

## Safety data sheet

According to Regulation (EC) No 1907/2006 (REACH)

# ZEDEX® newlife PVDF Filament

## 1. Identification of the substance/mixture and of the company

### 1.1. Product identifier

ZEDEX® newlife PVDF Filament (material code: F5D)

### 1.2. Relevant identified uses of the substance or mixture

Plastics/polymer processing (3D- based on Fused Filament Fabrication)

### 1.3. Details of the supplier of the safety data sheet

Wolf Kunststoff-Gleitlager GmbH  
Heisenbergstr. 63-65  
D 50169 Kerpen-Türnich  
Tel.: +4922379749-0  
Fax: +4922379749-20  
info@zedex.de  
www.zedex.de

### 1.4. Emergency number

Poison Center North (GIZ) – phone no. +49 (0) 551-19240

<b>Anschrift/Address</b>	<b>Bank</b>	<b>BLZ / Sort Code</b>	<b>Konto Nr. / Account No.</b>	<b>BIC (SWIFT-CODE)</b>	<b>IBAN</b>
Wolf Kunststoff- Gleitlager GmbH	Deutsche Bank	370 700 60	0 661 109 900	DEUTDE33	DE75 3707 0060 0661 1099 00
Heisenbergstr. 63 - 65	Kreissparkasse Köln	370 502 99	0 134 002 233	COKSDE33	DE32 3705 0299 0134 0022 33
50169 Kerpen -Türnich	Postbank Köln	370 100 50	0 121 663 503	PBNKDEFF	DE34 3701 0050 0121 6635 03
Deutschland	VoBa Rhein-Erft-Köln	370 623 65	1 310 609 010	GENODED1FHH	DE16 3706 2365 1310 6090 10
Tel. +49 2237 9749 -0 Fax +49 2237 9749 -20	Internet www.zedex.de E-Mail info@zedex.de		Geschäftsführer/Managing Director Wilfried Wolf, Gunter Wolf		Amtsgericht Kerpen/District Court Kerpen HRB Nr. 41798 • USt-IdNr. DE121861959

## 2. Hazards identification

### 2.1. Classification of the substance or mixture according to Regulation (EC) No 1272/2008 (CLP)

No need for classification according to GHS criteria for this product.

### 2.2. Label elements

The mixture is not subject to specific labelling in accordance with GHS criteria.

### 2.3. Other hazards

There are no known risks, if the regulation/details for handling are observed.  
Contact with molten product may cause severe burns.

## 3. Composition/information on ingredients

### 3.1. Description of the mixture

Mixture based on polyvinylidene fluoride (PVDF).  
Possibly containing additives and processing aids.

### 3.2. Information on ingredients

Ingredients with labelling requirements are not contained.

## 4. First-aid measures

### 4.1. After inhalation

In case of inhalation of vapours of the melted material  
-carry the person out into fresh air  
-bring the person into a semi-upright position  
-keep the person warm

<b>Anschrift/Address</b>	<b>Bank</b>	<b>BLZ / Sort Code</b>	<b>Konto Nr. / Account No.</b>	<b>BIC (SWIFT-CODE)</b>	<b>IBAN</b>
Wolf Kunststoff - Gleitlager GmbH	Deutsche Bank	370 700 60	0 661 109 900	DEUTDEDK	DE75 3707 0060 0661 1099 00
Heisenbergstr. 63 - 65	Kreissparkasse Köln	370 502 99	0 134 002 233	COKSDE33	DE32 3705 0299 0134 0022 33
50169 Kerpen -Türnich	Postbank Köln	370 100 50	0 121 663 503	PBNKDEFF	DE34 3701 0050 0121 6635 03
Deutschland	VoBa Rhein-Erft-Köln	370 623 65	1 310 609 010	GENODED1FHH	DE16 3706 2365 1310 6090 10
Tel. +49 2237 9749 - 0	Internet <a href="http://www.zedex.de">www.zedex.de</a>		Geschäftsführer/Managing Director		Amtsgericht Kerpen/District Court Kerpen
Fax +49 2237 9749 - 20	E-Mail <a href="mailto:info@zedex.de">info@zedex.de</a>		Wilfried Wolf, Gunter Wolf		HRB Nr. 41798 • USt-IdNr. DE121861959

In case of troubles in breathing the person must be taken to the next first-aid station or to the next hospital

#### 4.2. After skin contact

Melted material on the skin or burns must be cooled with water as soon as possible. The wound must be covered with sterile bandages and the person has to be taken for medical care to the next first-aid station or to the next hospital. Attention: Never remove melted material from the wound yourself.

#### 4.3. After eye contact

Remove contact lenses. Particles must be removed by washing the eye with eyelids spread. Obtain the doctor's advice as precautionary measure.

#### 4.4. After ingestion

No danger of poisoning. The material is biologically inactive. In case of persistent symptoms seek medical help.

#### 4.5. Most important symptoms and effects, both acute and delayed

The result of massive inhalation of thermal decomposition products (in temperatures >450 °C) is that after a symptomless time (4-24 hours) pulmonary oedema starts with the danger of suffocation.

#### 4.6 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

### 5. Firefighting measures

#### 5.1. Extinguishing agent

Water spray, alcohol-resistant foam, carbon dioxide, dry chemical foam.

#### 5.2 Unsuitable extinguishing media

Water jet.

Anschrift/Address	Bank	BLZ / Sort Code	Konto Nr. / Account No.	BIC (SWIFT-CODE)	IBAN
Wolf Kunststoff - Gleitlager GmbH	Deutsche Bank	370 700 60	0 661 109 900	DEUTDE33	DE75 3707 0060 0661 1099 00
Heisenbergstr. 63 - 65	Kreissparkasse Köln	370 502 99	0 134 002 233	COKSDE33	DE32 3705 0299 0134 0022 33
50169 Kerpen -Türnich	Postbank Köln	370 100 50	0 121 663 503	PBNKDEFF	DE34 3701 0050 0121 6635 03
Deutschland	VoBa Rhein-Erft-Köln	370 623 65	1 310 609 010	GENODED1FHH	DE16 3706 2365 1310 6090 10
Tel. +49 2237 9749 -0	Internet <a href="http://www.zedex.de">www.zedex.de</a>		Geschäftsführer/Managing Director		Amtsgericht Kerpen/District Court Kerpen
Fax +49 2237 9749 -20	E-Mail <a href="mailto:info@zedex.de">info@zedex.de</a>		Wilfried Wolf, Gunter Wolf		HRB Nr. 41798 • USt-IdNr. DE121861959

### 5.3. Specific dangers

With carbonization and incomplete combustion toxic gases develop, predominantly carbon dioxide and carbon monoxide. The development of further fission and oxidation products is dependent on the conditions of burning. Traces of other toxic substances may develop under certain conditions of burning. The release of hydrofluoric acid, tetrafluoroethylene, hexafluoropropylene, perfluoroisobutylene, carbonyl difluoride and other low-molecular fluorocarbons is possible.

### 5.4. Protection for firemen

If exposed to fumes and carbonization gases during fire-fighting measures, rescue operations and cleanup wear a self-contained breathing apparatus. Avoid whirling up the product because of the danger of dust explosion. In an advanced state of fire, the molten polymer must be cooled with water. Water used to extinguish the fire and the fire remainders must be collected and water disposed of, in accordance with local regulations.

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Collect product (Danger of slipping).

### 6.2. Environmental precautions

Let not enter surface water and sewage water system.

### 6.3. Methods and material for containment and cleaning up

Mechanical cleaning up. Avoid dry sweeping. Use an appropriate suction device for cleaning to avoid the generation of dust.

## 7 Handling and storage

### 7.1. Precautions for safe handling

Avoid overheating of material by improper handling. The relevant information on the technical data sheet have to be respected.

Anschrift/Address	Bank	BLZ / Sort Code	Konto Nr. / Account No.	BIC (SWIFT-CODE)	IBAN
Wolf Kunststoff - Gleitlager GmbH Heisenbergstr. 63 - 65 50169 Kerpen -Türnich Deutschland	Deutsche Bank Kreissparkasse Köln Postbank Köln VoBa Rhein-Erft-Köln	370 700 60 370 502 99 370 100 50 370 623 65	0 661 109 900 0 134 002 233 0 121 663 503 1 310 609 010	DEUTDE33 COKSDE33 PBNKDEFF GENODED1FHH	DE75 3707 0060 0661 1099 00 DE32 3705 0299 0134 0022 33 DE34 3701 0050 0121 6635 03 DE16 3706 2365 1310 6090 10
Tel. +49 2237 9749 - 0 Fax +49 2237 9749 - 20	Internet <a href="http://www.zedex.de">www.zedex.de</a> E-Mail <a href="mailto:info@zedex.de">info@zedex.de</a>	Geschäftsführer/Managing Director Wilfried Wolf, Gunter Wolf		Amtsgericht Kerpen/District Court Kerpen HRB Nr. 41798 • USt-IdNr. DE121861959	

Under high processing temperatures or excessively long residence harmful gases and vapours might develop. Use with adequate ventilation. Local exhaust ventilation should be provided.

## 7.2. Conditions for safe storage, including any incompatibilities

No special measures necessary.

The appropriate company regulations for fire prevention are to be followed.

Large quantities of product should not be stored with inflammable materials. In fire, fluorocarbon polymers can cause relatively toxic gases to be released.

# 8 Exposure controls/personal protection

## 8.1. Control parameters

The general limit for dust is valid.

## 8.2. Exposure controls

The working area should be well ventilated

## 8.3. Respiratory protection

Wear protective breathing apparatus in case of insufficient ventilation. Composite filter for organic, inorganic, acetous inorganic and alkaline fumes/vapours and toxic particles (e.g. DIN EN 14387 type ABEK-P3).

## 8.4. Eye/face protection

Protective goggles or protective shield are necessary when dealing with hot melt (for example during cleaning the processing machines).

## 8.5. Hand protection/skin protection

Protective gloves are necessary when dealing with hot melt (for example during cleaning the processing machines).

<b>Anschrift/Address</b>	<b>Bank</b>	<b>BLZ / Sort Code</b>	<b>Konto Nr. / Account No.</b>	<b>BIC (SWIFT-CODE)</b>	<b>IBAN</b>
Wolf Kunststoff - Gleitlager GmbH	Deutsche Bank	370 700 60	0 661 109 900	DEUTDE33	DE75 3707 0060 0661 1099 00
Heisenbergstr. 63 - 65	Kreissparkasse Köln	370 502 99	0 134 002 233	COKSDE33	DE32 3705 0299 0134 0022 33
50169 Kerpen -Türnich	Postbank Köln	370 100 50	0 121 663 503	PBNKDEFF	DE34 3701 0050 0121 6635 03
Deutschland	VoBa Rhein-Erft-Köln	370 623 65	1 310 609 010	GENODED1FHH	DE16 3706 2365 1310 6090 10
Tel. +49 2237 9749 - 0	Internet <a href="http://www.zedex.de">www.zedex.de</a>		Geschäftsführer/Managing Director		Amtsgericht Kerpen/District Court Kerpen
Fax +49 2237 9749 - 20	E-Mail <a href="mailto:info@zedex.de">info@zedex.de</a>		Wilfried Wolf, Gunter Wolf		HRB Nr. 41798 • USt-IdNr. DE121861959



## 9 Physical and chemical properties

- Appearance: solid (monofilament)
- Colour: product-specific
- Odour: product-specific
- Odour threshold: product-specific
- Melting point: ca. 175 °C
- Boiling range: N/A, product decomposes
- Flammability: N/A
- Evaporation rate: N/A
- Lower explosion limit: N/A, product decomposes
- Explosion hazard: not explosive
- Decomposition temperature: > 315 °C
- Spontaneous ignition temperature: no data available
- Auto-ignition temperature: no data available
- Relative density: no data available
- Relative vapour density: N/A
- Vapour pressure: N/A
- Viscosity: N/A
- Solubility in water: insoluble
- pH value: N/A
- Partition coefficient n-octanol/H<sub>2</sub>O: N/A
- Kinematic viscosity: N/A, since solid

<b>Anschrift/Address</b>	<b>Bank</b>	<b>BLZ / Sort Code</b>	<b>Konto Nr. / Account No.</b>	<b>BIC (SWIFT-CODE)</b>	<b>IBAN</b>
Wolf Kunststoff - Gleitlager GmbH Heisenbergstr. 63 - 65 50169 Kerpen -Türnich Deutschland	Deutsche Bank Kreissparkasse Köln Postbank Köln VoBa Rhein-Erft-Köln	370 700 60 370 502 99 370 100 50 370 623 65	0 661 109 900 0 134 002 233 0 121 663 503 1 310 609 010	DEUTDE33 COKSDE33 PBNKDEFF GENODED1FHH	DE75 3707 0060 0661 1099 00 DE32 3705 0299 0134 0022 33 DE34 3701 0050 0121 6635 03 DE16 3706 2365 1310 6090 10
Tel. +49 2237 9749 -0 Fax +49 2237 9749 -20	Internet <a href="http://www.zedex.de">www.zedex.de</a> E-Mail <a href="mailto:info@zedex.de">info@zedex.de</a>		Geschäftsführer/Managing Director Wilfried Wolf, Gunter Wolf		Amtsgericht Kerpen/District Court Kerpen HRB Nr. 41798 • USt-IdNr. DE121861959

Density: >1 g/cm<sup>3</sup>

## 10 Stability and reactivity

### 10.1. Reactivity

No hazardous reactions known when stored and handled according to instructions and used for its intended purpose.

### 10.2. Chemical stability

Product is stable. No hazardous reactions known when stored and handled according to instructions and used for its intended purpose.

### 10.3. Possibility of hazardous reactions

No hazardous reactions known when stored and handled according to instructions.

### 10.4. Conditions to avoid

Do not heat to a temperature above the decomposition temperature.  
Keep product away from heat and sources of ignition.

### 10.5. Incompatible materials

Strong alkalis, esters, ketones, silicate, boron, titanium dioxide at high temperature.

### 10.6. Hazardous decomposition products

No decomposition when handled according to instructions.  
By overheating of the material gaseous, toxic and caustic decomposition products, especially hydrofluoric acid, tetrafluoroethylene, hexafluoropropylene, perfluoroisobutylene and carbonyl difluoride may be generated.

## 11 Toxicological information

### 11.1. Acute toxicity

With proper use and in accordance with regulations there are no known dangers to health.

<b>Anschrift/Address</b>	<b>Bank</b>	<b>BLZ / Sort Code</b>	<b>Konto Nr. / Account No.</b>	<b>BIC (SWIFT-CODE)</b>	<b>IBAN</b>
Wolf Kunststoff - Gleitlager GmbH	Deutsche Bank	370 700 60	0 661 109 900	DEUTDE33	DE75 3707 0060 0661 1099 00
Heisenbergstr. 63 - 65	Kreissparkasse Köln	370 502 99	0 134 002 233	COKSDE33	DE32 3705 0299 0134 0022 33
50169 Kerpen -Türnich	Postbank Köln	370 100 50	0 121 663 503	PBNKDEFF	DE34 3701 0050 0121 6635 03
Deutschland	VoBa Rhein-Erft-Köln	370 623 65	1 310 609 010	GENODED1FHH	DE16 3706 2365 1310 6090 10
Tel. +49 2237 9749 -0 Fax +49 2237 9749 -20	Internet <a href="http://www.zedex.de">www.zedex.de</a> E-Mail <a href="mailto:info@zedex.de">info@zedex.de</a>		Geschäftsführer/Managing Director Wilfried Wolf, Gunter Wolf		Amtsgericht Kerpen/District Court Kerpen HRB Nr. 41798 • USt-IdNr. DE121861959

Slight inhalation of thermal decomposition products or smoking contaminated tobacco can cause “fluorine polymer fever” after 2 – 6 hours (allergic alveolaritis with influenza-like symptoms: high temperature, shivering, chest pains, cough, increased pulse). Treatment is generally not necessary, symptoms disappear after 48 hours. The result of massive inhalation of thermal decomposition products (in temperatures > 450 °C) is that after a symptomless time (4 – 24 hours) pulmonary oedema starts with the danger of suffocation.

### 11.2. Chronic toxicity

When used and handled according to specifications, the product does not have any harmful effects.

### 11.3. Other information

In our experience and according to the literature provided to us the product does not cause any noxious effects when used and handled according to regulations.

## 12 Ecological information

### 12.1. Toxicity

Data about ecological effects are not available for this product.

### 12.2. Persistence and degradability

No data available.

### 12.3. Bioaccumulation potential and mobility in soil

Biodegradability is not probable due to the consistency as well as the insolubility in water of the product.

### 12.4. Results of the PBT and vPvB assessment

The product does not fulfil the criteria for classification as PBT or vPvB.

### 12.5. Other adverse effects

No relevant information available.

<b>Anschrift/Address</b>	<b>Bank</b>	<b>BLZ / Sort Code</b>	<b>Konto Nr. / Account No.</b>	<b>BIC (SWIFT-CODE)</b>	<b>IBAN</b>
Wolf Kunststoff - Gleitlager GmbH	Deutsche Bank	370 700 60	0 661 109 900	DEUTDE33	DE75 3707 0060 0661 1099 00
Heisenbergstr. 63 - 65	Kreissparkasse Köln	370 502 99	0 134 002 233	COKSDE33	DE32 3705 0299 0134 0022 33
50169 Kerpen -Türnich	Postbank Köln	370 100 50	0 121 663 503	PBNKDEFF	DE34 3701 0050 0121 6635 03
Deutschland	VoBa Rhein-Erft-Köln	370 623 65	1 310 609 010	GENODED1FHH	DE16 3706 2365 1310 6090 10
Tel. +49 2237 9749 -0	Internet <a href="http://www.zedex.de">www.zedex.de</a>		Geschäftsführer/Managing Director		Amtsgericht Kerpen/District Court Kerpen
Fax +49 2237 9749 -20	E-Mail <a href="mailto:info@zedex.de">info@zedex.de</a>		Wilfried Wolf, Gunter Wolf		HRB Nr. 41798 • USt-IdNr. DE121861959



Due to the consistency of the product a disperse distribution in the environment is not likely. Therefore, according to the present state of knowledge negative ecological effects are not expected.

## 13 Disposal considerations

### 13.1. Waste treatment methods

Product residues can be recycled or treated in an energy recovery plant. When segregated, unpolluted product residues can be recycled mechanically.

### 13.2. European waste catalogue

The unpolluted product has no dangerous properties and is therefore not a hazardous waste within the meaning of regulation of the european list of wastes.

### 13.3. Waste codes/waste identification

The exact assignment to a waste code must be carried out source- and use-related. Proposals for the waste code numbers based on the probable use of the unpolluted product:

07 02 13 (waste plastic)

20 01 39 (plastics from separately collected fractions)

### 13.4. Packaging

Uncontaminated or cleaned packaging can be recycled without verification.

## 14 Transport information

No special regulations, because the material is not a dangerous good with regard to the national and international transport regulations.

## 15 Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific

Anschrift/Address	Bank	BLZ / Sort Code	Konto Nr. / Account No.	BIC (SWIFT-CODE)	IBAN
Wolf Kunststoff - Gleitlager GmbH Heisenbergstr. 63 - 65 50169 Kerpen -Türnich Deutschland	Deutsche Bank Kreissparkasse Köln Postbank Köln VoBa Rhein-Erft-Köln	370 700 60 370 502 99 370 100 50 370 623 65	0 661 109 900 0 134 002 233 0 121 663 503 1 310 609 010	DEUTDE33 COKSDE33 PBNKDEFF GENODED1FHH	DE75 3707 0060 0661 1099 00 DE32 3705 0299 0134 0022 33 DE34 3701 0050 0121 6635 03 DE16 3706 2365 1310 6090 10
Tel. +49 2237 9749 -0 Fax +49 2237 9749 -20	Internet <a href="http://www.zedex.de">www.zedex.de</a> E-Mail <a href="mailto:info@zedex.de">info@zedex.de</a>	Geschäftsführer/Managing Director Wilfried Wolf, Gunter Wolf		Amtsgericht Kerpen/District Court Kerpen HRB Nr. 41798 • USt-IdNr. DE121861959	

A safety data sheet for this article is not required by law. The particulars given in this Safety Data Sheet are not required in accordance with article 31 and annex II of the Regulation (EC) No 1907/2006. They merely serve the purpose of providing sufficient information on the voluntary basis with a view to ensure the safe utilization of such mixture.

## 15.2. EU regulations

No dangerous substance in the sense of EU-directives.

## 15.3. Chemical safety assessment

A chemical safety assessment has not been carried out.

## 15.4. National regulations

Storage class VCI/TRGS 510 (Germany): 11 (flammable solid materials)  
 Water hazard class (Germany): not hazardous to water (Kenn-Nr. 766, BAnz AT 10.08.2017 B5)

## 16 Other information

The above data is based on our latest information and experience. They do not represent any assurance of properties in the legal sense. We do not guarantee for factors which are beyond our knowledge and/or control. Therefore every user must consider the intended application and the respective purpose on his own responsibility. Freedom from patent rights, copyrights and rights of protection of patterns and designs cannot be taken for granted.

<b>Anschrift/Address</b>	<b>Bank</b>	<b>BLZ / Sort Code</b>	<b>Konto Nr. / Account No.</b>	<b>BIC (SWIFT-CODE)</b>	<b>IBAN</b>
Wolf Kunststoff - Gleitlager GmbH	Deutsche Bank	370 700 60	0 661 109 900	DEUTDEDK	DE75 3707 0060 0661 1099 00
Heisenbergstr. 63 - 65	Kreissparkasse Köln	370 502 99	0 134 002 233	COKSDE33	DE32 3705 0299 0134 0022 33
50169 Kerpen -Türnich	Postbank Köln	370 100 50	0 121 663 503	PBNKDEFF	DE34 3701 0050 0121 6635 03
Deutschland	VoBa Rhein-Erft-Köln	370 623 65	1 310 609 010	GENODED1FHH	DE16 3706 2365 1310 6090 10
Tel. +49 2237 9749 -0 Fax +49 2237 9749 -20	Internet <a href="http://www.zedex.de">www.zedex.de</a> E-Mail <a href="mailto:info@zedex.de">info@zedex.de</a>	Geschäftsführer/Managing Director Wilfried Wolf, Gunter Wolf		Amtsgericht Kerpen/District Court Kerpen HRB Nr. 41798 • USt-IdNr. DE121861959	