

Revision date: 12.11.2020 Print date: 12.11.2020

according to Regulation (EC) No 1907/2006

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

## 1.1. Product identifier

PA11 ESD

Product code: 11. Further trade names

UFI (Unique Formula Identifier) 3Y00-H0C4-X002-3MVJ

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

#### Use of the substance/mixture

Powder material for selective laser sintering (SLS) process

### Uses advised against

Any non-intended use.

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

Company name: Sinterit Sp. z o. o.
Street: Nad Drwina 10 bud. B3
Place: PL-30-741 Krakow
Telephone: +48 570 697 854
e-mail: contact@sinterit.com

Contact person: K. Glowacki

Responsible Department: E-Mail: contact@sinterit.com

Sinterit sp. z o.o., Nad Drwina 10 bud. B3, 30-741 Krakow, Poland

<u>1.4. Emergency telephone</u> Poison Information Center Mainz, Germany, Tel: +49 (6131) 19240

number:

#### **SECTION 2: Hazards identification**

### 2.2. Label elements

# Additional advice on labelling

Labelling according to Regulation (EC) No. 1272/2008 [CLP]: none

## 2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII. No risks worthy of mention. Please observe the information on the safety data sheet at all times.

## **SECTION 3: Composition/information on ingredients**

## 3.2. Mixtures

# **Hazardous components**

CAS No	Chemical name				
	EC No	Index No	REACH No		
	GHS Classification				
7440-44-0	carbon				
	931-328-0		01-2119488894-16		

Full text of H and EUH statements: see section 16.





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### **Further Information**

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

## **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

#### **General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

#### After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

## After contact with skin

Gently wash with plenty of soap and water. In case of skin irritation, seek medical treatment.

### After contact with eyes

Rinse cautiously with water for several minutes. In case of troubles or persistent symptoms, consult an ophthalmologist.

#### After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

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

No information available.

# 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## **SECTION 5: Firefighting measures**

## 5.1. Extinguishing media

## Suitable extinguishing media

Carbon dioxide (CO2). Dry extinguishing powder. alcohol resistant foam. Atomized water.

## Unsuitable extinguishing media

High power water jet.

## 5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon monoxide Carbon dioxide (CO2).

## 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

### **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Co-ordinate fire-fighting measures to the fire surroundings.

## **SECTION 6: Accidental release measures**

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

Avoid dust formation.

Do not breathe dust.







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Wear personal protection equipment (refer to section 8).

## 6.2. Environmental precautions

Discharge into the environment must be avoided.

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

Take up mechanically.

Treat the recovered material as prescribed in the section on waste disposal.

Clean contaminated objects and areas thoroughly observing environmental regulations.

## 6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## **SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

### Advice on safe handling

Wear personal protection equipment (refer to section 8).

## Advice on protection against fire and explosion

Usual measures for fire prevention. Dust clouds may present an explosion hazard.

## Further information on handling

Avoid generation of dust.

General protection and hygiene measures: refer to chapter 8

# 7.2. Conditions for safe storage, including any incompatibilities

### Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.

# Hints on joint storage

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances. Food and animal feedingstuff.

#### Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity.

Recommended storage temperature: 20°C Protect against: heat. (> 60°C). Humidity

## 7.3. Specific end use(s)

See section 1.

## **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

## **Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
7440-44-0	Graphite, respirable	-	4		TWA (8 h)	WEL

## **DNEL/DMEL values**

CAS No	Substance			
DNEL type		Exposure route	Effect	Value







Sinterit Sp. z o. o	S	inte	rit	Sp.	z	ο.	0
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7440-44-0	carbon				
Worker DNEL, long-term		inhalation	local	1,84 mg/m³	
Consumer DNEL, long-term		inhalation	local	0,9 mg/m³	

#### **PNEC values**

CAS No	Substance				
Environmental compartment Valu					
7440-44-0 carbon					
Soil	10 mg/kg				

## 8.2. Exposure controls

## Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Dust should be exhausted directly at the point of origin.

## Protective and hygiene measures

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work.

### Eye/face protection

Dust protection goggles.

## Hand protection

In case of prolonged or frequently repeated skin contact:

Wear suitable gloves.

Suitable material:

FKM (fluororubber). - Thickness of glove material: 0,4 mm

Breakthrough time >= 8 h

Butyl rubber. - Thickness of glove material: 0,5 mm

Breakthrough time >= 8 h

CR (polychloroprenes, Chloroprene rubber). - Thickness of glove material: 0,5 mm

Breakthrough time >= 8 h

NBR (Nitrile rubber). - Thickness of glove material: 0,35 mm

Breakthrough time >= 8 h

PVC (Polyvinyl chloride). - Thickness of glove material: 0,5 mm

Breakthrough time >= 8 h

The selected protective gloves have to satisfy the specifications of EU Directive EC/2016/425 and the standard EN 374 derived from it.

Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

### Skin protection

Suitable protective clothing: Protective clothing.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

# **Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

-Exceeding exposure limit values

-Insufficient ventilation, and Generation/formation of dust

Suitable respiratory protective equipment: particulates filter device (DIN EN 143). Type: P2-3

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The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

## **Environmental exposure controls**

No special precautionary measures are necessary.

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state: Powder, solid

Colour: grey

Odour: characteristic

pH-Value: not determined

Changes in the physical state

Melting point:

Initial boiling point and boiling range:

Sublimation point:

Softening point:

Pour point:

Plash point:

Rash point:

Not sustaining combustion:

198 - 210 °C

not determined

not determined

not determined

Not sustaining combustion

**Explosive properties** 

Dust clouds may present an explosion hazard. Dust explosive, Dust explosion category: ST 2

KSt-value (bar x m/s): 200 - 300

Lower explosion limits:

Upper explosion limits:

Ignition temperature:

not determined

not determined

> 450 °C

**Auto-ignition temperature** 

Gas: not determined

Decomposition temperature: not determined

**Oxidizing properties** 

none

Vapour pressure:

Density:

Bulk density:

530 kg/m³

Water solubility:

Immiscible

Solubility in other solvents

not determined

Partition coefficient:

Viscosity / dynamic:

not determined

not determined

not determined

rot determined

not determined

not determined

not applicable





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Vapour density:not applicableEvaporation rate:not applicableSolvent separation test:not applicableSolvent content:not determined

## 9.2. Other information

Solid content: not determined

UN Test N.4: Test method for self-heating substances: negative.

Particle size in µm: D10: 18; D50: 43,9; D90: 80,1

# **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

No information available.

## 10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

## 10.3. Possibility of hazardous reactions

Refer to chapter 10.5.

## 10.4. Conditions to avoid

Protect against: UV-radiation/sunlight. heat.(> 60°C)

#### 10.5. Incompatible materials

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong. Strong acid.

## 10.6. Hazardous decomposition products

Can be released in case of fire: Carbon monoxide Carbon dioxide (CO2).

## **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

## Toxicocinetics, metabolism and distribution

No data available.

## **Acute toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name							
	Exposure route Dose			Species	Source	Method		
7440-44-0	carbon							
	oral	LD50 mg/kg	> 2000	Rat	ECHA Dossier	OECD Guideline 423		

## Irritation and corrosivity

Based on available data, the classification criteria are not met.

# Sensitising effects

Based on available data, the classification criteria are not met.

## Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.





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### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### **Aspiration hazard**

Based on available data, the classification criteria are not met.

## Specific effects in experiment on an animal

No data available.

## **SECTION 12: Ecological information**

#### 12.1. Toxicity

The product has not been tested.

## 12.2. Persistence and degradability

The product has not been tested.

## 12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

#### 12.4. Mobility in soil

No data available.

## 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

#### 12.6. Other adverse effects

No data available.

### **Further information**

Do not allow to enter into surface water or drains.

## **SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

### Disposal recommendations

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled.

According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

## List of Wastes Code - residues/unused products

200139 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately

collected fractions (except 15 01); Plastics

### List of Wastes Code - used product

200139 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately

collected fractions (except 15 01); Plastics

List of Wastes Code - contaminated packaging





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150106 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND

PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately

collected municipal packaging waste); mixed packaging

### Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

# **SECTION 14: Transport information**

Land transport (ADR/RID)

14.1. UN number:No dangerous good in sense of this transport regulation.14.2. UN proper shipping name:No dangerous good in sense of this transport regulation.14.3. Transport hazard class(es):No dangerous good in sense of this transport regulation.14.4. Packing group:No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number:No dangerous good in sense of this transport regulation.14.2. UN proper shipping name:No dangerous good in sense of this transport regulation.14.3. Transport hazard class(es):No dangerous good in sense of this transport regulation.14.4. Packing group:No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number:No dangerous good in sense of this transport regulation.14.2. UN proper shipping name:No dangerous good in sense of this transport regulation.14.3. Transport hazard class(es):No dangerous good in sense of this transport regulation.14.4. Packing group:No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:No dangerous good in sense of this transport regulation.14.2. UN proper shipping name:No dangerous good in sense of this transport regulation.14.3. Transport hazard class(es):No dangerous good in sense of this transport regulation.14.4. Packing group:No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Refer to section 6-8

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

not relevant

## **SECTION 15: Regulatory information**

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

EU regulatory information

2010/75/EU (VOC): No information available. 2004/42/EC (VOC): No information available.

Information according to 2012/18/EU Not subject to 2012/18/EU (SEVESO III)

(SEVESO III):







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#### Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 2020/878) The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

REACH 1907/2006 Appendix XVII, No (mixture): not relevant

### **National regulatory information**

#### **Additional information**

Water hazard class (WGK): not determined

#### 15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

#### **SECTION 16: Other information**

## Changes

Rev. 1.0: Initial release

## 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)

**CAS Chemical Abstracts Service** 

CLP: Classification, Labelling and Packaging of substances and mixtures

**DNEL: Derived No Effect Level** 

d: day(s)

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

ECHA: European Chemicals Agency EWC: European Waste Catalogue

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

h: hour

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL: No observed adverse effect level

NOAEC: No observed adverse effect concentration

NLP: No-Longer Polymers

N/A: not applicable

OECD: Organisation for Economic Co-operation and Development

PNEC: predicted no effect concentration PBT: Persistent bioaccumulative toxic

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de

fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )

REACH: Registration, Evaluation, Authorisation of Chemicals





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SVHC: substance of very high concern TRGS: Technische Regeln für Gefahrstoffe

**UN: United Nations** 

VOC: Volatile Organic Compounds

#### **Further Information**

Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure:

Health hazards: Calculation method. Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

