

# SAFETY DATA SHEET

## FOMBLIN<sup>®</sup> Y LVAC

Updating: 22/7/2002

Ref: fom0228e

### COMPANY IDENTIFICATION

Company: AUSIMONT S.p.A.  
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**Emergency Calls**  
Telephone Number: 02-3835- 1

### 1) COMPOUND IDENTIFICATION

Trade Name: FOMBLIN<sup>®</sup> Y  
Grades: VAC 06/6; VAC 14/6; VAC 16/6; VAC 25/6  
Chemical Family: Perfluoropolyethers  
Molecular Weight: 1800 ÷ 3300  
Structural Formula: 
$$\text{CF}_3\text{-O-}(\text{CF}_2\text{-CF-O})_n\text{-}(\text{CF}_2\text{-O})_m\text{-CF}_3$$

|  
CF<sub>3</sub>

CAS Name: 1-Propene,1,1,2,3,3,3-hexafluoro-,oxidized,polymd.  
CAS Number : 69991-67-9 EC Number: Not assigned  
EINECS Number: exempted ELINCS Number: exempted

### 2) COMPOSITION/INFORMATION ON INGREDIENTS

#### Composition of the preparation

*Substances with established exposure limits or classifiable as dangerous according to EC Directive 67/548 and following amendments, in concentration equal or higher than that reported in EC Directive 88/379 (item 3, sect. 6):*

<u>Name</u>	<u>Conc.</u>	<u>CAS N°</u>	<u>Symbol</u>	<u>Risk Phrases</u>
none				

### 3) HAZARDS IDENTIFICATION

**Adverse human health effects** The product, when properly handled, according to the good working and hygienic practices, is not dangerous for the human health.

**Environmental effects** The product, when properly handled, according to the good working and hygienic practices, is not dangerous for the environment.

**Physical and chemical hazards** Harmful effects for health and environment in case of thermal decomposition, due to heating or fire, for the emission of toxic and corrosive gases.

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### 4) FIRST-AID MEASURES

#### Symptomatology following exposure

<u>Eye contact</u>	Redness
<u>Skin contact</u>	Redness
<u>Ingestion</u>	Abdominal pain, nausea, vomit.
<u>Inhalation</u>	Not applicable

#### First Aid Measures

<u>Eye contact</u>	Wash with plenty of water for at least 15 minutes.
<u>Skin contact</u>	Wash with water and soap.
<u>Ingestion</u>	Give some glasses of water to drink. Induce vomiting. Seek medical advice in case of persistent pain.
<u>Inhalation</u>	Not applicable

### 5) FIRE FIGHTING MEASURES

<b>Specific hazards</b>	The product is not flammable and not explosive. The heating of the product may cause decomposition with emission of toxic and corrosive vapours.
<b>Specific methods</b>	Stay upwind and at safety distance from flames. In case of surrounding fire, remove the containers, when possible to do so in safe conditions. In case of fire keep containers cool by spraying with water.
<b>Extinguishing media</b>	Water, powders, foams, chemicals, CO <sub>2</sub> .
<b>Protection of fire-fighters</b>	Self-contained breathing apparatus. Protective clothing for skin and eyes against corrosive vapours.

### 6) ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Stop the release as soon as possible, in safe conditions. Avoid the contact of the released product with glowing surfaces and flames. Possible risk only in case of thermal decomposition of the released product.
<b>Environmental precautions</b>	Avoid the discharge of the released product in sewage systems, in surface and underground waters, in the soil.
<b>Methods for cleaning up</b>	Absorb the released liquid with earth, sand or sawdust and collect it in suitable containers for disposal.

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### 7) HANDLING AND STORAGE

#### HANDLING

**Precautions** Avoid heating the product above its decomposition temperature.  
**Technical measures** Provide working areas with adequate ventilation systems and with water-wash facilities (eye bath and emergency showers).

#### STORAGE

**Storage conditions** Keep away from heat sources.  
Keep away from combustible and explosive materials.  
Keep away from incompatible substances (see sect.10).  
**Packaging** Product usually stored in polyethylene containers.  
**Recommended materials** Glass, plastic, lined metal

### 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure limits** Threshold limits of by-products from thermal decomposition (ACGIH 2002) :

HF TLV/CEILING	2.6 mg/mc	3 ppm
COF <sub>2</sub> TLV/STEL	13.5 mg/mc	5 ppm

#### PERSONAL PROTECTIVE EQUIPMENT

**Respiratory protection** Not necessary in normal use, self-contained breathing apparatus in case of fire.  
**Eye protection** Safety goggles.  
**Hand protection** Rubber gloves.  
**Skin and body protection** Worksuit or rubber apron.  
**Hygiene measures** Do not drink, eat and smoke during handling.

### 9) PHYSICAL AND CHEMICAL PROPERTIES

**Physical state** liquid  
**Colour:** colourless  
**Odour:** odourless  
**Melting point:** not applicable  
**Boiling point:** > 270 °C @ 760 mmHg  
**Decomposition temperature:** > 290 °C @ 760 mmHg  
**Flashpoint:** not flammable  
**Explosion properties:** not explosive  
**Vapour pressure:** 10<sup>-5</sup> ÷ 10<sup>-7</sup> mmHg (20 °C)  
**Kinematic viscosity:** 50 ÷ 300 cst  
**Density (20 °C.):** 1.88 ÷ 1.90 g/ml  
**Solubility in water:** not soluble  
**Solubility in organic solvents:** soluble in fluorinated solvents

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### 10) STABILITY AND REACTIVITY

<b>Stability:</b>	The product is stable in normal conditions of use and storage.
<b>Conditions to avoid:</b>	Avoid heating the product above decomposition temperature; metals promote and lower the decomposition temperature. Avoid contact with flames.
<b>Materials to avoid:</b>	Lewis acids (AlCl <sub>3</sub> , SbF <sub>5</sub> , CoF <sub>3</sub> ) above 100°C. Fine powdered magnesium, aluminium and their alloys above 100°C.
<b>Hazardous decomposition products:</b>	HF and COF <sub>2</sub> , which are toxic and corrosive gases;

### 11) TOXICOLOGICAL INFORMATION

<b>Penetration routes</b>	Contact or ingestion of the liquid product. Inhalation of gases from thermal decomposition.	
<b>Adverse effects for the Human Health</b>		
<i>Delayed and/or immediate effects after short and/or prolonged exposure:</i>		
Acute toxicity:	no known effect	
Local effects / irritating power:	not irritant; decomposition products may cause severe irritation to skin, eyes and mucosae.	
Sensitisation:	no known effect	
Chronic toxicity:	no known effect	
Carcinogenicity:	The product is not listed as potential carcinogen by National and International Agencies or Competent Authorities	
Mutagenicity:	The product is not listed as potential mutagenic by National and International Agencies or Competent Authorities	
Reproduction toxicity:	The product is not listed as potential reprotoxic agent by National and International Agencies or Competent Authorities	
<b>Experimental toxicological data</b>		
LD <sub>50</sub> - oral	> 2 000 mg/Kg	Species: rat
NOEL - oral	1000 mg/kg/day (28 d)	Species: rat
LD <sub>50</sub> - dermal	> 2 000 mg/Kg	Species: rat
Irritation (skin)	non irritant	Species: rabbit
(eye)	non irritant	Species: rabbit
Sensitisation (skin)	non sensitising	Species: Guinea pig
Mutagenicity (Ames test)	Negative ( <i>in vitro</i> and <i>in vivo</i> )	Species:

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### 12) ECOLOGICAL INFORMATION

#### Environmental effects

- Mobility: no available data
- Persistence/degradability: no available data
- Bioaccumulation: no available data

**Ecostability data** no available data

#### Ecotoxicity data

- LC<sub>50</sub> - fish > max. solubility of product in water Species: Rainbow trout  
EC<sub>50</sub> - crustaceans > max. solubility of product in water Species: daphnia  
EC<sub>50</sub> - bacteria > max. solubility of product in water Species:

**EVALUATION** Use the product according to the good working practice, avoiding polluting the environment.

### 13) DISPOSAL CONSIDERATIONS

**Waste treatment** Send the waste product to thermal destruction, using high-temperature incinerators designed to burn fluorine compounds.

**Packaging treatment** Reuse, when possible, the containers, after thorough washing.  
Send the waste containers to authorised landfills, according to local laws and regulations.

### 14) TRANSPORT INFORMATION

**Specific hazards** Product not dangerous for transportation.

**Packaging information** Product usually shipped in polyethylene containers of different capacities (drums, jerricans, tanks).

### INTERNATIONAL TRANSPORT CLASSIFICATION

U.N. Number: not assigned  
Packaging group: not assigned  
Road, rail, sea, air-Transportation not classified

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### 15) REGULATORY INFORMATION

#### CE Regulations (Directive 67/548 and following amendments)

##### Classification

Classification type: not required

Hazard class: none

##### Labelling

Trade Name: FOMBLIN<sup>®</sup> Y

Grades: VAC 06/6; VAC 14/6; VAC 16/6; VAC 25/6

Hazard Symbol: none

Risk phrases (R) none

Safety phrases (S) none

### 16) OTHER INFORMATION

#### BIBLIOGRAPHY

- Ausimont internal data

#### Safety Data Sheet according to EC Directive 93/112

*The information given in this safety data sheet is for safety purpose only. It is given in good faith and based on the best knowledge and experience of the company at the date of issuing.*

*The Company is not responsible for damages caused by the use of the product in applications for which it was not intended or for conditions of use outside its control.*