

MATERIAL SAFETY DATA SHEET

PRODUCT NAME : V LUBE F (US VERSION)

1. Product and Company Identification

Product name: V Lube F
Synonyms: None
Item Numbers: 254-117-002; 254-539-002; 421-780-001

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2. Hazards Identification

EMERGENCY OVERVIEW

Non-hazardous in bulk liquid form at low to moderate temperatures. Prolonged exposure to skin may possibly cause dermatitis. Inhalation of oil mists or vapours from hot oil may cause irritation of the upper respiratory tract. Toxic gases will be produced at high temperatures.

For short and long term exposure effects see Section 11 Toxicological data.

Eye Effects: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin Effects: Contact may cause mild skin irritation including redness, and a burning sensation. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin leading to dermatitis (inflammation). A component of this material may cause an allergic skin reaction. No harmful effects from skin absorption are expected.

Ingestion/Oral Effects: Low degree of toxicity by ingestion.

Inhalation Effects: No information available on acute toxicity. Effects of overexposure may include irritation of the digestive tract, nausea and diarrhoea. Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.

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MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Repeated contact may aggravate pre-existing skin conditions.

NFPA Hazard codes		HMIS Hazard codes		Rating System
Health	0	Health	0	0 = No Hazard 1 = Slight Hazard 2 = Moderate Hazard 3 = Serious Hazard 4 = Severe Hazard
Flammability	1	Flammability	1	
Instability	0	Reactivity	0	

3. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
Lubricant base oil (petroleum)	99-100	†	Not applicable	Not applicable
Proprietary additives	0-1	-	Not applicable	Not applicable

† The base oil can be a mixture of any of the following highly refined petroleum streams: CAS 64741-88-4; CAS 64741-89-5; CAS 64741-96-4; CAS 64741-97-5; CAS 64742-01-4; CAS 64742-52-5; CAS 64742-53-6; CAS 64742-54-7; CAS 64742-55-8; CAS 64742-56-9; CAS 64742-57-0; CAS 64742-62-7; CAS 64742-63-8; CAS 64742-65-0; CAS 72623-83-7; CAS 72623-85-9; CAS 72623-86-0; CAS 72623-87-1.

*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive No 1272/2008 (as amended) and are present in sufficient concentration to make the overall substance hazardous. In all other situations, the column will be completed as "Not applicable".

4. First Aid Measures

Eyes:	Flush eyes with large amounts of water until irritation subsides, keeping eyelids open. Seek medical attention if irritation persists.
Skin:	Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.
Ingestion/Oral:	First aid is not normally required. Seek medical attention if symptoms develop.
Inhalation:	If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If symptoms persist, seek medical attention.
Notes to Physician:	Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current work place exposure limits is unlikely to cause pulmonary abnormalities.
Other Information:	Safely dispose of heavily contaminated clothing which cannot be cleaned.

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5. Fire Fighting Measures

- Extinguishing Media:** Use water spray to cool surfaces exposed to fire and to protect personnel. Shut off source of fuel to the fire. Extinguish with carbon dioxide, foam, dry chemical or water spray, or allow the fire to burn under controlled conditions. Cover liquid spills with foam. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.
- Fire and Explosion Hazard:** This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire. Avoid spraying water directly into storage containers due to danger of boilover. See also Section 4 "First Aid Measures" and Section 10 "Stability and Reactivity".
- Special Protective Equipment for Fire Fighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).
- Instructions for Fire Fighters:** Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapours and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

For Flammability Properties - see Section 9.

6. Accidental Release Measures

Personal Precautions

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Notify persons and shipping down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8).

See Section 2 and Section 7 for additional information on hazards and precautionary measures.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the appropriate authorities.

Methods for Containment and Clean-Up

Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (for example: skimming, booms or absorbents).

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7. Handling and Storage

Handling: Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment. Keep away from flames and hot surfaces. Do not enter confined spaces such as tanks or pits without following proper entry procedures. Do not wear contaminated clothing or shoes.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. "Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

8. Exposure Controls/Personal Protection

Exposure Limits:

Ingredient	ACGIH - TLV -	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Lubricant base oil	5 mg/m ³ - TWA 10 mg/m ³ - STEL (as oil mist, if generated)	5 mg/m ³ - TWA (as oil mist, if generated)	5 mg/m ³ - TWA (as oil mist)

Personal Protection:

Engineering Measures: Where vapours or mists may be present, use mechanical ventilation to keep exposure to airborne contaminants below the recommended exposure limits. Ensure that eye wash stations and emergency showers are close to working areas.

Respiratory Protection: Special ventilation is not necessary for normal applications. Where vapour/mist concentrations in air may exceed the exposure limits (and where engineering or other means of exposure reduction are not adequate) use an approved respirator. A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever work place conditions warrant the use of a respirator. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health.

Hand/Skin Protection: The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective material: Nitrile.

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Eye/Face Protection:	The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.
Hygiene Measures:	Practice good hygiene. Wash hands after use and prior to consuming food and drink.
Other/General Protection:	Wear appropriate clothing with long-sleeves and full-length trousers to prevent skin contact. Wear appropriate protective footwear.

Note: Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

9. Physical and Chemical Properties

Appearance and Odour	Clear and bright viscous liquid, petroleum odour	Boiling point	No data available	°C/°F
pH (as supplied)	No data available	Freezing Point	<-18 / -0.4	°C/°F
Solubility in Water	Negligible	Auto Ignition	No data available	°C/°F
Volatile Content by Volume	Negligible	Flash Point	> 150 / 302	°C/°F
Specific Gravity	0.86 to 0.87 (@ 15.6 °C)	Viscosity	5-11 cSt (@ 100 °C) 30-110 cSt (@ 40 °C)	
Vapour Pressure (mbar)	< 1.333	Vapour Pressure (Torr)	< 1.0	

10. Stability and Reactivity

Stability:	Stable under normal working conditions.
Material/Conditions to Avoid:	High temperatures. Strong oxidising agents and strong reducing agents.
Hazardous Decomposition:	Not anticipated under normal conditions of use. Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulphur, nitrogen or phosphorus may also be formed.
Hazardous Polymerisation:	Not known to occur.

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11. Toxicological Information

For a comprehensive description for the various toxicological (health) effects which may arise if the user comes into contact with the substance or preparation refer to Section 2 Hazards Identification.

Animal data:

LD50 value: > 2 g/kg (dermal); > 5 g/kg (oral).

LC50 value: No data available.

Carcinogenicity:

The product does not contain any chemicals that are listed as carcinogens.

12. Ecological Information

Acute ecotoxicity: Experimental studies show that acute aquatic toxicity values are greater than 1000 mg/l. These values are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

Mobility: Volatilization to air is not expected to be a significant fate process due to the low vapour pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of base oil components in soil and sediment.

Persistence and degradability: The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

Bioaccumulative potential: Log Kow values measured for the hydrocarbon components of this material range from 4 to over 6, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

Other adverse effects: No data available.

Possible hazards (summary): Ecological injuries are not known or expected under normal use.

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13. Disposal Considerations

This material, as supplied, is not a hazardous waste. It is possible, however, that the material as produced contains constituents which are not required to be listed in the MSDS but could affect the hazardous waste determination. Care should in any case be taken to ensure compliance with EU, national and local regulations. This product is NOT suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers.

Used oil must be re-cycled in accordance with EU, national and local regulations. Use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

Empty containers may contain combustible product residue. Use appropriate precautions. Container contents should be completely used and containers should be emptied prior to discard. Empty containers should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor.

14. Transport Information

This product is not classified as dangerous under transport regulations.

PARAMETER	EUROPEAN	CANADIAN TDG	UNITED STATES DOT
Proper Shipping Name	Not applicable	Not applicable	Not applicable
Hazard Class	Not applicable	Not applicable	Not applicable
Identification Number	Not applicable	Not applicable	Not applicable
Shipping Label	Not applicable	Not applicable	Not applicable

15. Regulatory Information

European Regulatory Information

This product has been classified in accordance with EU Regulation No 1272/2008 (as amended) on the Classification, Labelling and Packaging of Substances and Mixtures.

Classified as dangerous to supply: No.

Risk Phrases : Not applicable.

Safety Phrases : Not applicable.

Symbols : None.

United States Regulatory Information

All of the components of this material are on the Toxic Substances Control Act Inventory (TSCA-U.S.).

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:

This product does not contain toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and 40 CFR Part 372.

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer or reproductive toxicity.

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Canadian Regulatory Information

WHMIS Classification: D2B.

All CAS numbers listed in Section 3 are in the Canadian DSL.

16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Sources of information for this data sheet:

- 76 Lubricants "76 Turbine Oil (All Grades)" Material Safety Data Sheet. MSDS No: 778982
Date of Issue: 31-Mar-2009. Status: Final.

Glossary:

ACGIH - American Conference of Governmental Industrial Hygienists; **ANSI** - American National Standards Institute; **Canadian TDG** - Canadian Transportation of Dangerous Goods; **CAS** - Chemical Abstracts Service; **CFR** - Code of Federal Regulations; **Chemtrec** - Chemical Transportation Emergency Center (US); **DSL** - Domestic Substances List; **EH40 (UK)** - HSE Guidance Note EH40 Occupational Exposure Limits; **EPCRA** - Emergency Planning and Community Right-to-Know Act; **EU** - European Union; **HMIS** - Hazardous Material Information Service; **LC** - Lethal Concentration; **LD** - Lethal Dose; **NFPA** - National Fire Protection Association; **OSHA** - Occupational Safety and Health Administration, US Department of Labour; **PEL** - Permissible Exposure Limit; **SARA (Title III)** - Superfund Amendments and Reauthorization Act; **SARA 313** - Superfund Amendments and Reauthorization Act, Section 313; **STEL** - Short Term Exposure Limit; **TLV** - Threshold Limit Value; **TSCA** - Toxic Substances Control Act Public Law 94-469; **TWA** - Time-Weighted Average; **US DOT** - US Department of Transportation; **WHMIS** - Workplace Hazardous Materials Information System.

Revisions:

Jul 2010 - Data Sheet updated to reflect the latest supplier safety information.

Although the information and recommendations in this data sheet are to the best of our knowledge correct, it is recommended that you make your own determination of the material's suitability for your purpose before you use it. The information contained in this data sheet has been reproduced from the manufacturers data; the accuracy of this information is the responsibility of the manufacturer. Edwards accept no responsibility for damage of any nature resulting from the use of, or the reliance upon, this data sheet.