

Safety Data Sheet

LOK 2640



AEROCHEM

1. Identification

Product identifier	LOK 2640
Product code	RALOK26401000ML; RALOK2640250ML; RALOK264050ML
Other means of identification	None.
Recommended use of the chemical and restrictions on use	Anaerobic resins with high strength, for high temperature
Manufacturer	AEROCHEM Inc. 5977 Trans Canada Highway Pointe-Claire, QC H9R 1C1 Canada Tel. 514-630-2800 General Information: 1-888-592-5837 Fax 514-630-2828 www.aerochem.ca
Emergency phone number	Quebec Poison Center: 1-800-463-5060 (toll free in QC) Ontario and Manitoba Poison Centres: 1-800-268-9017 or 419-813-5900 BC Drug and Poison Information Centre: 1-800-567-8911 (toll free in BC) or contact your local poison control centre in the state/province or territory where you live. INFOTRAC® 1-800-535-5053. International call collect: 1-352-323-3500 24 hours/day, 7 days/week.

2. Hazard identification

Summary	Avoid all contact with the skin, eyes and clothing. Do not breathe vapors. 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.
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WHMIS 2015/OSHA HCS 2012/GHS



Skin corrosion/irritation (Category 1)
Serious eye damage/eye irritation (Category 1)
Skin sensitizer (Category 1)
Specific target organ toxicity, single exposure, Respiratory tract irritation (Category 3)

DANGER

H314: Causes severe skin burns and eye damage

H317: May cause an allergic skin reaction

H335: May cause respiratory irritation

P260: Do not breathe vapours.

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.

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.

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.
 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.
 P403+233: Store in a well ventilated place. Keep container tightly closed.
 P405: Store locked up.
 P501: Dispose of contents and container in accordance with local regulations.

3. Composition/information on ingredients

Common name	CAS	Weight % content
Hydroxypropyl methacrylate	27813-02-1	45 - 50 %
Aliphatic urethane acrylate	Urethane No CAS	5 - 10 %
Acrylic acid	79-10-7	5 - 10 %
1-Acetyl-2-phenylhydrazine	114-83-0	0.1 - 1 %
Cumene hydroperoxide	80-15-9	0.1 - 1 %

Note: No CAS number was provided for the ingredient Aliphatic urethane acrylate (Urethane No CAS) from the supplier's SDS.

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	Flush with water 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. Seek medical attention immediately.
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 small amounts of water to drink. Seek medical attention or contact a Poison Centre immediately.
Other	No information available.
Symptoms	May cause severe eye irritation or eye damage. May cause severe skin irritation and burns. May cause irritation to nose, throat and respiratory tract. May cause an allergic reaction of the skin.
Notes to the physician	Apply a symptomatic and supportive treatment. 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, chemical foam, carbon dioxide (CO ₂). 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	Use water spray to cool fire-exposed containers. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.
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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) or wipe up or scrape up and place in an appropriate waste disposal container 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	People with a history of skin sensitization should not intervene in the process using this product. Use in well ventilated area. Avoid all contact with the skin, eyes and clothing. Do not breathe vapors. 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	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 incompatible materials (see section 10). Store in dry protected area free from humidity, freezing temperatures or extreme temperature changes.
Storage temperature	5 to 35°C (41 to 95°F)

8. Exposure controls/personal protection

Immediately Dangerous to Life or Health	No IDLH value is reported.		
Hydroxypropyl methacrylate	STEL	3 ppm	Other
	TWA (8h)	1 ppm	Other
Acrylic acid	TWA (8h)	2 ppm	ACGIH (Pc), BC, ON
		2 ppm	RSST (Pc)
Cumene hydroperoxide	TWA (8h)	1 ppm	US AIHA
		5.9 mg/m ³	
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 safety glasses with side shields. If there is a risk of contact with eyes, wear chemical splash goggles.		
Hands	Wear Nitrile gloves. Disposable nitrile gloves can also be used, but discard after single use. 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.

Feet

Wear rubber boots to clean up a spill.



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9. Physical and chemical properties

Physical state	Liquid	Flammability	Non-flammable.
Colour	Green	Flammability limits	N/Av.
Odour	Characteristic	Flash point	N/Av.
Odour threshold	N/Av.	Auto-ignition temperature	N/Av.
pH	N/Av.	Sensibility to electrostatic charges	N/Av.
Melting point	N/Av.	Sensibility to sparks and/or friction	No
Freezing point	N/Av.	Vapour density	N/Av. (Air = 1)
Boiling point	N/Av.	Relative density	N/Av. (Water = 1)
Solubility	Slightly soluble in water.	Partition coefficient n-octanol/water	N/Av.
Evaporation rate	N/Av.	Decomposition temperature	N/Av.
Vapour pressure	N/Av.	Viscosity	N/Av.
Percent Volatile	N/Av.	Molecular mass	N/Av.
N/Av.: Not Available N/Av.: Not Available Und.: Undetermined N/E: Not Established			

10. Stability and reactivity

Reactivity	No information available for this product.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions (including polymerizations)	A dangerous reaction will not occur.
Conditions to avoid	Avoid contact with incompatible substances. Avoid moisture, sunlight, heat and frost.
Incompatible materials	Strong oxidizing agents (e.g. chlorine, fluorine, nitric acid, perchloric acid, peroxides, nitrates, chlorates, chromates, permanganates and perchlorates), strong reducing agents (e.g.

	potassium, sodium, lithium, metal hydrides), strong bases (e.g. hydroxides, solutions of ammonia, amines, carbonates).
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>Hydroxypropyl methacrylate Ingestion >2000 mg/kg Rat LD50 Skin >5000 mg/kg Rabbit LD50</p> <p>Acrylic acid Ingestion 357 mg/kg Rat LD50 Inhalation 3.6 mg/l/4h Rat LC50 Skin 640 mg/kg Rabbit LD50</p> <p>Aliphatic urethane acrylate Ingestion >2000 mg/kg Rat LD50 Skin >2000 mg/kg Rabbit LD50</p> <p>1-Acetyl-2-phenylhydrazine Ingestion 270 mg/kg Mouse LD50</p> <p>Cumene hydroperoxide Ingestion 382 mg/kg Rat LD50 Inhalation 1.4 mg/l/4h Rat LC50 Skin 500 mg/kg Rat LD50</p>
Likely routes of exposure	Skin, eyes, inhalation, ingestion.
Delayed, immediate and chronic effects	<p>Eye contact May cause severe eye irritation or eye damage. Acrylic acid (CAS no 79-10-7) is highly corrosive to the eyes. Eye Irritation/Corrosion, Rabbit (OECD TG 405): tests performed with the other ingredients of this mixture gave not irritating results.</p> <p>Skin contact May cause skin irritation and burns. Acrylic acid (CAS no 79-10-7) is highly corrosive on skin rabbits (OECD TG 404). Skin Irritation/Corrosion, Rabbit (OECD 404) : tests performed with the other ingredients of this mixture gave not irritating to irritating results.</p> <p>Inhalation May cause irritation to nose, throat and respiratory tract. Prolonged exposure may cause headache, dizziness and nausea.</p> <p>Ingestion May be harmful if swallowed. May cause gastro-intestinal irritation and burns to mouth, throat and stomach.</p> <p>Respiratory or skin sensitization May cause an allergic reaction of the skin. Hydroxypropyl methacrylate (CAS no 27813-02-1) is not really a sensitizer in mouse study (OECD Guideline 429). However, a weak sensitisation response was observed on animal and cross sensitisation with other methacrylate or acrylates family compounds has been observed in animals and humans (OEDC 2008). Cumene hydroperoxide (CAS no 80-15-9) is known to have a skin sensitizing potential in human (TONEX). It is reasonable mentioning that the ingredient Aliphatic urethane acrylate (Urethane No CAS available) which is from the acrylates family compounds, may cause skin sensitization. One study reported dermal sensitization in a worker who used an adhesive containing 1-Acetyl-2-phenylhydrazine (CAS no 114-83-0). Closed skin tests (patch) gave a positive response.</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 Respiratory system.</p> <p>Specific target organ toxicity - repeated exposure No target organ is listed.</p>

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 dusts and mists. These values are not classified according to WHMIS 2015 and OSHA HCS 2012.

12. Ecological information

Ecological toxicity	<p>Fish - Oncorhynchus mykiss - Rainbow trout LC50 3.9 mg/L; 96 h (CAS no 80-15-9) OECD 203</p> <p>Aquatic Invertebrate - Daphnia Magna, Water flea (immobilization) EC50 18.8 mg/L; 48 h (CAS no 80-15-9) OECD 202</p> <p>Aquatic Plant - Algea, Scenedesmus subspicatus EC50 3.1 mg/L; 72 h (CAS no 80-15-9) OECD 201</p> <p>Marine fish - Scopthalmus maximus - Turbot LC50 833 mg/L; 96 h (CAS no 27813-02-1)</p> <p>Aquatic Invertebrate - Daphnia Magna - Fresh water EC50 >143 mg/L; 48 h (CAS no 27813-02-1)</p> <p>Fish - Oncorhynchus mykiss - Rainbow trout LC50 27 mg/L; 96 h (CAS no 79-10-7)</p> <p>Aquatic Invertebrate - Daphnia Magna - Fresh water EC50 95 mg/L; 78 h (CAS no 79-10-7)</p> <p>Aquatic Plant - Algea, Desmodesmus subspicatus EC50 0.205 mg/L; 72 h (CAS no 79-10-7)</p>
Persistence	Contains an or many ingredients that may be persistent in aquatic environment.
Degradability	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).
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 of which some ingredients have a high mobility in the soil, while other ingredients have a moderate to low 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 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 1760
UN Proper Shipping Name	CORROSIVE LIQUID, N.O.S. (acrylic 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
Packing group	II
Emergency response guidebook 2016	154
IMO/IMDG - International Maritime Transport	
Classification	UN 1760. CORROSIVE LIQUID, N.O.S. (acrylic acid). Class 8, PG II. Emergency schedules (EmS-No) F-A, S-B
IATA - International Air Transport Association	
Classification	UN 1760. CORROSIVE LIQUID, N.O.S. (acrylic acid). Class 8, 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
Hydroxypropyl methacrylate	27813-02-1		X		
Aliphatic urethane acrylate	Urethane No CAS		X		
Acrylic acid	79-10-7	X	X		X
1-Acetyl-2-phenylhydrazine	114-83-0		X		
Cumene hydroperoxide	80-15-9		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.
Hydroxypropyl methacrylate	27813-02-1	X								
Aliphatic urethane acrylate	Urethane No CAS	X								
Acrylic acid	79-10-7	X	X	X		X	X			
1-Acetyl-2-phenylhydrazine	114-83-0	X								
Cumene hydroperoxide	80-15-9	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

WHMIS 1988



D2B

E

Class D2B : Toxic material causing other toxic effects

Class E : Corrosive material

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HMIS



NFPA



16. Other information

Date
(YYYY-MM-DD)

AEROCHEM Inc. 2015-05-08

Version

01

Other
information

REFERENCES:

- Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, <http://hazmap.nlm.nih.gov/index.php>
- TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, <http://toxnet.nlm.nih.gov/>
- 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, www.ncbi.nlm.nih.gov
- Toxicological Review, Integrated Risk Information System (IRIS), USA Environment Protection Agency, www.epa.gov/iris

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

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