Safety Data Sheet
SOLUROUILLE

1. Identification

Product identifier	SOLUROUILLE
Product code	FLSOLU500MLDZ ; FLSOLU4X4LTCS ; FLSOLU20LT
Other means of identification	N.Av.
Recommended use of the chemical and restrictions on use	Convertisseur de rouille. Not recommended for any other use not detailed on product data sheet or label.
Manufacturer	AEROCHEM Inc. 5977 Trans Canada Highway Pointe-Claire, QC H9R 1C1 Canada General Information: 1-888-592-5837 www.aerochem.ca info@aerochem.ca
Emergency phone number	INFOTRAC®: 1-800-535-5053 International call collect: 1-352-323-3500 24 hours/day, 7 days/week

2. Hazard identification

Summary	Avoid contact with 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.

WHMIS 2015/GHS/OSHA HCS 2012

Skin corrosion/irritation (Category 2)
Serious eye damage/eye irritation (Category 2)

WARNING
H319: Causes serious eye irritation
H315: Causes skin irritation
P264: Wash skin thoroughly after handling.
P280: Wear protective gloves, protective clothing and eye protection.
P302+352: IF ON SKIN: Wash with plenty of water and soap.
P332+313: If skin irritation occurs: Get medical advice or attention.
P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+313: If eye irritation persists: Get medical advice or attention.
P362+364: Take off contaminated clothing and wash before reuse.

3. Composition/information on ingredients

Common name	CAS	Weight % content
Diethylene glycol ethyl ether acetate	112-15-2	3 - 10 %
3,4,5-Trihydroxybenzoic acid	149-91-7	1 - 7 %
Ethylene glycol	107-21-1	0.1 - 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 not breathing, give artificial respiration. If a problem develops or persists, seek medical attention.
Skin contact	Wash skin with warm water and mild soap. Remove contaminated clothing and wash before reuse. If a problem develops or persists, seek medical attention.
Eye contact	Flush with water for at least 15 minutes. Remove contact lenses if easy to do. Hold eyelids apart to rinse properly. If a problem develops or persists, seek medical attention.
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	No information available.
Symptoms	May cause pain, redness and irritation to eyes. May cause itching, redness and skin irritation.
Notes to the physician	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.

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 chemical	Non-flammable. May be combustible at high temperature.
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	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 spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.
Environmental precautions	Prevent entry into sewers, closed areas 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	Ventilate the area well. Absorb with inert material (soil, sand, vermiculite) and place in an appropriate waste disposal clearly identified. Finish cleaning the contaminated surface by rinsing with soapy water. Dispose via a licensed waste disposal contractor.

7. Handling and storage

Precautions for safe handling	Use in well ventilated area. Avoid contact with skin, eyes and clothing. Do not breathe vapours, mists or aerosols. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet. Avoid contamination with another chemical product. 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	Store tightly close and in properly labelled container. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from incompatible materials (see section 10). Keep away from direct sunlight and heat.
Storage temperature	10 to 30°C (50 to 86°F)

8. Exposure controls/personal protection

Immediately Dangerous to Life or Health	No IDLH value is reported.

Ethylene glycol	Ceiling	Aerosol		100 mg/m^3	BC , ON
			50 ppm		BC
			50 ppm	127 mg/m^3	RSST (RP)
	STEL	Aerosol		10 mg/m^3	ACGIH
		Aerosol		20 mg/m^3	BC
			50 ppm		ACGIH
	TWA (8h)	Aerosol		10 mg/m^3	BC
			25 ppm		ACGIH

Appropriate engineering controls	Provide sufficient mechanical ventilation (general and/or local exhaust) to keep the airborne concentrations of vapours, mists, aerosols or dust below their respective occupational exposure limits.
Individual protection measures	
Eye	Wear safety glasses with side shields. If there is a risk of contact with eyes, wear chemical splash goggles.
Hands	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.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code. If necessary, wear an apron or long-sleeve protective coverall suit.
Respiratory	A respirator is not required in a well-ventilated area. 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 and for an assigned protection factor (APF) up to 10 times the exposure limit, wear a half mask respirator with organic vapour cartridges fitted with P100 filters. For an APF until maximum 100 times of exposure limit, wear a full face respirator mask with organic vapour cartridges and P100 filters.
Feet	Wear rubber boots to clean up a spill.

Goggles Nitrile gloves

9. Physical and chemical properties

Physical state	Liquid	**Flammability**	Non-flammable
Colour	White to tan	**Flammability limits**	N/Av.
Odour	Light odor	**Flash point**	99 to 100°C (210.2 to 212°F)
Odour threshold	N/Av.	**Auto-ignition temperature**	N/Av.
pH	2.5 to 3.5	**Sensibility to electrostatic charges**	N.Av.
Melting point	0°C (32°F)	**Sensibility to sparks and/or friction**	N.Det.
Freezing point	0°C (32°F)	**Vapour density**	>1 (Air = 1)
Boiling point	100 to 214°C (212 to 417.2°F)	**Relative density**	1.16 kg/L (Water = 1)
Solubility	Partially soluble in water.	**Partition coefficient n-octanol/water**	N/Av.
Evaporation rate	> Butyl Acetate	**Decomposition temperature**	N/Av.
Vapour pressure	N/Av.	**Viscosity**	<20.5 cSt @ 40°C (104°F)
Percent Volatile	60.9%	**Molecular mass**	N/Ap.

N/Av.: Not Available N/Ap.: Not Applicable Und.: Undetermined N/E: Not Established

10. Stability and reactivity

Reactivity	No reaction expected.
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.
Incompatible materials	Strong oxidizing agents (e.g. chlorine, fluorine, nitric acid, perchloric acid, peroxides, nitrates, chlorates, chromates, permanganates and perchlorates).
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Numerical measures of toxicity	Diethylene glycol ethyl ether acetate	Ingestion	4400 mg/kg	Rat	LD50
		Skin	15.1 ml/kg	Rabbit	LD50
	3,4,5-Trihydroxybenzoic acid	Ingestion	5000 mg/kg	Rabbit	LD50
	Ethylene glycol	Ingestion	1550 mg/kg	Human	
			4700 mg/kg	Rat	LD50
		Inhalation	>0.2 mg/l/4h	Rat	LC50
		Skin	10600 mg/kg	Rabbit	LD50

Likely routes of exposure

Skin, eyes, inhalation, ingestion.

Delayed, immediate and chronic effects

Eye contact

May cause pain, redness and irritation to the skin. Eye Irritation/Corrosion, Rabbit (OECD TG 405): tests performed with each ingredient of this mixture gave not irritating to irritating results.

Skin contact

May cause itching, redness and skin irritation. Skin Irritation/Corrosion, Rabbit (OECD 404) : tests performed with each ingredient of this mixture gave not irritating to irritating results.

Inhalation

Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions. Prolonged or excessive exposure may cause headache, drowsiness, nausea, dizziness, respiratory tract irritation.

Ingestion

Ingestion can cause abdominal pain, nausea, cramps, headache, dizziness, drowsiness and vomiting.

Respiratory or skin sensitization

Ingredients present at levels greater than or equal to 0.1% of this product are not skin or respiratory sensitizers.

IARC/NTP Classification

Common name	IARC	NTP
Diethylene glycol ethyl ether acetate	-	-

IARC : 1- Carcinogenic; 2A- Probably carcinogenic; 2B- Possibly carcinogenic.
NTP : K- Known to be carcinogens; R- Reasonably anticipated to be carcinogens.

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.

Mutagenicity

Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effects.

Reproductive toxicity

Ethylene Glycol (CAS no 107-21-1) has an embryotoxic and fetotoxic in laboratory animals. However, the mechanism of this effect is not relevant to humans.

Specific target organ toxicity - single exposure

No target organ is listed.

Specific target organ toxicity - repeated exposure

No target organ is listed.

Interactive effects

No information available.

Other information

The oral and skin acute toxicity estimates (ATE) of the mixture were calculated to be greater than 2000 mg/kg. The acute toxicity estimates (ATE) by inhalation of the mixture were calculated to be greater than 20 mg/L/4h for vapours and to be greater than 5 mg/L/4h for the aerosols and mists. These values are not classified according to WHMIS 2015 and OSHA HCS 2012.

12. Ecological information

Ecological toxicity

Aquatic Invertebrates, various	EC50	>10000 mg/L; 48 h (CAS no 107-21-1)
Aquatic Plant - Algea, Selenastrum capricornutum	EC50	10940 mg/L; 96 h (CAS no 107-21-1)
Fish - Oncorhynchus mykiss - Rainbow trout	LC50	22810 mg/L; 96 h (CAS no 107-21-1)
Fish - Pimephales promelas [static]	LC50	110 mg/L; 96 h (CAS no 112-15-2)
Aquatic Invertebrate - Daphnia Magna, Water flea (immobilization)	EC50	200 mg/L; 48 h (CAS no 112-15-2) OEDC 202

	Aquatic Plant - Chlorella vulgaris (Fresh water algae)	EC50	110 mg/L; 72 h (CAS no 112-15-2) OEDC 201
Persistence	No persistent.		
Degradability	The product is a mixture whose ingredients are not readily biodegradable (<60% in 28 days).		
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.		

13. Disposal considerations

Container 	Important! Prevent waste generation. Use in full. DO NOT dispose residue in sewers, streams or drinking water supply. Dispose residues as a hazardous waste. Non-use oils, organic solvents and wastes residues can be reprocessed (recycle) where there is a recovery program. Empty containers can be treated (recycled) where there is a recovery program. 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.

14. Transport information

UN Number	UN N/A
UN Proper Shipping Name	Not regulated by TDG (Canada) and 49 CFR DOT (USA).
Environmental hazards	This material does not contain marine pollutant.
Special precautions for user	No information available for this product.
TDG - Transportation of Dangerous Goods (Canada)	
Transport hazard class(es)	Not regulated
Packing group	Not regulated
Emergency response guidebook 2016	
IMO/IMDG - International Maritime Transport	
Classification	Not regulated
IATA - International Air Transport Association	
Classification	Not regulated

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
Diethylene glycol ethyl ether acetate	112-15-2	X	X		X
3,4,5-Trihydroxybenzoic acid	149-91-7		X		
Ethylene glycol	107-21-1	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.
Diethylene glycol ethyl ether acetate	112-15-2	X				X				
3,4,5-Trihydroxybenzoic acid	149-91-7	X								
Ethylene glycol	107-21-1	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

Common name	CAS	Cancer	Reproductive and Developmental Toxicity
Ethylene glycol	107-21-1		X

Other regulations	

HMIS

NFPA

16. Other information

Date (YYYY-MM-DD)	AEROCHEM Inc. 2020-03-03
Version	04
Other information	REFERENCES: - Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, https://haz-map.com/ - 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 - The National Center for Biotechnology Information, National Institutes of Health (NIH), U.S. National

Library of Medicine, https://pubchem.ncbi.nlm.nih.gov/
DATE OF FIRST VERSION OF SDS:
2017-09-15.
CHANGES MADE IN THE VERSION 02:
section 2.
DATE OF SECOND VERSION OF SDS:
2018-04-30.
CHANGES MADE IN THE VERSION 03:
section 3.
DATE OF THIRD VERSION OF SDS:
2019-08-01.
CHANGES MADE IN THE VERSION 04:
section 1.

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