

MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : MECHANICAL PUMP OILS - FOMBLIN® Y/LVAC SERIES:
(06/6, 14/6, 16/6, 25/6, 25/9) AND 30GX**

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; Fomblin 30GX

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.
30GX: H113-23-016; H113-23-116.

European Contact Details

Edwards, Manor Royal, Crawley
West Sussex, RH10 9LW, England

General enquiries

UK : +44 (0)1293 528844
France : +(33) 1 47 98 24 01
Germany : +(49) 6420-82-410
Italy : +(39) 0248-4471

US Contact Details

Edwards, 301 Ballardvale Street,
Wilmington, MA 01887

General enquiries

+(1) 978-658-5410
Toll Free: 1-800-848-9800

24 h Emergency telephone number:

Chemtrec: 1-800-424-9300

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.

MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : MECHANICAL PUMP OILS - FOMBLIN® Y/LVAC SERIES:
(06/6, 14/6, 16/6, 25/6, 25/9) AND 30GX**

Eye Effects: May cause redness. Severe irritation may be caused by decomposition products.
Skin Effects: May cause redness. Severe irritation may be caused by decomposition products.
Ingestion/Oral Effects: Very low toxicity on ingestion. May cause abdominal pain, nausea and vomiting.
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	1	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 for at least 15 minutes. If irritation occurs, seek medical attention.
Skin: Wash with soap and water. If irritation occurs, seek medical attention.
Ingestion/Oral: Give several glasses of water to drink. Do not induce vomiting. Seek medical attention if persistent pain arises.
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

MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : MECHANICAL PUMP OILS - FOMBLIN® Y/LVAC SERIES:
(06/6, 14/6, 16/6, 25/6, 25/9) AND 30GX**

6. Accidental Release Measures

In the event of spillage:

- Prevent contact of the spilled product with hot surfaces and flames.
- 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. Do not smoke 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 materials (see Section 10). 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: Provide working areas with adequate ventilation systems. Provide eye wash and emergency shower facilities.

Respiratory Protection: Wear self-contained breathing apparatus in cases of thermal decomposition or fire. See also Section 5.

Hand/Skin Protection: Wear rubber gloves and worksuit or rubber apron.

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.

MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : MECHANICAL PUMP OILS - FOMBLIN® Y/LVAC SERIES:
(06/6, 14/6, 16/6, 25/6, 25/9) AND 30GX**

9. Physical and Chemical Properties

Appearance and Odour	Clear, colourless, odourless viscous liquid	Boiling point	>270 / 518	°C/°F
pH (as supplied)	No data available	Freezing Point	No data available	°C/°F
Solubility in Water	Insoluble	Auto Ignition	Not explosive	°C/°F
Volatile Content by Volume	No data available	Flash Point	Not flammable	°C/°F
Specific Gravity (@20 °C/68 °F)	Grade 06/6: 1.88 to 1.90 Grade 14/6: 1.88 to 1.90 Grade 16/6: 1.88 to 1.90 Grade 25/6: 1.88 to 1.90 Grade 25/9: 1.89 to 1.92 30GX: 1.88 to 1.90			
Vapour Pressure (mbar)	Grade 06/6: 2.0×10^{-4} @ 20 °C Grade 14/6: 5.0×10^{-6} @ 20 °C Grade 16/6: 4.0×10^{-5} @ 20 °C Grade 25/6: 5.2×10^{-8} @ 20 °C Grade 25/9: 2.0×10^{-9} @ 20 °C 30GX: 1.3×10^{-7} @ 20 °C	Vapour Pressure (Torr)	Grade 06/6: 1.5×10^{-4} @ 68 °F Grade 14/6: 3.7×10^{-6} @ 68 °F Grade 06/6: 3.0×10^{-5} @ 68 °F Grade 25/6: 3.9×10^{-8} @ 68 °F Grade 25/9: 1.5×10^{-9} @ 68 °F 30GX: 1.0×10^{-7} @ 68 °F	

10. Stability and Reactivity

Stability:	Stable under normal conditions of use and storage.
Material/Conditions to Avoid:	Avoid exposing the product to free flames or temperatures above 290 °C/554 °F. Avoid contact with strong alkaline non-aqueous compounds, Lewis acids (AlCl ₃ , SbF ₅ , CoF ₃) above 100 °C/212 °F and fine powdered magnesium or aluminium or their alloys above 200 °C/392 °F.
Hazardous Decomposition:	The product may decompose at temperatures above 290 °C/554 °F with emissions of hydrogen fluoride (HF) and carbonyl fluoride (COF ₂), which are toxic and corrosive gases.
Hazardous Polymerisation:	Will not occur.

MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : MECHANICAL PUMP OILS - FOMBLIN® Y/LVAC SERIES:
(06/6, 14/6, 16/6, 25/6, 25/9) AND 30GX**

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: Oral: >2000 mg/kg (rat) Dermal: > 2000 mg/kg (rat)

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

Carcinogenicity:

No carcinogenic, mutagenic or reproduction effects are known.

12. Ecological Information

There is no data available for the environmental effects (mobility, persistence/degradability, bioaccumulation) or the ecostability of the product.

Ecotoxicity: LC50 (rainbow trout), EC50 (daphnia) and EC50 (bacteria) > maximum solubility of the product in water.

13. Disposal Considerations

If recycling is not practicable, dispose of the product and used containers in accordance with all local and national requirements.

Waste product can be incinerated at a licensed disposal plant equipped to burn fluorine compounds. Waste containers can be reused after thorough washing, or be sent to landfill sites.

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

MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : MECHANICAL PUMP OILS - FOMBLIN® Y/LVAC SERIES:
(06/6, 14/6, 16/6, 25/6, 25/9) AND 30GX**

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.

Canadian Regulatory Information

WHMIS Classification: Not classified.

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

MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : MECHANICAL PUMP OILS - FOMBLIN® Y/LVAC SERIES:
(06/6, 14/6, 16/6, 25/6, 25/9) AND 30GX**

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:

- Solvay Solexis "FOMBLIN® Y LVAC" Safety Data Sheet. Ref : fom0228e. Updating: 21/6/2006.
- Solvay Solexis "FOMBLIN® Y HVAC" Safety Data Sheet. Ref : fom0229e. Updating: 21/6/2006.
- Solvay Solexis "FOMBLIN® 30GX" Safety Data Sheet. Ref : fom0484e. Updating: 8/5/2006.

Glossary:

ACGIH - American Conference of Governmental Industrial Hygienists; ANSI - American National Standards Institute; Canadian TDG - Canadian Transportation of Dangerous Goods; CAS - Chemical Abstracts Service; Chemtrec - Chemical Transportation Emergency Center (US); CHIP - Chemical (Hazard Information and Packing); DSL - Domestic Substances List; EC - Equivalent Concentration; EH40 (UK) - HSE Guidance Note EH40 Occupational exposure limits; EPA - Environmental Protection Agency; EPCRA - Emergency Planning and Community Right-to-Know Act; HMIS - Hazardous Material Information Service; LC - Lethal Concentration; LD - Lethal Dose; NFPA - National Fire Protection Association; OEL - Occupational Exposure Limit; OSHA - Occupational Safety and Health Administration, US department of Labour; PEL - Permissible exposure limit; ppm - parts per million; SARA (Title III) - Superfund Amendments and Reauthorization Act; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; SCBA - Self-Contained Breathing Apparatus; 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:

Nov 2007 - 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.