Safety Data Sheet
POLY-45

1. Identification

Product identifier	POLY-45
Product code	SOLPOLY4520LT ; SOLPOLY45205LT
Other means of identification	N.Av.
Recommended use of the chemical and restrictions on use	Biodegradable paint stripper. 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	Combustible liquid. Keep away from heat, sparks and open flame. Avoid contact with skin, eyes and clothing. Do not breathe vapours, mists or aerosols. Do not ingest. If ingested consult physician immediately and show this Safety Data Sheet. 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

Flammable liquids (Category 4)
Skin corrosion/irritation (Category 2)
Serious eye damage/eye irritation (Category 2)
Skin sensitizer (Category 1)
Reproductive toxicity (Category 1B)
Specific target organ toxicity, single exposure (Category 3)

DANGER

H227: Combustible liquid
H360D: May damage the unborn child
H319: Causes serious eye irritation
H315: Causes skin irritation
H317: May cause an allergic skin reaction
H335: May cause respiratory irritation
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, sparks, open flames and other ignition sources. No smoking.
P261: Avoid breathing vapours and spray.
P264: Wash skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves, protective clothing and eye protection.
P308+313: IF exposed or concerned: Get medical attention.
P302+352: IF ON SKIN: Wash with plenty of water and soap.
P333+313: If skin irritation or a rash occurs: Get medical advice or attention.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or physician if you feel unwell.
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.
P370+378: In case of fire: Use water spray, chemical foam, or dry chemical to extinguish.
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
N-Methyl-2-pyrrolidone	872-50-4	80 - 100 %
d-Limonene	5989-27-5	3 - 10 %

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 breathing is difficult, give oxygen by trained personnel. If a problem develops or persists, seek medical attention.
Skin contact	Wash skin with warm water and mild soap for at least 15 minutes. Remove contaminated clothing and wash before reuse. Avoid touching eyes with contaminated body parts. If a problem develops or persists, seek medical attention.
Eye contact	IMMEDIATELY flush with plenty of water. Remove contact lenses if easy to do. Flush with water for at least 15 minutes. 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 additional information.
Symptoms	May cause redness and irritation to eyes. May cause redness and irritation of the skin. May cause an allergic reaction of the skin. May cause irritation to nose, throat and respiratory tract.
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	Combustible liquid and vapours. Vapors are heavier than air and may travel to an ignition source distant from the material handling point, they can spread along the ground and collect in low or confined areas and forms explosive mixture with air. May be ignited by heat, sparks, flame or static electricity. The product can also be ignited by strong oxidizing agents.

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 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. Remove sources of ignition. 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. Use non-sparking and antistatic tools. Finish cleaning by rinsing with water contaminated surface. For large spills, dike for later disposal. Dispose via a licensed waste disposal contractor.

7. Handling and storage

Precautions for safe handling	Keep away from heat, sparks and open flame. Use non-sparking and antistatic tools. Ground/bond all containers when transfering large quantities (5 gallons US or 20 L and more). Use only in well ventilated area. Do not breathe vapours, mists or aerosols. Avoid contact with skin, eyes and clothing. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved. Keep containers tightly closed when not in use. Do not eat, do not drink and do not smoke during use. Wash hands, forearms and face thoroughly after handling this compound and before eating, drinking or using toiletries. Remove contaminated clothing and wash before reuse.
Conditions for safe storage, including any incompatibilities	Storage and handling should follow the NFPA 30 Flammable and/or Combustible Liquids Code and the National Fire Code of Canada (NFCC). Ground or bond large containers. Store tightly closed and in properly labelled containers in a cool, dry and well ventilated place. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from oxidizing materials and incompatible materials (see section 10). Keep away from direct sunlight and heat. Keep away from moisture.
Storage temperature	0 to 40°C (32 to 104°F)

8. Exposure controls/personal protection

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

N-Methyl-2-pyrrolidone	TWA (8h)		400 mg/m^3	ON
		10 ppm		US AIHA
d-Limonene	TWA (8h)	30 ppm		US AIHA

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.

Individual protection measures	
Eye	Wear chemical splash goggles. If risk of contact with eyes or the face, wear a face shield.
Hands	Wear gloves made of butyl rubber, gloves made with a mixture of Neoprene and butyl rubber, or laminate multilayers gloves made of polyethylene/vinyl alcohol and ethylene/polyethylene. Before using, user should confirm impermeability. Be aware that the liquid may penetrate the gloves. Therefore, change gloves when worn. 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	Respiratory protection is not required for normal use. 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.


Apron


Butyl rubber gloves


Goggles

9. Physical and chemical properties

Physical state	Liquid	**Flammability**	Combustible
Colour	Colourless	**Flammability limits**	1.3 to 9.5%
Odour	Slight amine odor	**Flash point**	91°C (195.8°F)
Odour threshold	N/Av.	**Auto-ignition temperature**	245°C (473°F)
pH	7 to 8 @ 10%	**Sensibility to electrostatic charges**	Yes
Melting point	-25 to -24°C (-13 to -11.2°F)	**Sensibility to sparks and/or friction**	No
Freezing point	-25 to -24°C (-13 to -11.2°F)	**Vapour density**	3.4 (Air = 1)
Boiling point	200 to 202°C (392 to 395.6°F)	**Relative density**	1.03 kg/L (Water = 1)
Solubility	Soluble in water.	**Partition coefficient n-octanol/water**	<0
Evaporation rate	< Éther éthylique	**Decomposition temperature**	N/Av.
Vapour pressure	0.039kPa (0.3 mm Hg) @ 20°C (68°F)	**Viscosity**	N/Av.
Percent Volatile	>95%	**Molecular mass**	N/Ap.

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

10. Stability and reactivity

Reactivity	May react violently or explosively with incompatible materials.
Chemical stability	Stable under recommended storage conditions. N-Methyl-2-pyrrolidone (CAS no 872-50-4) can absorb moisture from the air (hygroscopic) and oxidize gradually.
Possibility of hazardous reactions (including polymerizations)	A dangerous reaction will not occur.
Conditions to avoid	Avoid heat, flame and sparks. Avoid moisture, sunlight, heat and frost. 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), strong acids (e.g. hydrochloric acid, sulfuric acid, phosphoric acid), strong reducing agents (e.g. potassium, sodium, lithium, metal hydrides), strong bases.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Numerical measures of toxicity	N-Methyl-2-pyrrolidone	Ingestion	3914 mg/kg	Rat	LD50
		Inhalation	>5.1 mg/l/4h	Rat	LC50
		Skin	8000 mg/kg	Rabbit	LD50
	d-Limonene	Ingestion	4400 mg/kg	Rat	LD50
		Skin	>5000 mg/kg	Rabbit	LD50

Likely routes of exposure	Skin, eyes, inhalation, ingestion.	
Delayed, immediate and chronic effects	**Eye contact**	May cause itching, redness and irritation of the eyes. Eye Irritation/Corrosion, Rabbit (OECD TG 405): tests performed with each ingredient (>1%) of this mixture gave all irritating results.
	Skin contact	May cause itching, redness and skin irritation. Skin Irritation/Corrosion, Rabbit (OECD 404) : tests performed with each ingredient (>1%) of this mixture gave all irritating results. Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in N-Methyl-2-pyrrolidone (CAS no 872-50-4) is easily absorbed through the skin. Widespread contact with skin for several hours can cause harmful amounts of material to be absorbed.
	Inhalation	May cause irritation to nose, throat and respiratory tract. Prolonged exposure may cause headache, dizziness and nausea.
	Ingestion	May be harmful if swallowed. Ingestion can cause abdominal pain, nausea, cramps, headache, dizziness, drowsiness and vomiting.
	Respiratory or skin sensitization	May cause an allergic reaction of the skin. Humans applied with patch tests showed signs of sensitization 10 to 15 minutes after the application of d-Limonene (CAS no 5989-27-5). Signs of sensitization were also observed in tests using guinea pigs (OEDC TG 429). Moreover, recent studies indicate that the oxidation products of d-limonene which are responsible for the skin sensitization and not d-limonene itself. This product is not a respiratory sensitizer.
	IARC/NTP Classification	No ingredients listed.
	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	N-Methyl-2-pyrrolidone (CAS no 872-50-4) has developmental effects and foetal malformations effects in many animal species without maternal toxicity (OECD, 2009).

	Specific target organ toxicity - single exposure	Respiratory system.
	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	Fish - Oncorhynchus mykiss - Rainbow trout	LC50	>500 mg/L; 96h (CAS no 872-50-4)
	Invertebrate - Palaemonetes vulgaris	EC50	>1107 mg/L; 96h (CAS no 872-50-4)
	Algea - Desmodesmus subspicatus	EC50	600 mg/L; 72h (CAS no 872-50-4)
	Fish - Pimephales promelas - Fresh water	LC50	0.72 mg/L; 96 h (CAS no 5989-27-5) OECD 203
	Aquatic Invertebrate - Daphnia magna (static)	EC50	0.36 mg/L; 48 h (CAS no 5989-27-5) OECD 202
Persistence	Contain an ingredient that may be persistent in the environment.		
Degradability	N-Méthyl-2-pyrrolidone (CAS no 872-50-4) is readily biodegradable; >70% in 28 days (OECD 301C). D-Limonene (CAS no 5989-27-5) is readily biodegradable to 71% (OECD 301B). In fact, d-Limonene is reported to undergo biodegradation under aerobic conditions, but is resistant to biodegradation under anaerobic condition (TOXNET).		
Bioaccumulative potential	The product is a mixture of which some ingredients are readily biodegradable (> 60% in 28 days) while other ingredients are not readily biodegradable (<60% in 28 days).		
Mobility in soil	This product is soluble in water and it is expected to have high mobility in 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. Non-use oils, organic solvents and wastes residues can be reprocessed (recycle) 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). Regulated by 49 CFR DOT (USA). COMBUSTIBLE LIQUID, N.O.S.
Environmental hazards	This material does not contain marine pollutant.
Special precautions for user	NOTE: Regulated by 49 CFR DOT (USA): NA1993, COMBUSTIBLE LIQUID, N.O.S. (N-Methyl-2-pyrrolidone), Class 3, PG III. Permit required for transportation with proper DANGER placards displayed on vehicle.

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
N-Methyl-2-pyrrolidone	872-50-4	X	X		X
d-Limonene	5989-27-5	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.
N-Methyl-2-pyrrolidone	872-50-4	X		X						
d-Limonene	5989-27-5	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
N-Methyl-2-pyrrolidone	872-50-4		X

Other regulations	

	

16. Other information

Date (YYYY-MM-DD)	AEROCHEM Inc. 2020-03-16
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: 2018-01-09. CHANGES MADE IN THE VERSION 02: section 3. DATE OF SECOND VERSION OF SDS: 2018-07-18. CHANGES MADE IN THE VERSION 03: section 3. DATE OF THIRD VERSION OF SDS: 2019-07-31. CHANGES MADE IN THE VERSION 04: sections 1, 3, 8, 11, 12, and 15. 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
Powered by A global vision of prevention	