

**PRODUCT NAME : Mechanical Pump Oil - Fomblin Y/LVAC Series
(06/6, 14/6, 16/6, 25/6, 25/9)**

1. Product and Company Identification

Product Name: Fomblin YVAC Vacuum Pump Fluids.
Fomblin YVAC 06/6; Fomblin YVAC 14/6; Fomblin YVAC 16/6; Fomblin YVAC 25/6;
Fomblin YVAC 25/9.

Synonyms: None.

Item Numbers : Grade 06/6: H026-00-4001; H026-00-4002; H026-00-4003; H026-00-4004;
H026-00-4005; H026-00-4006; H113-01-019; H113-01-020.
Grade 14/6: H113-11-020; H113-11-019.
Grade 16/6: H026-00-1003; H026-00-1004; H026-00-1005; H026-00-1006; H113-06-019;
H113-06-020.
Grade 25/6: H026-00-8002; H026-00-8003; H026-00-8004; H026-00-8005; H026-00-8006;
H026-00-8007; H113-12-019.
Grade 25/9: H113-22-019.
Grade 30 GX: H113-23-016; H113-23-116.

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2. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
Perfluorinated polyethers	100	69991-67-9	Not applicable	Not applicable

*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive (67/548/EEC, 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".

3. Hazards Identification

EMERGENCY OVERVIEW

This material when properly handled according to good working and hygienic practices is not dangerous to human health and the environment. Vapours which may irritate the respiratory system may be released above 290°C/554°F.

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

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Eye Effects: Prolonged contact with eyes has no expected effect. Severe irritation may be caused by decomposition products.

Skin Effects: Prolonged contact with skin has no expected effect. Severe irritation may be caused by decomposition products.

Ingestion/Oral Effects: Very low toxicity on ingestion.

Inhalation Effects: Low volatility makes inhalation hazards unlikely. Severe irritation may be caused by decomposition products.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

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

4. First Aid Measures

Eyes: Wash with plenty of water. If irritation occurs, seek medical attention.

Skin: Wash with soap and water. If irritation occurs, seek medical attention.

Ingestion/Oral: Induce vomiting if the patient is conscious.

Inhalation: Move to fresh air in cases of accidental inhalation of vapours from decomposition products. If breathing problems occur, a qualified individual should administer oxygen or artificial respiration as indicated. Seek immediate medical attention.

Other Information: None

5. Fire Fighting Measures

Extinguishing Media: The product does not burn. Select extinguishing media to suit other material(s) involved.

Fire and Explosion Hazard: Possible risk due to irritation and toxic affects of thermal combustion products therefore keep container cool by spraying with water. Thermal decomposition products include hydrogen fluoride and carbonyl fluoride.

Special Protective Equipment for Fire Fighters: Fire fighters should wear self-contained breathing apparatus (SCBA) which meets appropriate standards operated in positive pressure mode. Skin protection should be worn to protect from thermal combustion products.

For Flammability Properties - see Section 9

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6. Accidental Release Measures

In the event of spillage:

- Wear personal protective clothing (see Section 8 Exposure Controls and Personal Protection).
- Recover released product by absorbing with earth, sand or sawdust and collecting in a suitable container. Wash area to prevent slip hazard.
- Avoid discharge into sewage systems, surface or underground waters and the soil.

7. Handling and Storage

Handling: Wear protective clothing when required. Do not drink or eat during handling. No smoking is compulsory in working areas. Avoid heating above the decomposition temperature of 290°C/554°F. Take precautions to avoid electrostatic charges which may be generated during handling.

Storage: Keep away from heat sources, from flammable, combustible or explosive materials and from incompatible compounds. Store in glass or polyethylene containers.

8. Exposure Controls/Personal Protection

Exposure Limits

Ingredient	ACGIH - TLV -	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Hydrofluoric Acid (HF)**.	3 ppm (C)	3 ppm - 8H TWA	3 ppm - STEL
Carbonylfluoride (COF ₂)**	2 ppm - 8 H TWA 5 ppm (STEL)	Not available	Not available

** Note: Only the threshold limit values (ACGIH 1998/99), OSHA PELs, and UK OELs of by-products from thermal decomposition are available.

Personal Protection:

- Engineering Measures: None.
- Respiratory Protection: Wear self-contained breathing apparatus in cases of thermal decomposition or fire. See also Section 5.
- Hand/Skin Protection: Wear rubber gloves.
- Eye/Face Protection: Wear safety goggles.
- Hygiene Measures: Practice good workplace hygiene. Do not eat or smoke when handling. Wash hands before eating.
- Other/General Protection: None.

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9. Physical and Chemical Properties

Appearance and Odour	Clear, colourless, odourless viscous liquid	Boiling Point	No data available	⁰ C/ ⁰ F
pH (as supplied)	No data available	Freezing Point	No data available	⁰ C/ ⁰ F
Solubility in Water	Insoluble	Auto Ignition	Not explosive	⁰ C/ ⁰ F
Volatile Content by Volume	No data available	Flash Point	Not flammable	⁰ C/ ⁰ F
Specific Gravity	1.84 - 1.93 @ 20°C/68°F			
Vapour Pressure (mbar)	Grade 06/6: 2.0 x 10 ⁻⁴ @ 20°C Grade 14/6: 5.0 x 10 ⁻⁶ @ 20°C Grade 16/6: 4.0 x 10 ⁻⁵ @ 20°C Grade 25/6: 5.2 x 10 ⁻⁸ @ 20°C Grade 25/9: 2.0 x 10 ⁻⁹ @ 20°C	Vapour Pressure (Torr)	Grade 06/6: 1.5 x 10 ⁻⁴ @ 68°F Grade 14/6: 3.7 x 10 ⁻⁶ @ 68°F Grade 06/6: 3.0 x 10 ⁻⁵ @ 68°F Grade 25/6: 3.9 x 10 ⁻⁸ @ 68°F Grade 25/9: 1.5 x 10 ⁻⁹ @ 68°F	

10. Stability and Reactivity

Stability: Stable

Material/Conditions to Avoid: Avoid exposing the product to free flames or temperatures above 290°C/554°F. Avoid contact with alkaline metals and ammonia, strong or non aqueous alkalis, Lewis acids (AlCl₃, SbF₅, CoF₃) above 100°C/212°F.

Hazardous Decomposition: The product may decompose at temperatures above 290°C/588°F with emissions of hydrogen fluoride (HF) and carbonyl fluoride (COF₂), which are toxic and corrosive gases.

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 3 Hazards Identification.

Animal Data:

LD50 value: Ingestion (rat): >15-25g/kg

Intraperitoneal (rat): > 25g/kg

LC50 value: Inhalation (rat) 4h: >2000ppm

Note that no effects were noted at the above doses.

Carcinogenicity:

No carcinogenic, mutagenic or reproduction effects are known.

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12. Ecological Information

Use the product according to good working practices, avoid discharge to the environment. There is a risk of environmental pollution of the atmosphere in case of emission of toxic and corrosive gases from thermal decomposition.

13. Disposal Considerations

Send spent product to an authorised disposal plant or to incinerators equipped with specific emission treatment plant.
Send waste containers to a suitably qualified or licensed landfill contractor.

14. Transport Information

This product is not regulated 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 the Dangerous Substances Directive (67/548/EEC, as amended) and the Preparations Directive (88/379/EEC, as amended), implemented in the UK as the Chemical (Hazard Information and Packing) Regulations 1994 (CHIP, as amended).

Classified as dangerous to supply : No

Risk Phrases : Not applicable

Safety Phrases : Not applicable

Symbols : None

United States Regulatory Information

All ingredients contained in this product are included on the EPA TSCA Chemical Substance Inventory.

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 harm.

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Canadian Regulatory Information

All ingredients contain in this product are included on the Canadian DSL.

WHMIS Classification: Not Applicable

16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and the EU Safety Data Sheet Directive 91/155/EEC.

Sources of information for this data sheet :

- Ausimont Safety Data Sheet for Fomblin Y. Reference : sym/ss 58. Date: March, 1994.
- Edwards Publication 'Fluids and Sealants'. Publication number 09-H021-20-895.
- National Library of Medicine (NLM) electronic databases (HSDB, RTECS, CHEMID, Toxline)

Glossary : **CAS**, Chemical Abstracts Service; **NFPA**, National Fire Protection Association; **HMIS**, Hazardous Material Information Service; **LD**, Lethal Dose; **LC**, Lethal Concentration; **ACGIH**, American Conference of Governmental Industrial Hygienists; **TLV**, threshold limit value; **OSHA**, Occupational Safety and Health Administration, US department of Labour; **PEL**, Permissible exposure limit; **EH40 (UK)**, HSE Guidance Note EH40 Occupational exposure limits; **PPM**, parts per million; **TWA**, Time-Weighted Average; **STEL**, Short Term Exposure Limit; **Canadian TDG**, Canadian Transportation of Dangerous Goods; **US DOT**, US Department of Transportation.

HSDB, Hazardous Substances Data Bank; **RTECS**, Registry of Toxic Effects of Chemical Substances; **CHEMID**, Chemical Identification; **DSL**, Domestic Substances List ; **TSCA**, Toxic Substances Control Act Public Law 94-469; **CERCLA**, Comprehensive Environmental Response, Compensation and Liability Act; **EPCRA**, Emergency Planning and Community Right-to-Know Act; **CAA**, Clean Air Act; US, **SARA (Title III)**, Superfund Amendments and Reauthorization Act.; **SARA 313**, Superfund Amendments and Reauthorization Act, Section 313; **EHS**, Extremely Hazardous Substance; **WHMIS**, Workplace Hazardous Materials Information System.

Revisions

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