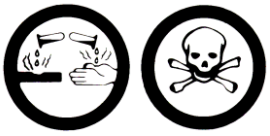
Safety Data Sheet

Section 1. Chemical Product and Company Identification		
Product Name:	**Oxalic Acid**	**Version: 5** **Effective Date: 25 January 2021**
Supplier/ Manufacturer:	Chemfax Products Ltd. 11444 – 42 Street SE Calgary, AB T2C 5C4 Tel: 403-287-2055	
Material Uses	Textile cleaning, flame-proofing, rust removal, fabric dyeing, metal and equipment cleaning, anti-corrosion coating, chemical intermediate and catalyst	
Emergency Phone	1-855-887-2055 Monday - Friday 8:00am - 4:30pm MST	
WHMIS		
This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR		
HMIS Ratings for this product are: **Health 3 , Flammability 1 , Reactivity 0**		

Section 2. Composition and Information on Ingredients		
Name	**CAS#**	**% by weight**
Oxalic acid	144-62-7	100
See Section 8 for information on permissible exposure limits and threshold limit values		

Section 3. Hazards Identification	
Physical State and Appearance	Colourless, transparent crystals or powder
Hazard Summary	Corrosive
Routes of Exposure	Skin and eye contact, inhalation, ingestion
Potential Acute Health Effects	**Skin:** Solutions of 5 % or higher are irritating to the skin, with prolonged exposure corrosive injury may occur. Excessive contact may produce localised pain and discolouration of the

	skin, with fingernails becoming brittle and blue-coloured. **Eyes:** Causes severe eye irritation. Can cause redness, pain and damage to the cornea. Prolonged contact with solutions can produce irreversible eye damage. **Inhalation:** May irritate nose, mouth and throat. Coughing, chest pains and difficulty breathing may occur. Also nausea, headache and vomiting. **Ingestion:** Can cause severe poisoning or death, depending on the concentration and amount ingested. Concentrated solutions (10% or greater) may cause burning in the mouth, throat and stomach, followed by profuse vomiting (sometime bloody – corrosive effects). Small does of oxalate in the body may cause headache, pain and twitching in the muscles and cramps. Larger doses can cause weak and irregular heartbeat, a drop in blood pressure and signs of heart failure. Large doses rapidly cause shock like state, convulsions, coma and possibly death. Delayed effect of ingestion is kidney damage, leading to possible renal failure.
Medical Conditions Aggravated by Exposure	None known
See Toxicological Information – Section 11	
Additional Hazard Identification Remarks	None

Section 4. First Aid Measures	
Eye Contact	Flush eyes with water for 15 minutes. Seek medical attention.
Skin Contact	Flush area with water. If irritation persists seek medical attention. Launder clothing before reuse.
Inhalation	Remove victim to fresh air. If there is difficulty breathing, seek immediate medical attention.
Ingestion	Rinse mouth with water if conscious. Do not induce vomiting. Lay victim on left side to prevent aspiration of any vomit. Seek immediate medical attention.
Notes to Physician	If victim is conscious give immediately, by mouth, a fine suspension in water of a non-toxic calcium compound such as calcium lactate, chalk, plaster or milk. Large amounts of calcium are required to inactivate oxalate by precipitating it as the insoluble calcium oxalate salt.
Additional First Aid Remarks	None

Section 5. Fire Fighting Measures	
Flammability of the Product	Non flammable.
Flash Point	Not applicable
Explosive Limits	Not applicable
Auto Ignition Temperature	Not applicable
Static Discharge	No
Suitable Extinguishing Media	Water spray, dry chemical, alcohol foam or carbon dioxide. Foam or water on molten oxalic acid may cause frothing.
Hazardous Combustion Products	Decomposition products include carbon monoxide and Formic acid which are toxic and flammable. Reacts explosively with strong oxidising agents and some silver compounds.
Precautions for Fire Fighting	Fire fighters should wear self contained breathing apparatus and full protective clothing. Use water spray to cool containers and structures exposed to fire.

Section 6. Accidental Release Measures	
Personal Precautions	Gloves (nitrile), coveralls (chemical resistant), boots (chemical resistant), safety glasses
Environmental Precautions	Do not allow product to enter storms drains and surface watercourses.
Methods for Clean Up	Remove all sources of ignition. Sweep, scoop or shovel up material carefully to avoid generating dust, use non sparking tools. Place collected material in a suitable container for disposal. If material is mixed with water, neutralise with a solution of soda ash or lime. Absorb with inert material (vermiculite, dry sand, earth). Do not use combustible material such as sawdust. Do not flush to sewer. Neutralised residues can be washed away.

Section 7. Handling and Storage	
Handling	Handle with care. Corrosive and combustible material.
Storage	Store in a cool dry place, away from incompatible materials. Keep containers closed when not in use

Section 8. Exposure Controls and Personal Protection				
Exposure Guidelines	**TWA: 8 Hr**	**STEL: 15 min**	**Ceiling**	**IDLH ***
Oxalic acid	1 mg/m^3 OSHA	2 mg/m^3		500 mg/m^3
	* Immediately Dangerous to Life and Health			
Exposure Controls	Local exhaust ventilation			

Personal Protection	
Respiratory	Air purifying respirator can be worn for levels 10 times the exposure limits. Above that level powered air purifying respirator or better must be worn.
Skin	Gloves and chemical resistant clothing and footwear
Eyes	Safety glasses
Other	None

Section 9. Physical and Chemical Properties	
Physical State and Appearance	Colourless, transparent crystals or powder
Odour Threshold	No data
pH	1.3 (0.1 M solution)
Boiling Point	149 – 160 ^{o}C - sublimes
Melting Point / Freezing point	101.5 ^{o}C
Evaporation Rate	No data
Vapour Density	4.4
Vapour Pressure	<0.001 mmHg @ 20 ^{o}C
Relative Density	1.653
Solubility in Water	1 g/7 ml of water
% Volatile	0
Other Data	None

Section 10. Stability and Reactivity	
Chemical Stability	Stable at room temperature. Heating to melting point will cause sublimation and decomposition occurs
Hazardous Polymerisation	Will not occur
Conditions to Avoid	Heat, ignition sources, moisture (hygroscopic), dusting
Materials to Avoid	Alkalis, chlorites, hypochlorites, oxidising agents, furfuryl alcohol and silver compounds
Hazardous Decomposition Products	Formic acid, carbon dioxide, carbon monoxide

Section 11. Toxicological Information	
Principle Routes of Exposure	
Skin:	Solutions of 5 % or higher are irritating to the skin, with prolonged exposure corrosive injury may occur. Excessive contact may produce localised pain and discolouration of the skin, with fingernails becoming brittle and blue-coloured.
Eyes:	Causes severe eye irritation. Can cause redness, pain and damage to the cornea. Prolonged contact with solutions can produce irreversible eye damage.

Inhalation:	May irritate nose, mouth and throat. Coughing, chest pains and difficulty breathing may occur. Also nausea, headache and vomiting.
Ingestion:	Can cause severe poisoning or death, depending on the concentration and amount ingested. Concentrated solutions (10% or greater) may cause burning in the mouth, throat and stomach, followed by profuse vomiting (sometime bloody – corrosive effects). Small does of oxalate in the body may cause headache, pain and twitching in the muscles and cramps. Larger doses can cause weak and irregular heartbeat, a drop in blood pressure and signs of heart failure. Large doses rapidly cause shock like state, convulsions, coma and possibly death. Delayed effect of ingestion is kidney damage, leading to possible renal failure.
Additional Information	
Acute Toxicity	
Oxalic acid	LD50: 7500 mg/kg (Rat, oral) LD50: 475 mg/kg (Rat, oral) – male LD50: 375 mg/kg (Rat, oral) – female LD50: 20000 mg/kg (Rabbit, dermal)
Chronic Toxic Effects – Formation of kidney stone (calculi) is linked to long term exposure. Oxalic acid solutions can cause localised pain, discolouration of fingers and nails, possibly ulcers and gangrene. Weight loss, chronic inflammation of the upper respiratory tract, irritation of the nose and throat and painful urination were symptoms of long term chronic exposure by inhalation.	
Carcinogenicity – No data	
Reproductive Toxicity / Teratogenicity / Embryotoxicity / Mutagenicity – None known	

Section 12. Ecological Information	
Ecotoxicity	LC50: 4000 mg/L (Lepomis macrochirus) 24 hr
BOD and COD	No data
Biodegradability / OECD	No data
Toxicity of the Products of Biodegradation	No data
Special Remarks	None

Section 13. Disposal Considerations
Dispose of in accordance with local, provincial and federal regulations

Section 14. Transport Information	
TDG Classification	Not regulated under TDG
Emergency Response Guide #	Not applicable
Marine Pollutant	No
Special Precautions	None

Section 15. Regulatory Information	
Canada – DSL Inventory	All components of this product are either on the Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL) or exempt
TSCA	All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt
WHMIS Hazard Class	D1B E
Additional Information	None

Section 16. Other Information

Prepared by:
Chemfax Products Ltd., Technical Department

Date Prepared: September 28, 2012

Revision Date: 25 January 2021

Disclaimer
Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier 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.

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