

SAFETY DATA SHEET (SDS)

**PRODUCT NAME: MECHANICAL PUMP OILS -
FOMBLIN YVAC (06/6, 14/6, 16/6, 25/6) AND 30GX**

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1 Product identifier

Product name: Fomblin YVAC, Fomblin 30GX
Other means of identification: None known.
Item numbers: H11301019 Fomblin Y VAC 06/6 1 kg
H11301020 Fomblin Y VAC 06/6 5 kg
H026004006 Fomblin Y VAC 06/6 8 kg (North America only)

H11311019 Fomblin Y VAC 14/6 1 kg

H11306019 Fomblin Y VAC 16/6 1 kg
H11306020 Fomblin Y VAC 16/6 5 kg
H026001006 Fomblin Y VAC 16/6 8 kg (North America only)

H11312019 Fomblin Y VAC 25/6 1 kg
H11312020 Fomblin Y VAC 25/6 5 kg
H026008006 Fomblin Y VAC 25/6 8 kg (North America only)

H11323016 Fomblin 30 GX 1 kg
H11323116 Fomblin 30 GX 5 kg
H11323017 Fomblin 30 GX 250 kg

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use: Industrial lubricant for electronic, electrical and chemical industries.
Uses advised against: No data available.

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1.3 Details of the supplier of the safety data sheet.

UK contact details

Edwards, Innovation Drive, Burgess Hill, West Sussex,
RH15 9TW, United Kingdom

General enquiries

Tel: +44 (0)8459 212223

Email: info@edwardsvacuum.com

US contact details

Edwards, 6416 Inducon Drive West, Sanborn,
New York, 14132, USA

General enquiries

Toll Free: 1-800-848-9800

1.4 Emergency telephone number

Chemtrec: 1-800-424-9300.

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS classification:	Substance.
Classification according to Regulation (EC) No. 1272/2008:	Not classified as hazardous.
Classification according to Directive 1999/45/EC:	Not classified as hazardous.

2.2 Label elements

Hazard pictograms:	Not applicable.
Signal words:	Not applicable.
Hazard statements:	Not applicable.
Precautionary statements:	Not applicable.

2.3 Other hazards

PBT criteria:	No data available.
vPvB criteria:	No data available.
Other hazards which do not result in a classification:	Thermal decomposition can lead to the release of toxic and corrosive gases including gaseous Hydrogen Fluoride and Fluorophosgene.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Ingredient	CAS No	Hazard class*	Risk phrase / Hazard Statements*
1-Propene, 1,1,2,3,3,3-hexafluoro-, oxidised, polyimd **	69991-67-9	Not applicable	Not applicable

* Hazard class, Risk phrase and Hazard Statements. 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".

** Ingredient. The product has an ingredient concentration of greater than 99.9 %.

Full text for the declared risk phrases and hazards statements is given in Section 16.

3.2 Mixtures

Not applicable.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

Eyes:	Rinse thoroughly with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do so. Seek medical attention if symptoms persist.
Skin:	Wash contaminated skin with plenty of soap and water. Seek medical attention if symptoms occur.
Ingestion/Oral:	Thoroughly rinse out mouth with plenty of water. Provide the affected person with 1-2 glasses of water or milk. Never give anything by mouth to an unconscious person. Do not induce vomiting. Seek medical attention if symptoms occur.
Inhalation:	Remove affected person to fresh air. If breathing problems occur, a qualified individual should administer Oxygen or artificial respiration as indicated. Seek immediate medical attention.
General advice:	None.

4.2 Most important symptoms and effect, both acute and delayed

Potential acute health effects:

Eyes:	May cause redness and irritation.
Skin:	May cause redness.
Ingestion / Oral:	May cause nausea, vomiting and diarrhoea.
Inhalation:	None known.

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Over-exposure symptoms:

Eyes: No data available.
Skin: No data available.
Ingestion / Oral: No data available.
Inhalation: No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Water, powder, foam, dry chemical and Carbon Dioxide (CO₂).

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Fire and explosion hazard: The product is not flammable or explosive.

Hazardous combustion products: In case of fire, thermal decomposition can lead to the release of toxic and corrosive gases including gaseous Hydrogen Fluoride and Fluorophosgene.

5.3 Advice for fire-fighters

Special precautions for fire-fighters: Approach from upwind. Use water fog or spray to protect the intervention team and to keep containers and surroundings cool.

Special protective equipment for fire-fighters: Fire-fighters should wear Self-Contained Breathing Apparatus (SCBA) with full face-piece operated in positive pressure mode. An acid resistant over suit must be worn when intervening in close proximity to the fire.

For Flammability Properties - refer to Section 9.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate non-essential staff, or those not equipped with individual personal protective equipment. Turn leaking containers leakerside up to prevent the escape of the product. Do not touch or walk through spilled material; spilt product constitutes a slip hazard. Avoid contact with skin and eyes. Put on appropriate personal protective equipment (refer to Section 8).

For emergency responders: Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition.

6.2 Environmental precautions:

Contain spill before washing area to prevent slip hazard. Eliminate sources of ignition. Prevent product from entering drains, sewers and watercourses.

6.3 Methods and material for containment and cleaning up

Put on the necessary personal protective equipment; refer to Section 8. Exercise caution; the area of the spill may be slippery. Absorb material onto vermiculite, dry sand, earth or similar inert absorbent. Place spilled material into suitable container for disposal. Use a suitable cleaning solution to clean up any remaining product. Dispose of according to applicable local, state and federal regulations. Do not flush into surface water or sanitary sewer system.

6.4 Reference to other sections

Refer to Section 8 for information on personal protective equipment.

Refer to Section 13 for information on disposal considerations.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Ensure personal protective equipment is used whenever handling the product, refer to Section 8. Handle away from heat and sources of ignition in areas with adequate ventilation. Ground equipment and apparatus to take precautionary measures against electrostatic discharge. Clean and dry piping circuits before use.

Avoid eating and drinking in areas where the product is used. Practice good hygiene. Wash hands after use and prior to consuming food and drink.

7.2 Conditions for safe storage, including any incompatibilities

Store in labelled containers, in a cool well-ventilated area, away from heat and sources of ignition and incompatible materials.

7.3 Specific end use(s)

No special precautions required.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

The Occupational Exposure Limits (OEL) identified in the table below are for the by-products of thermal decomposition.

Substance	ACGIH - TLV	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Hydrogen Fluoride Anhydrous	0.5 ppm - 8 hr TWA 2 ppm - CLV	2.5 mg/m ³	1.5 mg/m ³ - 8 hr TWA 2.5 mg/m ³ - STEL
Carbonyl Difluoride	2 ppm - 8 hr TWA 5 ppm - STEL	2.5 mg/m ³	2.5 mg/m ³ - 8 hr TWA

8.2 Exposure controls

Appropriate engineering controls: Ensure adequate ventilation, especially in confined areas, that is appropriate to the risk of hazardous decomposition. Apply technical measures to comply with the OELs identified in the table above.

Ensure that eyewash stations and safety showers are close to the workstation location.

Individual protection measures:

Eye/Face Protection: Safety glasses with side shields, safety goggles or face shields in case of splashes.

Hand/Skin Protection: Wear suitable protective clothing such as impermeable gloves (chemical, oil and solvent resistant) and long-sleeved overalls/coveralls and safety shoes appropriate to the risk at the specific workplace.

Respiratory Protection: Use a personal respirator and approved filter that conforms to local and national standards when potentially exposed to hazardous decomposition products.

Hygiene Measures: Practice good hygiene. Wash face, hands and any exposed skin thoroughly after handling. Remove all soiled and contaminated clothing. Do not eat or drink while handling the product.

Other/General Protection: None.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

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The following information is for 30GX Lubricant only.

Appearance	Colourless liquid	Melting point / freezing point	Not applicable	°C / °F
Odour	Odourless	Initial boiling point and boiling range	> 270 / 518	°C / °F
Odour threshold	No data available	Flash point	Non-flammable	°C / °F
pH	No data available	Upper/lower flammability or explosive limits	No data available	°C / °F
Evaporation rate	No data available	Vapour pressure	< 0.0000001 @ 20 °C / 68 °F	hPa
Flammability (solid, gas)	No data available	Vapour density	No data available	g/cm ³
Solubility(ies)	Insoluble in water, Soluble in fluorinated solvents	Relative density	1.9 @ 20 °C / 68 °F	g/cm ³
Partition coefficient: n-octanol/water	No data available	Auto-ignition temperature	No data available	°C / °F
Explosive properties	Not explosive	Decomposition temperature	> 290 / 554	°C / °F
Oxidising properties	Not an oxidiser	Viscosity	570	mPa.s

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The following information is for Y VAC Lubricant only.

Appearance	Colourless liquid	Melting point / freezing point	Not applicable	°C / °F
Odour	Odourless	Initial boiling point and boiling range	> 270 / 518	°C / °F
Odour threshold	No data available	Flash point	Not flammable	°C / °F
pH	No data available	Upper/lower flammability or explosive limits	No data available	°C / °F
Evaporation rate	No data available	Vapour pressure	< 0.0000001- 0.000013 @ 20 °C / 68 °F	hPa
Flammability (solid, gas)	No data available	Vapour density	No data available	g/cm ³
Solubility(ies)	Insoluble in water, Soluble in fluorinated solvents	Relative density	1.88 - 1.90	g/cm ³
Partition coefficient: n-octanol/water	No data available	Auto-ignition temperature	No data available	°C / °F
Explosive properties	Not explosive	Decomposition temperature	> 290 / 554	°C / °F
Oxidising properties	Not an oxidiser	Viscosity	95 - 560 @ 20 °C / 68 °F	mPa.s

9.2 Other information

None.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions of use.

10.2 Chemical stability

Stable under normal conditions of use. Metals promote and lower decomposition temperature.

10.3 Possibility of hazardous reactions

None known under normal conditions of use.

10.4 Conditions to avoid

Avoid using the product in the presence of a high voltage electric arc and in the absence of Oxygen. Keep away from flames and sources of ignition. To avoid thermal decomposition, do not overheat.

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10.5 Incompatible materials

Lewis acids (Friedel-Crafts) above 100 °C / 212 °F, Aluminium and Magnesium in powder form above 200 °C / 392 °F.

10.6 Hazardous decomposition products

Gaseous Hydrogen Fluoride and Fluorophosgene.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:	Fomblin 30GX: LD50 Oral: > 5,000 mg/kg (Rat) LD50 Dermal: > 2,000 mg/kg (Rat)
	Fomblin Y VAC: LD50 Oral: > 15,000 mg/kg (Rat) LD50 Dermal: > 5,000 mg/kg (Rat)
Irritation:	Not irritating to the eye or skin (Rabbit).
Corrosivity:	No data available.
Sensitisation:	Not a sensitiser (Guinea Pig).
Repeat dose toxicity:	No data available.
Carcinogenicity:	No data available.
Mutagenicity:	Fomblin 30GX and Fomblin Y VAC: Not mutagenic in Ames Test.
	Fomblin Y VAC Only: Chromosome aberration test in vitro, negative.
Specific Target Organ Toxicity (STOT) - single exposure	No data available.
STOT - repeated exposure	Fomblin 30GX: 28d: Rat 1,000 mg/kg. Remarks: NOEL.
Aspiration hazard	No data available.
Toxicity for reproduction:	No data available.

Information on likely routes of exposure

No data available.

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Symptoms related to the physical, chemical and toxicological characteristics

Eye Effects: May cause redness and irritation.
Skin Effects: May cause redness.
Ingestion/Oral Effects: May cause nausea, vomiting and diarrhoea.
Inhalation Effects: No data available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

No data available.

Other information

The product is biologically inert. Exposure to decomposition products causes severe irritation of eyes, skin and mucous membranes.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Fomblin 30GX:

LC50, 96 h > 360 mg/l, Fish, Brachydanio rerio (saturated aqueous solution).

EC50, 48 h > 360 mg/l, 220 ppm, Crustaceans, Daphnia magna (saturated aqueous solution).

Fomblin Y VAC:

EC50, 48 h > 360 mg/l, 200 ppm, Crustaceans, Daphnia magna (Water Flea), saturated aqueous solution.

LC50, 96 h > 360 mg/l, 200 ppm, Fish, Brachydanio rerio (Zebrafish), saturated aqueous solution.

12.2 Persistence and degradability

Fomblin 30GX:

No data available.

Fomblin Y VAC:

Non-biodegradable.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

PBT: No data available.

vPvB: No data available.

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12.6 Other adverse effects

Ecological injuries are not known or expected under normal use.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Dispose of the product in compliance with all applicable local and national regulations. Can be incinerated when in compliance with local regulations. The incinerator must be equipped with a system for the neutralisation or recovery of Hydrogen Fluoride.

Packaging: Dispose of the packaging in compliance with all applicable local and national regulations. Empty containers can be landfilled.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

14.2 UN proper shipping name

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

14.3 Transport hazard class

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

14.4 Packing group

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

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14.5 Environmental hazards

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

14.6 Special precautions for user

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

No data available.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environment regulations/legislation specific for the substance or mixture

European

This product has been classified in accordance with EU Regulation No 1907/2006 (REACH) on the Classification, Labelling and Packaging of Substances and Mixtures.

Classified as dangerous to supply: No.

German Federal Water Management Act: No data available.

United States

Materials contained in this product are listed on the U.S. Toxic Substances Control Act (TSCA).

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.

Canadian

WHMIS Classification: No data available.

Ingredients in this product are included in the Canadian DSL.

15.2 Chemical safety assessment

No data available.

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SECTION 16. OTHER INFORMATION

This SDS is compiled in accordance with ANSI Z400.1, Regulation (EC) No 1907/2006 (as amended by Regulation No 453/2010) concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

16.1 Full text of abbreviated statements and phrases

Not applicable.

16.2 NFPA / HMIS hazard codes

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

16.3 Sources of information for this data sheet

- Solvay Speciality Polymers "Fomblin 30GX" European Safety Data Sheet, Version 2.1
Revision Date: 2nd September 2013.
- Solvay Speciality Polymers "Fomblin 30GX" North American Safety Data Sheet, Version 2.0
Revision Date: 30th September 2014.
- Solvay Speciality Polymers "Y LVAC" European Safety Data Sheet, Version 3.1
Revision Date: 13th March 2014.
- Solvay Speciality Polymers "Y LVAC" North American Safety Data Sheet, Version 2.0
Revision Date: 19th September 2014.

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16.4 Glossary

ACGIH - American Conference of Governmental Industrial Hygienists; **ADR** - European Agreement concerning the International Carriage of Dangerous Goods by Road; **ANSI** - American National Standards Institute; **CAS No.** - Chemical Abstracts Service number; **Chemtrec** - Chemical Transportation Emergency Centre (US); **CLV** - Ceiling Limit Value; **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; **GHS** - Globally Harmonized System of Classification and Labelling of Chemicals; **HMIS** - Hazardous Material Information Service; **IATA** - International carriage of dangerous goods by air; **IBC** - International Bulk Chemical; **IMDG** - International carriage of dangerous goods by sea; **LC** - Lethal Concentration; **LD** - Lethal Dose; **MARPOL 73/78** - International Convention for the Prevention of Pollution from Ships, 1973 as modified by the protocol of 1978; **NFPA** - National Fire Protection Association; **NOEL** - No Observed Effect Level; **OEL** - Occupational Exposure Limit; **OSHA** - Occupational Safety and Health Administration; **PBT** - Persistent, Bioaccumulative, Toxic chemical; **PEL** - Permissible Exposure Limit; **REACH** - Registration, Evaluation, Authorisation and Restriction of Chemicals; **RID** - International carriage of dangerous goods by rail; **SARA (Title III)** - Superfund Amendments and Reauthorization Act; **SARA 313** - Superfund Amendments and Reauthorization Act, Section 313; **SDS** - Safety Data Sheet; **STEL** - Short Term Exposure Limit, 15 minute reference period; **STOT** - Specific Target Organ Toxicity; **SCBA** - Self-Contained Breathing Apparatus; **TLV** - Threshold Limit Value; **TSCA** - Toxic Substances Control Act Public Law 94-469; **TWA** - Time Weighted Average, 8 hour reference period; **US DOT** - US Department of Transportation; **vPvB** - Very Persistent, Very Bioaccumulative chemical; **WHMIS** - Workplace Hazardous Materials Information System.

16.5 Revisions:

June 2015 - Data Sheet updated to conform to Regulation (EC) No 1907/2006 (as amended by Regulation No 453/2010), GHS and the latest suppliers information.

January 2016 - Contact details updated. Revision date not changed to preserve 2-yearly SDS review date.

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 manufacturer's data; accuracy of this information is the responsibility of the manufacturer. It should not, therefore, be construed as guaranteeing any specific property of the product.