piece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

SECTION 7) HANDLING AND STORAGE

General:

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use.

Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous.

FOR INDUSTRIAL AND INSTITUTIONAL USE ONLY. FOR USE BY TRAINED PERSONNEL ONLY. KEEP FROM FREEZING.

SECTION 8) EXPOSURE CONTROLS, PERSONAL PROTECTION

Eye Protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection:

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

Appropriate Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA-Tables-Z1,2,3	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
AMMONIUM BIFLUORIDE												
PHOSPHORIC ACID		1			1				1	1	3	
SULFURIC ACID		1			1				1	1		

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
AMMONIUM BIFLUORIDE		2.5		
PHOSPHORIC ACID		1		3
SULFURIC ACID		0.2 (T)		

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	6.59063 lb/gal
Density VOC	0.16477 lb/gal
% VOC	2.50000%
VOC Actual	0.16477 lb/gal
VOC Regulatory	0.16477 lb/gal

Appearance	N.A.
Odor Threshold	N.A.
Odor Description	N.A.
pH	1
Water Solubility	N.A.
Flammability	(no selection)
Flash Point Symbol	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	22 mmHg
Melting Point	N.A.
Vapor Density	1.000000000000
Freezing Point	N.A.
Low Boiling Point	220 °F
High Boiling Point	N.A.
Decomposition Pt	0
Auto Ignition Temp	N.A.
Evaporation Rate	1.5
VOC Composite Partial Pressure	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability:

Stable.

Conditions to Avoid:

Keep from freezing.

Incompatible Materials:

Strong bases (alkalines), bleach (chlorine), reducing agents, and oxidizing agents.

Hazardous Reactions/Polymerization:

Will not occur.

Hazardous Decomposition Products:

Acidic vapors in a fire and some metals may liberate hydrogen gas.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Concentrate may cause skin damage. Dilutions can cause irritation, reddening, or dermatitis.

Causes severe skin burns and eye damage

Serious Eye Damage/Irritation:

Concentrate is corrosive to eyes. Dilutions can cause irritation, redness, and tearing.

Causes serious eye damage

Carcinogenicity:

No data available

Germ Cell Mutagenicity:

No data available

Reproductive Toxicity:

No data available

Respiratory or Skin Sensitization:

Vapors can cause irritation to the lungs.

Respiratory/Skin Sensitization:

No data available

Specific Target Organ Toxicity - Single Exposure:

No data available

Specific Target Organ Toxicity - Repeated Exposure:

No data available

Aspiration Hazard:

No data available

Acute Toxicity:

No data available

0000111-76-2 ETHYLENE GLYCOL MONOBUTYL ETHER

LC50 (female rat): 450 ppm (4-hour exposure) (2)

LC50 (male rat): 486 ppm (4-hour exposure) (2)

LD50 (oral, male weanling rat): 3000 mg/kg (1)

LD50 (oral, 6-week old male rat): 2400 mg/kg (1)

LD50 (oral, yearling male rat): 560 mg/kg (1)

LD50 (oral, female rat): 530 mg/kg; 2500 mg/kg (1) LD50 (oral, male mouse): 1230 mg/kg (1)

LD50 (oral, rabbit): 320 mg/kg (1)

LD50 (dermal, male rabbit): 406 mg/kg (cited as 0.45 mL/kg) (1)

0007664-93-9 SULFURIC ACID

LC50 (rat): 510 mg/m³ (2 hour-exposure) (255 mg/m³ - equivalent 4-hour exposure) (1)

LC50 (mouse): 320 mg/m³ (2-hour exposure) (160 mg/m³ - equivalent 4-hour exposure) (1)

LD50 (oral, rat): 2140 mg/kg (2)

0007664-38-2 PHOSPHORIC ACID

LC50 (mouse): 25.5 mg/m³ (duration of exposure not specified) (4)

LD50 (oral, rat): 3500 mg/kg (85% aqueous solution); 4200 mg/kg (80% aqueous solution)

Potential Health Effects - Miscellaneous

0000111-76-2 ETHYLENE GLYCOL MONOBUTYL ETHER

Can be absorbed through the skin in harmful amounts. May cause injury to the kidneys, liver, blood and/or bone marrow. Repeated overexposure may result in damage to the blood. Eye contact may cause corneal injury. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother.

0007664-38-2 PHOSPHORIC ACID

Ingestion may cause any of the following: burns to mouth and stomach. Inhalation of vapor may cause any of the following: burns to respiratory system. Skin or eye contact may cause any of the following: burns.

SECTION 12) ECOLOGICAL INFORMATION**Toxicity:**

No data available.

Persistence and Degradability:

No data available.

Bio-Accumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS**Water Disposal:**

Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION**U.S. DOT Information:**

Compound, cleaning, liquid, 8, NA1760 PGII (SULFURIC ACID AND PHOSPHORIC ACID)

IMDG Information:

Compound, cleaning, liquid, 8, NA1760 PGII (SULFURIC ACID AND PHOSPHORIC ACID)

IATA Information:

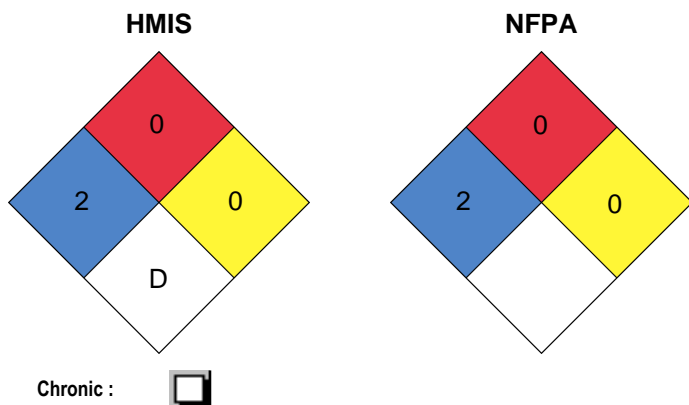
Compound, cleaning, liquid, 8, NA1760 PGII (SULFURIC ACID AND PHOSPHORIC ACID)

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0007732-18-5	WATER	44% - 74%	TSCA
0007664-93-9	SULFURIC ACID	18% - 30%	CERCLA,SARA312,SARA313,TSCA,ACGIH,CA_Prop65 - California Proposition 65,CA_Prop65_Type_Toxicity_Cancer - CA_Proposition65_Type_Toxicity_Cancer,OSHA
0007664-38-2	PHOSPHORIC ACID	4% - 11%	CERCLA,SARA312,TSCA,ACGIH,OSHA
0001341-49-7	AMMONIUM BIFLUORIDE	3% - 7%	CERCLA,SARA312,SARA313,TSCA,ACGIH

SECTION 16) OTHER INFORMATION**Glossary:**

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.



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