

# Safety Data Sheet

## FLUIDE VO-5



# AEROCHEM

### 1. Identification

<b>Product identifier</b>	FLUIDE VO-5
<b>Product code</b>	FLVO520LT, FLVO5205LT
<b>Other means of identification</b>	None.
<b>Recommended use of the chemical and restrictions on use</b>	Fast evaporation oil for heavy duty stamping.
<b>Manufacturer</b>	AEROCHEM Inc. 5977 Trans Canada Highway Pointe-Claire, QC H9R 1C1 Canada  General Information: 1-888-592-5837  <a href="http://www.aerochem.ca">www.aerochem.ca</a> <a href="mailto:info@aerochem.ca">info@aerochem.ca</a>
<b>Emergency phone number</b>	INFOTRAC®: 1-800-535-5053 International call collect: 1-352-323-3500 24 hours/day, 7 days/week

### 2. Hazard identification

<b>Summary</b>	Flammable 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.
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#### WHMIS 2015/GHS/OSHA HCS 2012



Flammable liquids (Category 3)  
Acute toxicity, inhalation (Category 4)  
Specific target organ toxicity, single exposure, Narcotic effects (Category 3)  
Aspiration hazard (Category 1)

#### DANGER

H226: Flammable liquid and vapour  
H304: May be fatal if swallowed and enters airways  
H332: Harmful if inhaled  
H336: May cause drowsiness or dizziness  
P210: Keep away from heat, sparks, open flames and other ignition sources. No smoking.  
P240: Ground or bond container and receiving equipment.  
P242: Use only non-sparking tools.  
P243: Take precautionary measures against static discharge.  
P261: Avoid breathing vapours, mist and spray.  
P271: Use only outdoors or in a well-ventilated area.  
P280: Wear protective gloves, protective clothing and eye protection.  
P301+310+331: IF SWALLOWED: Immediately call a POISON CENTER or a physician. 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.  
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.  
 P370+378: In case of fire: Use chemical foam, dry chemical or carbon dioxide to extinguish.  
 P403+P235+P233: Store in a well-ventilated place. Keep container tightly closed. Keep cool.  
 P405: Store locked up.  
 P501: Dispose of contents and container to an approved waste disposal plant.

### 3. Composition/information on ingredients

Common name	CAS	Weight % content
Naphtha (petroleum), hydrotreated heavy (C6-C13)	64742-48-9	80 - 100 %
Alkanes (C14-17), chloro	61788-76-9	1 - 5 %
Mineral oil mixture	Mineral oil	1 - 5 %
Lard, oil	8016-28-2	0.5 - 1.5 %

**Note:** This product contains a mixture of highly refined mineral oil (CAS no 64741-88-4, 64742-54-7 and 64742-01-4) containing no polycyclic aromatic hydrocarbon (PAH). P.S. for CAS no: 61788-76-9: Chlorinated paraffins are a group of compounds varying in molecular structure by carbon chain length and degree of chlorination. The chlorinated paraffin materials used in this product are medium-chain, C14-C17, containing <1% of C10-C13, and with a degree of chlorination of 40% to 60%. The manufacturer withholds the actual concentration range of the ingredients as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	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.
<b>Skin contact</b>	Wash skin with warm water and mild soap for at least 15 minutes. Remove contaminated clothing and wash before reuse. If a problem develops or persists, seek medical attention.
<b>Eye contact</b>	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.
<b>Ingestion</b>	DO NOT induce vomiting, unless recommended by medical personnel. If victim is conscious wash out mouth with plenty of water. Never give anything by mouth if victim is unconscious or convulsing. If spontaneous vomiting occurs, keep head below hip level to prevent aspiration into the lungs. Seek medical attention or contact a Poison Centre immediately.
<b>Other</b>	No information available.
<b>Symptoms</b>	May cause redness and slight irritation of the eyes. May cause dry skin and slight irritation. Inhalation of vapours may cause central nervous system depression such as drowsiness, headache, dizziness, vertigo, nausea and fatigue. Harmful or fatal if inhaled into the lungs (ingestion/vomiting). Signs of lung involvement include increased respiratory rate, increased heart rate, and a bluish discolouration of the skin. Coughing, choking and gagging are often noted at the time of aspiration.
<b>Notes to the physician</b>	Aspiration hazard for the lungs (ingestion/vomiting). Can enter lungs and cause damage. 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

<b>Suitable extinguishing media</b>	Dry chemicals, water spray, chemical foam, carbon dioxide (CO <sub>2</sub> ). Do not use a heavy water jet.
<b>Specific hazards arising from the chemical</b>	Flammable liquid and vapours. May be ignited by heat, sparks, flame or static electricity. Vapours are heavier than air and may travel to an ignition source distant from the material handling point. Contact with strong oxidizers may cause fire.

<b>Special protective equipment</b>	Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.
<b>Special protective actions for fire-fighters</b>	Use water spray to cool fire-exposed containers. Water spray can reduce the intensity of the flames. However, the water jets can spread the fire. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.

## 6. Accidental release measures


<b>Personal precautions, protective equipment and emergency procedures</b>	Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.
<b>Environmental precautions</b>	Prevent entry into sewers, closed areas and release to the environment. For a large spill, consult the Department of Environment or the relevant authorities.
<b>Methods and materials for containment and cleaning up</b>	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 the contaminated surface by rinsing with soapy water. For large spills, dike for later disposal. Dispose via a licensed waste disposal contractor.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Keep away from heat, sparks and open flame. Avoid all sources of ignition. Use non-sparking and antistatic tools. Ground/bond all containers when transferring 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 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. Wash hands, forearms and face thoroughly after handling this compound and before eating, drinking or using toiletries. Remove contaminated clothing and wash before reuse.
<b>Conditions for safe storage, including any incompatibilities</b>	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.
<b>Storage temperature</b>	15 to 30°C (59 to 86°F)

## 8. Exposure controls/personal protection

<b>Immediately Dangerous to Life or Health</b>	No IDLH value is reported.				
Naphtha (petroleum), hydrotreated heavy (C6-C13)	TWA (8h)	Mist	5 mg/m <sup>3</sup>	ACGIH , RSST	
			175 ppm	1200 mg/m <sup>3</sup>	Other
			300 ppm		OSHA
Mineral oil mixture	TWA (8h)	Mist	5 mg/m <sup>3</sup>	ACGIH	
<b>Appropriate engineering controls</b>	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	
<b>Eye</b>	Wear safety glasses with side shields. If there is a risk of contact with eyes, wear chemical splash goggles.
<b>Hands</b>	Wear nitrile or neoprene gloves. Disposable nitrile gloves can also be used, but discard after single use. 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.
<b>Skin</b>	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. Wear synthetic or a neoprene apron, if necessary, to prevent repeated or prolonged contact with skin.
<b>Respiratory</b>	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.
<b>Feet</b>	Wear rubber boots to clean up a spill.
 Goggles      Nitrile gloves	

## 9. Physical and chemical properties

<b>Physical state</b>	Liquid	<b>Flammability</b>	Flammable
<b>Colour</b>	Colourless	<b>Flammability limits</b>	0.7 to 5.3%
<b>Odour</b>	Odourless	<b>Flash point</b>	58°C (136.4°F) ASTM D56
<b>Odour threshold</b>	N/Av.	<b>Auto-ignition temperature</b>	225°C (437°F)
<b>pH</b>	N/Av.	<b>Sensibility to electrostatic charges</b>	Yes
<b>Melting point</b>	N/Av.	<b>Sensibility to sparks and/or friction</b>	No
<b>Freezing point</b>	N/Av.	<b>Vapour density</b>	5.65 (Air = 1)
<b>Boiling point</b>	175 to 202°C (347 to 395.6°F)	<b>Relative density</b>	0.75 to 0.76 kg/L (Water = 1)
<b>Solubility</b>	Insoluble in water.	<b>Partition coefficient n-octanol/water</b>	2.1 to 6.5
<b>Evaporation rate</b>	< Butyl Acetate	<b>Decomposition temperature</b>	N/Av.
<b>Vapour pressure</b>	0.052kPa (0.4 mm Hg) @ 20°C (68°F)	<b>Viscosity</b>	2.8 cSt @ 40°C (104°F)
<b>Percent Volatile</b>	100%	<b>Molecular mass</b>	N/Av.

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

## 10. Stability and reactivity

<b>Reactivity</b>	No information available for this product.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions (including polymerizations)</b>	A dangerous reaction will not occur.
<b>Conditions to avoid</b>	Avoid heat, flame and sparks. Avoid contact with incompatible materials.
<b>Incompatible materials</b>	Strong bases, strong acids, strong oxidizing agents (e.g. chlorine, fluorine, nitric acid, perchloric acid, peroxides, nitrates, chlorates, chromates, permanganates and perchlorates).
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information


<b>Numerical measures of toxicity</b>	<p>Naphtha (petroleum), hydrotreated heavy (C6-C13) Ingestion &gt;10000 mg/kg Rat LD50 Inhalation &gt;8.5 mg/l/4h Rat LC50 Skin &gt;3200 mg/kg Rabbit LD50</p> <p>Alkanes (C14-17), chloro Ingestion &gt;21.5 ml/kg Rat LD50 Skin &gt;10 ml/kg Rat LD50</p> <p>Mineral oil mixture Ingestion &gt;5000 mg/kg Rat LD50 Skin &gt;5000 mg/kg Rabbit LD50</p> <p>Lard, oil Ingestion &gt;2000 mg/kg Rat LD50 Skin &gt;2000 mg/kg Rabbit LD50</p>				
<b>Likely routes of exposure</b>	Skin, eyes, inhalation, ingestion.				
<b>Delayed, immediate and chronic effects</b>	<p><b>Eye contact</b> May cause redness and slight irritation of the eyes. Naphtha (petroleum), hydrotreated heavy (CAS no 64742-48-9) is non-irritating to the eye (OECD 405).</p> <p><b>Skin contact</b> May cause redness and slight irritation of the skin. Prolonged or repeated exposure can cause skin drying, defatting and dermatitis. Naphtha (petroleum), hydrotreated heavy (CAS no 64742-48-9) is a low skin irritant (human, OECD 431).</p> <p><b>Inhalation</b> Harmful if inhaled. Inhalation of vapours may cause central nervous system depression such as drowsiness, headache, dizziness, vertigo, nausea and fatigue.</p> <p><b>Ingestion</b> Harmful or fatal if inhaled into the lungs (ingestion/vomiting). May cause serious damage to lung tissue and respiratory tract. Signs of lung involvement include increased respiratory rate, increased heart rate, and a bluish discolouration of the skin. Coughing, choking and gagging are often noted at the time of aspiration.</p> <p><b>Respiratory or skin sensitization</b> Ingredients present at levels greater than or equal to 0.1% of this product are not skin or respiratory sensitizers.</p> <p><b>IARC/NTP Classification</b></p> <table border="0"> <tr> <td><b>Common name</b></td> <td><b>IARC NTP</b></td> </tr> <tr> <td>Alkanes (C14-17), chloro</td> <td>2B R</td> </tr> </table> <p><small>IARC : 1- Carcinogenic; 2A- Probably carcinogenic; 2B- Possibly carcinogenic. NTP : K- Known to be carcinogens; R- Reasonably anticipated to be carcinogens.</small></p> <p><b>Carcinogenicity</b> Chlorinated paraffins of average carbon-chain length C12 and average degree of chlorination approximately 60% are possibly carcinogenic to humans (Group 2B) [IARC]. However, chronic ingestion studies in animals have shown that repeated doses of a similar chlorinated paraffin (C14-17, 52% chlorinated) gave no effect levels in the range of 250-300ppm. The lack of genotoxic activity together with the results of other studies leads to the conclusion that this chlorinated paraffin is unlikely to present a carcinogenic hazard to man under normal conditions of handling and use. The following information has been reported for the aliphatic petroleum distillates with regards to carcinogenicity (IARC, 1987): Untreated and mildly-treated oils are carcinogenic to humans (Group 1), and highly-refined oils are not classified as carcinogenic to humans.</p>	<b>Common name</b>	<b>IARC NTP</b>	Alkanes (C14-17), chloro	2B R
<b>Common name</b>	<b>IARC NTP</b>				
Alkanes (C14-17), chloro	2B R				

	<p><b>Mutagenicity</b> Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effects.</p> <p><b>Reproductive toxicity</b> Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause reproduction effects.</p> <p><b>Specific target organ toxicity - single exposure</b> Central nervous system.</p> <p><b>Specific target organ toxicity - repeated exposure</b> No target organ is listed.</p>
<b>Interactive effects</b>	No information available.
<b>Other information</b>	The oral and skin acute toxicity estimates (ATE) of the mixture were calculated to be greater than 2000 mg/kg. These values are not classified according to WHMIS 2015 and OSHA HCS 2012. The acute toxicity estimate (ATE) by inhalation of the mixture was calculated to be greater than 10 mg/L/4h but lower than 20 mg/L/4h. This value is classified according to GHS: Acute toxicity, inhalation (Category 4).

## 12. Ecological information

<b>Ecological toxicity</b>	<p>Fish - Pimephales promelas - Fresh water LC50 8.2 mg/L; 96 h (64742-48-9)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 4.5 mg/L; 48 h (64742-48-9) OECD 202</p> <p>Aquatic Invertebrate - Daphnia magna EC50 0.0059 mg/L; 48 h [Alkanes (C14-17), chloro]</p> <p>Aquatic Invertebrate - Crustaceans - Gammarus pulex (fresh water) EC50 1 mg/L; 96 h [Alkanes (C14-17), chloro]</p>
<b>Persistence</b>	Contains an or many ingredients that may be persistent in aquatic environment.
<b>Degradability</b>	Naphtha (petroleum), hydrotreated heavy (C6-C13) (CAS no 64742-48-9) is expected to biodegrade only very slowly in the environment (10% in 28 days, OECD 301D). Chlorinated paraffins do not biodegrade readily based on limited data (IPCS 1996, HSDB 2009).
<b>Bioaccumulative potential</b>	Naphtha (petroleum), hydrotreated heavy (CAS no 64742-48-9) has Log Kow values ranging from 2.1 to 6.5 and Bioconcentration Factor (BCF) of >3000 for the oil mixture. These values indicate a high degree of bioaccumulation. Chlorinated paraffins have low water solubility and have a high partition coefficient log Kow from 4,48 to 7,38. These values indicate a high degree of bioaccumulation.
<b>Mobility in soil</b>	The product is a hydrocarbon mixture of which some ingredients can evaporate into the air while others present a medium to low mobility in soil. If released to soil, chlorinated paraffins are bound to the soil particles and are not expected to volatilize or to leach into groundwater.
<b>Other adverse effects</b>	This chemical does not deplete the ozone layer.

## 13. Disposal considerations

<p><b>Container</b></p> 	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.
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Alkanes (C14-17), chloro	61788-76-9	X							
Mineral oil mixture	Mineral oil	X							
Lard, oil	8016-28-2	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

<b>HMIS</b>	<b>NFPA</b>
	

## 16. Other information

<b>Date (YYYY-MM-DD)</b>	AEROCHEM Inc. 2020-03-03
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<b>Version</b>	04
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<b>Other information</b>	<p>REFERENCES:</p> <ul style="list-style-type: none"> <li>- Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, <a href="https://haz-map.com/">https://haz-map.com/</a></li> <li>- Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), <a href="http://www.reptox.csst.qc.ca">http://www.reptox.csst.qc.ca</a></li> <li>- Database, Institut National de Recherche et de Sécurité, <a href="http://www.inrs.fr/accueil/produits/bdd.html">http://www.inrs.fr/accueil/produits/bdd.html</a></li> <li>- EPA ACToR (Aggregated Computational Toxicology Resource) <a href="http://actor.epa.gov/actor/faces/ACToRHome.jsp">http://actor.epa.gov/actor/faces/ACToRHome.jsp</a></li> </ul> <p>DATE OF FIRST VERSION OF SDS: 2016-02-01.</p> <p>CHANGES MADE IN THE VERSION 02: section 3.</p> <p>DATE OF SECOND VERSION OF SDS: 2018-07-18.</p> <p>CHANGES MADE IN THE VERSION 03: sections 2 and 3.</p> <p>DATE OF THIRD VERSION OF SDS: 2019-07-31.</p> <p>CHANGES MADE IN THE VERSION 04: 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</p>
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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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