

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/18/2015

Version: 2. 0

Reviewed on 03/18/2015

### 1 Identification

· **Product identifier**

· Trade name: **F4**

· Project number: PK\_0004\_M

· Relevant identified uses of the substance or mixture and uses advised against -

· Uses advised against: -

· Application of the substance / the mixture Operating fluid / lubricant for vacuum pumps

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

PFEIFFER VACUUM GmbH

Berliner Strasse 43

D-35614 Asslar

Telefon +49 6441 / 802-0

Telefax +49 6441 / 802-1202

www.pfeiffer-vacuum.com

Email: info@pfeiffer-vacuum.de

· **Supplier:**

Pfeifer Vacuum Inc.

24 Trafalgar Square

Nashua, NH 03063

· **E-mail competent person:** sds@kft.de

· **Information department:** See supplier/manufacturer

· **Emergency telephone number:** 603-578-6500

### 2 Hazard(s) identification

· **Classification of the substance or mixture**

The substance is not classified according to the Globally Harmonized System (GHS).

· **Classification system:**

The classification complies with current legislation, but is supplemented with information from technical literature and company information.

· **Label elements**

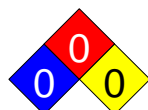
· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



HEALTH 0 Health = 0

FIRE 0 Fire = 0

REACTIVITY 0 Reactivity = 0

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- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
Perfluoriertes Polyetheröl
- **Identification number(s) -**
- **TSCA** All components are listed.

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** If symptoms persist or in case of doubt seek medical advice.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately rinse with water.  
Remove contaminated clothes and shoes.  
If symptoms persist, consult a doctor.
- **After eye contact:**  
First check the victim for contact lenses and remove if present.  
Rinse opened eye for several minutes under running water.  
If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse mouth with water.  
Do not induce vomiting  
If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** Symptomatic treatment

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** None
- **Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon monoxide (CO)  
Carbon dioxide (CO<sub>2</sub>)

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Halogenated compounds

· **Advice for firefighters**

· **Protective equipment:** Wear self-contained respiratory protective device.

· **Additional information**

Heating leads to increased pressure and danger of bursting and explosion. Immediately cool neighbouring packages and containers with sprayed water and, if possible, remove them out of the danger zone.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**



Wear protective equipment. Keep unprotected persons away.

Do not breathe aerosol or vapors.

Particular danger of slipping on leaked/spilled product.

· **Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Do not allow to penetrate the ground/soil.

· **Methods and material for containment and cleaning up:**

Absorb with non-combustible material like sand, soil, diatomite.

Send for recovery or disposal in suitable receptacles.

Dam up larger quantities and pump into containers.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Do not breathe aerosol or vapors.

Avoid contact with eyes and skin.

· **Information about protection against explosions and fires:**

Use only in explosion protected area.

Protect against electrostatic charges.

Observe the general rules of industrial fire protection.

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· **Conditions for safe storage, including any incompatibilities**

- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store receptacles tightly closed at a cool and dry place with sufficient ventilation  
Store only in the original receptacle.
- **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Store away from feed.
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Keep receptacle tightly sealed.  
Store and transport packagings always uprightly.
- **Storage class:** 12 Non combustible liquids
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Immediately remove all soiled and contaminated clothing.  
Provide eye bath and emergency shower.
- **Breathing equipment:**  
A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.  
Always use a NIOSH or European Standard EN 149 approved respirator when necessary.  
Under normal conditions of use not required.  
If vapors form, use suitable respiratory protective device.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**  
as described by OSHA's eye and face protection regulations in 29 CFR 1910.133  
Goggles recommended during refilling.

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- **Body protection:**  
Protective work clothing  
Safety footwear

### 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

- **Form:** Fluid
- **Color:** Colourless
- **Odor:** Odorless
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.

· **Change in condition**

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** Not determined

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Not determined.

· **Danger of explosion:** Not determined.

· **Explosion limits:**

- **Lower:** Not determined
- **Upper:** Not determined

· **Oxidizing properties** not determined

· **Vapor pressure at 20 °C (68 °F):** ≤ 0.00000013 hPa (≤ 0 mm Hg)

· **Density at 20 °C (68 °F):** 1.9 g/cm<sup>3</sup> (15.856 lbs/gal)

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

- **Water:** Insoluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

- **Dynamic:** Not determined.
- **Kinematic at 40 °C (104 °F):** 60 mm<sup>2</sup>/s

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- **Other information** No further relevant information available.

### 10 Stability and reactivity

- **Possibility of hazardous reactions:** No further relevant information available.
- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**  
No hazardous decomposition products if instructions for storage and handling are followed  
> 280 °C Gefahr der Entstehung toxischer fluorhaltiger Pyrolyseprodukte.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:** No toxicity data are available for the product itself.
- **Primary irritant effect:**
- **on the skin:** No data available
- **on the eye:** No data available
- **On respiratory tract:** No data available
- **Sensitization:** No data available
- **Other information (about experimental toxicology):**
- **Effects on reproduction, carcinogenic and mutagenic effects:**  
Carcinogenicity: no data available  
Mutagenicity: no data available  
Toxicity for reproduction: no information available
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.

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- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Classification according to German VwVwS dt. 27.07.2005 appendix 3  
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
 Danger to drinking water is possible if large quantities leak into the ground or into water course.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
 Disposal according to instructions of local authorities
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**
- DOT, ADR, ADN, IMDG, IATA Void
- **UN proper shipping name**
- DOT, ADR, ADN, IMDG, IATA Void
- **Transport hazard class(es)**
- DOT, ADR, ADN, IMDG, IATA
- **Class** Void
- **Packing group**
- DOT, ADR, IMDG, IATA Void
- **Environmental hazards:**
- **Marine pollutant:** No

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- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara:**
- **Section 355 (extremely hazardous substances):** None of the ingredients is listed.
- **Section 313 (Specific toxic chemical listings):** None of the ingredients is listed.
- **TSCA (Toxic Substances Control Act):** All ingredients are listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **IARC (International Agency for Research on Cancer)** void
- **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
- **MAK (German Maximum Workplace Concentration)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** void
- **Regulation or reporting requirements USA**
- **Prop. 65 - Cancer** Substance is not listed.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Replaces the version dated:** Version(s) 1 is/are not available for this language.

- **Department issuing SDS:**

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 Im Leuschnerpark. 3 64347 Griesheim  
 Postfach 1451 64345 Griesheim  
 Germany

Tel.: +49 6155 86829-0 Fax: +49 6155 86829-25

- **Contact:** Dr. Faiza Khan
- **Date of preparation / last revision** 03/18/2015 / 1.99
- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
ACGIH: American Conference of Governmental Industrial Hygienists  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

• **Sources** SDS of the supplier

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