

Safety Data Sheet

AERO 59



AEROCHEM

1. Identification

Product identifier	AERO 59
Product code	SOL5920LT, SOL59205LT
Other means of identification	N.Av.
Recommended use of the chemical and restrictions on use	Liquide cleaner and brightener for aluminum and stainless steel. Not recommended for any other use not detailed on product data sheet or label.
Manufacturer	<p>AEROCHEM Inc. 5977 Trans Canada Highway Pointe-Claire, QC H9R 1C1 Canada</p> <p>General Information: 1-888-592-5837</p> <p>www.aerochem.ca info@aerochem.ca</p>
Emergency phone number	<p>INFOTRAC®: 1-800-535-5053 International call collect: 1-352-323-3500 24 hours/day, 7 days/week</p>

2. Hazard identification

Summary	TOXIC AND CORROSIVE. Avoid all contact with the skin, eyes and clothing. Do not breathe vapours, mists or aerosols. Do not ingest. If medical advice is needed, have this SDS or label at hand. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved.
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WHMIS 2015/GHS/OSHA HCS 2012



Corrosive to Metals (Category 1)
 Acute toxicity, oral (Category 4)
 Acute toxicity, inhalation (Category 3)
 Skin corrosion (Category 1)
 Serious eye damage (Category 1)
 Specific target organ toxicity, repeated exposure (Category 1)
 Health hazards not otherwise classified (HHNOC)

DANGER

H290: May be corrosive to metals
 H331: Toxic if inhaled
 H314: Causes severe skin burns and eye damage
 H3xx: May cause burns and serious injury to the respiratory tract
 H372: Causes damage to organs through prolonged or repeated exposure
 H302: Harmful if swallowed
 P234: Keep only in original packaging.
 P260: Do not breathe vapours and spray.
 P264: Wash face, hands and any exposed skin thoroughly after handling.
 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 and/or face protection.
 P308+311: IF exposed or concerned: Call a POISON CENTER or physician.

P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water and soap or take a shower if necessary.
P363: Wash contaminated clothing before reuse.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or a doctor.
P390: Absorb spillage to prevent material damage.
P403+233: Store in a well ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents and container to a licensed chemical disposal agency in accordance with local, regional and national regulations.

3. Composition/information on ingredients

Common name	CAS	Weight % content
Phosphoric acid	7664-38-2	15 - 40 %
Nonylphenol ethoxylate	9016-45-9	3 - 7 %
Hydrofluoric acid	7664-39-3	1 - 5 %
Note: The manufacturer withholds the actual concentration range of the ingredients as a trade secret.		

4. First-aid measures

Inhalation	Move person to fresh air. If breathing is difficult, give oxygen by trained personnel. If not breathing, give artificial respiration. If a problem develops or persists, seek medical attention.
Skin contact	IMMEDIATELY! Flush with water for at least 20 minutes while removing contaminated clothing and shoes. Speed is essential. Avoid touching eyes with contaminated body parts. Seek medical attention or contact a Poison Centre immediately. Wash contaminated clothing before reuse.
Eye contact	IMMEDIATELY flush with plenty of water. Speed is essential. Remove contact lenses if easy to do. Hold eyelids apart to rinse properly. Flush with water for at least 20 minutes. Seek medical attention immediately. Have an ophthalmologist make an evaluation of eye injury.
Ingestion	DO NOT induce vomiting, unless recommended by medical personnel. Never give anything by mouth if victim is unconscious or convulsing. If victim is conscious wash out mouth with water and give 1-2 glasses of water to drink. If spontaneous vomiting occurs, keep head below hip level to prevent aspiration into the lungs. Seek medical attention or contact a Poison Centre immediately.
Other	Do not use mouth-to-mouth resuscitation unless you use a buccal protective device.
Symptoms	Causes burns to the respiratory tract, gastrointestinal tract, eyes and skin.
Notes to the physician	Treat according to person's condition and specifics of exposure. If gastric lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. For severe exposures, monitor for delayed onset of pulmonary edema.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemicals, water spray, chemical foam, carbon dioxide (CO2). Do not use a heavy water jet.
Specific hazards arising from the	Contact with water will generate heat or splashing.

chemical	
Special protective equipment	Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.
Special protective actions for fire-fighters	Use water spray to cool fire-exposed containers. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.

6. Accidental release measures


Personal precautions, protective equipment and emergency procedures	Do not touch damaged containers or spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.
Environmental precautions	Prevent product from entering drains and release to the environment. For a large spill, consult the Department of Environment or the relevant authorities.
Methods and materials for containment and cleaning up	No action shall be taken involving any personal risk or without suitable training. Evacuate unauthorized personnel. Ventilate the area well. Stop leak, if it's possible to do so without risk. Absorb with inert material (soil, sand, vermiculite) and place in an appropriate waste disposal clearly identified. Finish cleaning by rinsing with water contaminated surface. Dispose via a licensed waste disposal contractor.

7. Handling and storage

Precautions for safe handling	Use only in well ventilated area. Avoid all contact with the skin, eyes and clothing. Do not breathe vapours, mists or aerosols. Wear eye protection, gloves, respiratory protection and other protective clothing that are adapted to the task being performed and the risks involved. DO NOT dispose residue in sewers, streams or drinking water supply. Keep only the quantities necessary for the work being performed in the work area. Keep containers tightly closed when not in use. Do not eat, do not drink and do not smoke during use. After use, wash hands with soap and water. Wash contaminated clothing before reuse.
Conditions for safe storage, including any incompatibilities	Always keep in containers made of the same materials as the supply container. Store tightly closed and in properly labelled containers in a cool, dry and well ventilated place. Keep away from direct sunlight and heat. Store away from bases and incompatible materials (see section 10).
Storage temperature	10 to 40°C (50 to 104°F)

8. Exposure controls/personal protection

Immediately Dangerous to Life or Health	Phosphoric acid: 1000 mg/m ³ . Hydrofluoric acid: 30 mg/m ³ , value as F (fluoride).		
Phosphoric acid	STEL	3 mg/m ³	ACGIH , BC, ON, RSST
	TWA (8h)	1 mg/m ³	ACGIH , BC, ON, RSST
Hydrofluoric acid	Ceiling	2 ppm	ACGIH , BC, ON
		3 ppm	RSST (RP)
	TWA (8h)	0.5 ppm	ACGIH , ON
Appropriate engineering controls	Provide sufficient mechanical ventilation (general or local exhaust) to keep the airborne concentrations of vapours, mists, aerosols or dust below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation.		

Individual protection measures	
Eye	Wear chemical splash goggles. If risk of contact with eyes or the face wear chemical splash goggles and a face shield.
Hands	Chemical-resistant, impervious gloves should be worn at all times when handling this chemical product. Wear nitrile or neoprene gloves. Before using, user should confirm impermeability. Discard gloves with tears, pinholes, or signs of wear. Gloves must only be worn on clean hands. Wash gloves with water before removing them. After using gloves, hands should be washed and dried thoroughly.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear appropriate chemical impervious clothing. Wear an apron or long-sleeve protective coverall suit.
Respiratory	Where the conditions in the workplace require a respirator, it is necessary to follow a respiratory protection program. Moreover, respiratory protection equipment (RPE) must be selected, fitted, maintained and inspected in accordance with regulations and standard 29 CFR 1910.134 (OSHA), ANSI Z88.2 or CSA Z 94.11 (Canada) and approved by NIOSH/MSHA. In case of insufficient ventilation or in confined or enclosed space, wear any self-contained breathing apparatus that has a full face piece and is operated in a pressure-demand or other positive-pressure mode. Spraying in enclosed areas: Fresh air-line respirators or self-contained breathing apparatus should be used in areas with concentrations above the exposure limit.
Feet	Wear rubber boots as needed.
 <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Apron Goggles Nitrile gloves </div>	

9. Physical and chemical properties

Physical state	Liquid	Flammability	Non-flammable
Colour	Colourless	Flammability limits	N/Ap.
Odour	Butyl	Flash point	N/Ap.
Odour threshold	N/Av.	Auto-ignition temperature	N/Av.
pH	<1.5	Sensibility to electrostatic charges	N.Det.
Melting point	N/Av.	Sensibility to sparks and/or friction	N.Det.
Freezing point	N/Av.	Vapour density	<1 (Air = 1)
Boiling point	100°C (212°F)	Relative density	1.13 kg/L (Water = 1)
Solubility	Fully soluble in water.	Partition coefficient n-octanol/water	<1
Evaporation rate	< Butyl Acetate	Decomposition temperature	N/Av.
Vapour pressure	N/Av.	Viscosity	N/Av.
Percent Volatile	N/Av.	Molecular mass	N/Ap.

N/Av.: Not Available

N/Ap.: Not Applicable

Und.: Undetermined

N/E: Not Established

10. Stability and reactivity

Reactivity	Corrosive for metals. Violent reaction with bases.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions (including polymerizations)	Hazardous polymerization will not occur.
Conditions to avoid	Avoid contact with incompatible materials. Never add water directly in this product.
Incompatible materials	Strong bases (e.g. hydroxides, solutions of ammonia, amines, carbonates), strong oxidizing agents (e.g. chlorine, fluorine, nitric acid, perchloric acid, peroxides, nitrates, chlorates, chromates, permanganates and perchlorates), reducing agents.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information


Numerical measures of toxicity	<p>Phosphoric acid</p> <p>Ingestion 1530 mg/kg Rat LD50</p> <p>Inhalation >0.42 mg/l/4h Rat LC50</p> <p>Skin 2740 mg/kg Rabbit LD50</p> <p>Nonylphenol ethoxylate</p> <p>Ingestion 1310 mg/kg Rat LD50</p> <p>Inhalation >20 mg/l/4h Rat LC50</p> <p>Skin >2000 ml/kg Rabbit LD50</p> <p>Hydrofluoric acid</p> <p>Inhalation 650 ppm/4h Rat LC50</p> <p>171 ppm/4h Mouse LC50</p> <p>0.14 mg/l/4h Rat LC50</p>
Likely routes of exposure	Skin, eyes, inhalation, ingestion.
Delayed, immediate and chronic effects	<p>Eye contact May cause burns and damages to eyes.</p> <p>Skin contact May cause severe skin irritation and burns. The severity of symptoms may vary depending on exposure conditions.</p> <p>Inhalation Vapors and mists may irritate the eyes, nose, throat and lungs. Can cause damage to nasal and respiratory passages. The severity of symptoms may vary depending on exposure conditions. Prolonged or repeated exposure may cause damages to target organ.</p> <p>Ingestion May cause gastro-intestinal irritation and burns to mouth, throat and stomach.</p> <p>IARC/NTP Classification No ingredients listed.</p> <p>Carcinogenicity Ingredients present at levels greater than or equal to 0.1% of this product are not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA.</p> <p>Mutagenicity Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effects.</p> <p>Reproductive toxicity Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause reproduction effects.</p> <p>Specific target organ toxicity - single exposure No target organ is listed.</p> <p>Specific target organ toxicity - repeated exposure Respiratory system, bones, teeth, kidneys, liver.</p>
Interactive effects	No information available.
Other	The skin acute toxicity estimate (ATE) of the mixture was calculated to be greater than 2000 mg/kg. This

information	value is not classified according to WHMIS and OSHA HCS 2012. The oral acute toxicity estimate (ATE) of the mixture was calculated to be greater than 300 mg/Kg but lower than 2000 mg/kg. This value is classified according to GHS: Acute toxicity, oral (Category 4). The acute toxicity estimate (ATE) by inhalation of the mixture was calculated to be greater than 0.5 mg/L/4h but lower than 1 mg/L/4h for mists/aerosols, or it was calculated to be greater than 500 ppmV/4h but lower than 2500 ppmV/4h for gaz. These values are classified according to GHS: Acute toxicity, inhalation (Category 3).
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12. Ecological information

Ecological toxicity	<p>Fish - Lepomis macrochirus - Bluegill LC50 1.0 mg/L; 96h (CAS no 9016-45-9)</p> <p>Aquatic Invertebrate - Daphnia magna (Water flea) EC50 12.2-17; 48h (CAS no 9016-45-9)</p> <p>Fish - Pimephales promelas (fathead minnow) CESO 1.8 mg/l; 144 h (CAS no 9016-45-9)</p> <p>Aquatic Invertebrate - Daphnia magna (Water flea) CESO 10 mg/l; 144 h (CAS no 9016-45-9)</p>
Persistence	Inorganic compounds persist in the environment indefinitely or incorporate into biological systems.
Degradability	The product is a mixture whose ingredients are readily biodegradable (> 60% in 28 days). The term biodegradability, as such, is not applicable to inorganic compounds.
Bioaccumulative potential	The product is a mixture of which all ingredients have a low bioaccumulation potential (Log Kow of <3 and / or BCF <500).
Mobility in soil	The product is a mixture whose ingredients have a high mobility in the soil.
Other adverse effects	This chemical does not deplete the ozone layer. The observed ecological toxicity presented by this product for the environment was considered a result of pH effects. This compound will release phosphates which will result in algae growth, increased turbidity, and depleted oxygen. At extremely high concentrations, this may be hazardous to fish or other marine organisms. Release to watercourses may cause effects downstream.

13. Disposal considerations

Container 	Important! Prevent waste generation. Use in full. DO NOT dispose residue in sewers, streams or drinking water supply. Residues and empty containers must be considered as hazardous waste. Dispose via a licensed waste disposal contractor. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities.
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14. Transport information

UN Number	UN 2922
UN Proper Shipping Name	CORROSIVE LIQUID, TOXIC, N.O.S. (hydrofluoric acid, phosphoric acid)
Environmental hazards	This material does not contain marine pollutant.
Special precautions for user	Permit required for transportation with proper DANGER placards displayed on vehicle. Exemption available: LTD QTY according to TDG Canada - art. 1.17; Mode of transportation: rail, sea and road, applicable for Canadian domestic shipments. Quantitative limits: applicable for domestic containers (plastic bottles, glass or metal) containing =< 1L each.

TDG - Transportation of Dangerous Goods (Canada)

Transport hazard class(es)	  Class 8 Class 6.1
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Packing group	II
Emergency response guidebook 2016	154
IMO/IMDG - International Maritime Transport	
Classification	UN 2922. CORROSIVE LIQUID, TOXIC, N.O.S. (hydrofluoric acid, phosphoric acid). Class 8 (6.1), PG II. Emergency schedules (EmS-No) F-A, S-B
IATA - International Air Transport Association	
Classification	UN 2922. CORROSIVE LIQUID, TOXIC, N.O.S. (hydrofluoric acid, phosphoric acid). Class 8 (6.1), PG II.
These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. In addition, if a domestic exemption exists, it is the responsibility of the shipper to define the application of it.	

15. Regulatory information

CANADA

Common name	CAS	CEPA	DSL	NDSL	NPRI
Phosphoric acid	7664-38-2		X		
Nonylphenol ethoxylate	9016-45-9	X	X		X
Hydrofluoric acid	7664-39-3	X	X		X

- CEPA: List of Toxic Substances Managed Under Canadian Environmental Protection Act

- DSL: Domestic Substances List Inventory

- NDSL: Non-Domestic Substances List Inventory

- NPRI: National Pollutant Release Inventory Substances

UNITED STATE OF AMERICA

Common name	CAS	TSCA	CER CLA	EPCRA 313	EPCRA 302/304	CAA 112(b) HON	CAA 112(b) HAP	CAA 112(r)	CWA 311	CWA Prio.
Phosphoric acid	7664-38-2	X	X	X						
Nonylphenol ethoxylate	9016-45-9	X								
Hydrofluoric acid	7664-39-3	X	X	X	X		X	X	X	

- TSCA: Toxic Substance Control Act

- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act list of hazardous substances

- EPCRA 313: Emergency Planning and Community Right-to-Know Act, Section 313 Toxic Chemicals

- EPCRA 302/304: Emergency Planning and Community Right-to-Know Act, Section 302/304 Extremely Hazardous Substances

- CAA 112(b) HON: Clean Air Act - Hazardous Organic National Emission Standard for Hazardous Air Pollutant

- CAA 112(b) HAP: Clean Air Act - Hazardous Air Pollutants lists pollutants

- CAA 112(r): Clean Air Act - Regulated Chemicals for Accidental Release Prevention

- CWA 311: Clean Water Act - List of Hazardous Substances

- CWA Priority: Clean Water Act - Priority Pollutant list

California Proposition 65

No ingredients listed.


Other regulations

CANADA :

- Canadian National Pollutant Release Inventory Substances (NPRI):

This material is listed in Phosphore (total) (Substance Identifier NA - 22).

HMIS**NFPA****16. Other information**

Date (YYYY-MM-DD)	AEROCHEM Inc. 2020-03-03
Version	03
Other information	<p>REFERENCES:</p> <ul style="list-style-type: none"> - Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, https://haz-map.com/ - TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, http://toxnet.nlm.nih.gov/ - IPCS INCHEM, Chemical Safety Information from Intergovernmental Organizations, Canadian Centre for Occupational Health and Safety (CCOHS), Copyright International Programme on Chemical Safety (IPCS), http://www.inchem.org - Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), http://www.reptox.csst.qc.ca - Phosphoric acid, The Registry of Toxic Effects of Chemical Substances, RTECS #: TB6300000. - NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, http://www.cdc.gov/niosh/npg/npg.html <p>DATE OF FIRST VERSION OF SDS: 2017-08-07.</p> <p>CHANGES MADE IN THE VERSION 02: section 3.</p> <p>DATE OF SECOND VERSION OF SDS: 2019-07-31.</p> <p>CHANGES MADE IN THE VERSION 03: section 1.</p> <p>ACGIH: American Conference of Governmental Industrial Hygienists AIHA: American Industrial Hygiene Association HMIS: Hazardous Materials Identification System NFPA: National Fire Protection Association OSHA: Occupational Safety and Health Administration (USA) NIOSH: National Institute for Occupational Safety and Health NTP: National Toxicology Program RSST: Règlement sur la santé et la sécurité du travail (Québec) GHS: Globally Harmonized System IARC: International Agency for Research on Cancer IDLH: Immediately Dangerous to Life or Health STEL: Short Term Exposure Limit (15 min) TWA: Time Weighted Averages WHMIS: Workplace Hazardous Materials Information System</p>
<p>Powered by</p>  <p>A global vision of prevention</p>	<p>To the best of our knowledge, the information contained herein is accurate. However, neither Préventis System nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.</p>