



LUVOCOM® 3F PAHT® CF 9891 BK à 20 kg

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	19.12.2018	10000018393	Date of first issue: 19.12.2018
REG_EU_			
RED / EN			

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name	:	LUVOCOM® 3F PAHT® CF 9891 BK à 20 kg
Product code	:	00000002511989100

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

Use of the Sub-	:	Thermoplastic high-performance	material,	High-performance
stance/Mixture		polymer for 3D printing		

1.3 Details of the supplier of the safety data sheet

Company	: Lehmann & Voss & Co. KG Alsterufer 19 20354 Hamburg Germany					
Telephone	: 49(0)40/44197-0					
Responsible/issuing person	: EHuS@lehvoss.de					
Emergeney telephone number						

1.4 Emergency telephone number

Telephone

: (DE): GIZ Giftinformationszentrum-Nord (all msds available) 49(0)551/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.3 Other hazards

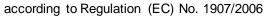
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature

: carbon reinforced polyamide

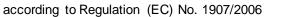




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Remar	ks	:	No hazardous i	ngredients	
SECTION	4: First aid measu	ures			
4.1 Descrip	otion of first aid me	asure	S		
-	al advice	:	Move out of dar Never give any If unconscious, advice.	ngerous area. hing by mouth to an unconscious person. place in recovery position and seek medical artificial respiration if needed.	
If inhaled		:	Move to fresh air. If symptoms persist, call a physician.		
In case of skin contact		:	Do NOT use solvents or thinners. Wash off with soap and water. If symptoms persist, call a physician. Cool melted product on skin with plenty of water. Do not move solidified product. In case of burns apply cold water until pain subsides the seek medical advice.		
In case of eye contact		:	Rinse thoroughly with plenty of water for at least 15 min and consult a physician. Keep eye wide open while rinsing.		
If swall	lowed	:	If symptoms persist, call a physician.		
4.2 Most in	nportant symptoms	and	effects, both ac	ute and delayed	
Symptoms :		:	No information available.		
4.3 Indicati Treatm	-	te me	dical attention a No information	nd special treatment needed	
neatin	ient	·	NO INOTTATION	avaliable.	
SECTION	15: Firefighting me	asur	es		

5.1 Extinguishing media		
Suitable extinguishing media :		Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing	:	High volume water jet





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media

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire- fighting	:	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Do not use a solid water stream as it may scatter and spread fire. Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.
Hazardous combustion prod- ucts	:	Carbon monoxide, carbon dioxide and unburned hydrocar- bons (smoke). Nitrogen oxides (NOx) Ammonia Hydrogen cyanide (hydrocyanic acid) Sulphur compounds Metal oxides
5.3 Advice for firefighters		
Special protective equipment for firefighters	:	Exposure to decomposition products may be a hazard to health. In the event of fire, wear self-contained breathing ap-

		paratus.
Further information	:	Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment. Use water spray to cool unopened containers. In the event of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	 Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation. Avoid contact with skin, eyes and clothing. Avoid breathing dust. Avoid inhalation of vapour or mist. Contaminated surfaces will be extremely slippery. Treat recovered material as described in the section "Disposal
	considerations".

6.2 Environmental precautions

Environmental precautions	:	Should not be released into the environment.
		Do not allow contact with soil, surface or ground water.
		Avoid dispersal of dust in the air (i.e., clearing dust surfaces
		with compressed air).

according to Regulation (EC) No. 1907/2006



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6.3 Methods and material for containment and cleaning up

Methods for cleaning up	 Sweep up or vacuum up spillage and collect in suitable con- tainer for disposal. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Avoid dust formation.
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6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

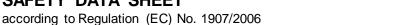
7.1 Precautions for safe handling

Advice on safe handling	:	Provide for appropriate exhaust ventilation and dust collection at machinery. The material can accumulate static charge and can therefore cause electrical ignition. Minimize dust generation and accumulation. Dust must be collected and disposed of carefully. Wear personal protective equipment. Do not breathe vapours/dust.
Advice on protection against fire and explosion	:	Take measures to prevent the build up of electrostatic charge. During processing, dust may form explosive mixture in air. Keep away from heat and sources of ignition. Normal measures for preventive fire protection.
Hygiene measures	:	 Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing. Keep away from food and drink. General industrial hygiene practice. When using do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep containers tightly closed in a dry, cool and well- ventilated place.
Further information on stor- age conditions	:	Keep away from heat and sources of ignition. Keep away from direct sunlight. Avoid moisture.
Advice on common storage	:	Keep away from food, drink and animal feedingstuffs.
Storage class (TRGS 510)	:	11, Combustible Solids

7.3 Specific end use(s)





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Specifi	c use(s)	: For further infor	mation, refer to the product technical data

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

sheet.

Substance name	End Use	Exposure routes	Potential health ef- fects	Value
Carbon black	Workers	Inhalation		2 mg/m3
Remarks:	DNEL (long-term	rep.)		

8.2 Exposure controls

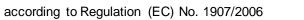
Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Apply measures to prevent dust explosions.

Personal protective equipment

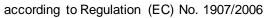
Eye protection	:	Safety glasses with side-shields
Hand protection Material	:	Protective gloves
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. As the product is a mixture of several substances, the dura- bility of the glove materials cannot be calculated in advance and has to be tested before use. The exact break through time can be obtained from the pro- tective glove producer and this has to be observed. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Request information on glove permeation properties from the glove supplier. Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous sub- stance and specific to place of work.
Skin and body protection	:	Safety shoes Wear suitable protective clothing.
Respiratory protection	:	Effective dust mask In the case of vapour formation use a respirator with an ap-





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			proved filter.	
Pr	otective measures	:	Follow the skin pr	otection plan.
SECT	ION 9: Physical and che	emic	al properties	
9.1 Info	ormation on basic physica	al an	nd chemical prope	erties
	pearance	:	pellets	
Co	lour	:	black	
Oc	dour	:	characteristic	
Oc	dour Threshold	:	not determined	
рH	I	:	not determined	
Me	elting point/range	:	225 °C	
Bc	iling point/boiling range	:	not determined	
Fla	ash point	:	not determined	
Fla	ammability (solid, gas)	:	No data available	
Up	per explosion limit	:	No data available	
Lo	wer explosion limit	:	The product is no dust	ot explosive at itself, but it may form explosive
Va	pour pressure	:	not determined	
Re	elative density	:	No data available	
De	ensity	:	not determined	
Sc	lubility(ies) Water solubility	:	not determined	
	Solubility in other solvents	:	not determined	
	ntition coefficient: n- tanol/water	:	No data available	
lgr	nition temperature	:	not determined	
De	composition temperature	:	No data available	
Vi	scosity Viscosity, dynamic	:	Not applicable	





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Vis	scosity, kinematic	: Not applicabl	e
9.2 Other i	information		
Condu	uctivity	: not determine	ed
SECTION	10: Stability and I	eactivity	
10.1 Reac	-		
	composition if stored	and applied as direct	ed.
	nical stability	tabla	
•	roduct is chemically s		
	bility of hazardous i dous reactions	: Finely disper	sed particles form explosive mixtures with air. luces noxious and toxic fumes.
10.4 Cond	itions to avoid		
Condit	tions to avoid	: Keep away f Avoid dust fo Avoid moistu	
10.5 Incon	npatible materials		
Materi	als to avoid	: No data avail	able
10.6 Haza	rdous decompositio	n products	
	en oxides (NOx)	lioxide and unburned	hydrocarbons (smoke).
Hydro	gen cyanide (hydrocy	anic acid)	
	ie. ur oxides oxides		
SECTION	N 11: Toxicological	information	
11 1 Inform	nation on toxicologi	cal offects	
	toxicity		
Acule	loviony		

Product:

Acute oral toxicity	:	No data available
Acute inhalation toxicity	:	No data available
Acute dermal toxicity	:	No data available

according to Regulation (EC) No. 1907/2006



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Skin corrosion/irritation

Product:

No known irritant effect. May cause irritation of respiratory tract.

Serious eye damage/eye irritation

Product:

Dust contact with the eyes can lead to mechanical irritation.

Respiratory or skin sensitisation

Product:

No known sensitising effect.

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	No data available
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Genotoxicity in vivo : No data available

Carcinogenicity

Product:

This information is not available.

Reproductive toxicity

Product:

Effects on fertility : No data available

STOT - single exposure

Product: No data available

STOT - repeated exposure

Product:

No data available

according to Regulation (EC) No. 1907/2006



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Aspiration toxicity

Product:

No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	No data available
Toxicity to daphnia and other aquatic invertebrates	:	No data available
Toxicity to algae	:	No data available
Toxicity to microorganisms	:	

-	No data available

12.2 Persistence and degradability

Product:

Biodegradability	:	No data available
Biodogradability	•	

12.3 Bioaccumulative potential

Product:

Bioaccumulation	:	No data available
Partition coefficient: n- octanol/water	:	No data available

12.4 Mobility in soil

Product:

Mobility	:	No data available
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12.5 Results of PBT and vPvB assessment

Product:	
Assessment	: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

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Produc	adverse effects <u>ct:</u> nal ecological infor-	:	Should not be rele	eased into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Dispose of in accordance with the European Directives on waste and hazardous waste. In accordance with local and national regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Contaminated packaging	:	Dispose of in accordance with local regulations. Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

according to Regulation (EC) No. 1907/2006



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SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx -Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

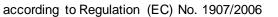
Further information

Contact Point

: Business Unit CUSTOMIZED POLYMER MATERIALS

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.





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