

# Safety Data Sheet PVA®

## 1. Identification of the substance or mixture and company responsible for product identification manufacturing / marketing:

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### 1.1 Identification

SMARTFIL® PVA

### 1.2 Forms of use

Uses: Filament for 3D printing FDM supports any printer type

### 1.3 Company



#### SMART MATERIALS 3D

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SMARTFIL® by Smart Materials 3D

**1.3 Emergency phone:** 112

## 2. Hazards identification

### 2.1 Classification

- Classification according to Regulation (EC) No 1272/2008: The product is not classified according to the CLP regulation.
- Classification according to the directive 67/548/CEE or Directive 1999/45/CE: Not classified.

### 2.2 Label elements

Markings according to EC guidelines: According to the method of calculating the " General Classification Guideline for the Production of the EC " in the latest valid version, the product does not require labeling.

<b>Contain:</b>	Polyvinyl alcohol compound
<b>Hazard pictograms</b>	None
<b>Signal word</b>	None
<b>Hazard statements</b>	The mixtures do not meet the criteria for classification

#### Precautionary statements

<b>Prevention</b>	Use personal protective equipment as required
<b>Response</b>	No specific first aid measures noted.
<b>Storage</b>	Store in a dry area. Store in a closed container.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.

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### 2.3 Other dangers

- Results of the valuation PBT y mPmB  
PBT: Non-applicable  
mPmB: Non-applicable

## 3. Composition

### 3.1 Chemical characterization: Mixes

Description: Polymer

Dangerous components: Non-applicable.

Other components: Non-applicable

CAS	Name	Content
N/A	Polivinyl alcohol compound	97-100 %

	Clasificación	Content	Nº de registro REACH	Nº de índice
67-56-1 200-659-6	Methanol	<1%	01-2119433307-44-XXXX	603-001-00-X

Classification: Flam. Liq. 2; H225, Acute Tox. 3; H301, Acute Tox. 3; H11, Acute Tox 3; H331, STOT

## 4. First aids:

### 4.1 Description of First Aids

- General instruction: Change clothes impregnated with the product.
- In case of inhalation: Supply fresh air. In case of disturbances, consult a doctor.



- After inhalation of decomposition products, breathe fresh air, rest, seek medical help.
- In case of skin contact: Wash with soap and water. Visit your doctor if irritation continues skin.
- After contact with molten product, cool rapidly with cold water. No skin separating the solidified product. Call a doctor immediately.
- In case of eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. Remove contact lenses, if present and easy. Continue rinsing.

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

No more data available.

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

No more data available.

### 5. Firefighting measures:

#### 5.1 Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide. Apply extinguishing media carefully to avoid creating airborne dust.

#### 5.2. Unsuitable extinguishing media for safety reasons

Do not use water jet as an extinguisher, as this will spread the fire.

#### 5.3 Special hazards arising from the substance or mixture

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. During fire, gases hazardous to health may be formed.

#### 5.4 Advice for firefighters

Protective equipment: Wear protective breathing apparatus independent of the ambient air.

### 6. Measures in case of accidental release

#### 6.1 Personal precautions,

- Protective equipment and emergency procedures
- Avoid dust formation.
- Do not breathe dust.
- Keep away from sources of ignition.
- Avoid eye contact.
- Danger of slipping on spilled product or pouring.

## 6.2 Environmental cautions:

Do not discharge into drains / surface water / ground water.


## 6.3 Methods and materials for containment and cleaning up:

Allow to solidify, pick up mechanically

Dispose of the material collected according to regulations.

## 7. Handling and Storage:

### 7.1. Precautions for safe handling

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- Ensure good ventilation / exhaustion at the workplace.
  - Avoid dust formation.
  - Do not inhale fumes / dust produced.
  - Remove regularly dust that inevitably form.
  - Avoid contact with the eyes and skin.
  - Complying value / it is of the CMA.
  - Avoid contact with the product I heat.
- Prevention of fire and explosion:
- Protect against electrostatic charges.
  - Keep away from sources of ignition - No smoking.
  - Protect from heat.
  - The enrichment of fine dust in presence of air can lead to danger of dust explosion.

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

- Requirements to be met by storerooms and receptacles:



- Standards in one common storage facility: Not required
- Further information about storage conditions: Store it in a tightly sealed container in a cool, dry place.

## 8. Exposure controls / personal protection

UK. EH40 Workplace Exposure Limits (WELs)

Components	Cat	Value	Form
<b>Methanol (impurity) (CAS 67-56-1)</b>	TWA	266 mg/m <sup>3</sup>	
<b>Dust</b>	TWA	200 ppm 3mg/m <sup>3</sup> 10mg/m <sup>3</sup>	Respirable dust Inhalable dust

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UE. Indicative Exposure Limit Values in Directives 91/322/EEC, 2006/15/EC, 2009/161/EU

Components	Cat	Value	Form
<b>Methanol (impurity) (CAS 67-56-1)</b>	TWA	266 mg/m <sup>3</sup> 200 ppm	

### 8.1 Control parameters

Components with admissible limit values that require monitoring at the workplace: Do not exceed the values for dust concentration. Additional information: Based on references valid at the time of processing

### 8.2 Personal protection equipment.

#### General safety and hygiene:

- Keep away from foodstuffs, beverages, and food.
- Do not eat, drink, smoke, or sniff snuff during work.
- Do not breathe dust / smoke / mist.
- Avoid contact with eyes and skin.
- Wash hands before breaks and after work.

#### Breathing equipment:

- Surely concentrations below the value of the CMA does not require special measures.

#### Protection of hands:

- For use of chemical protective gloves is required.
- For handling product, I heat / cast heat resistant gloves.

#### Eye protection:

- Protection glasses

#### Body protection:

- For handling, hot / molten heat resistant protective clothing product.

### 9. Físical and chemical properties:

- A. Appearance: Natural
- B. Odor: Almost Odorless
- C. Odour Threshold: NA
- D. pH: Neutral
- E. Boiling Point (° C): NA
- F. Melting point (° C): 180-230
- G. Evaporation Rate: NA



- H. Properties Flammable / Explosive: NA
- I. Vapor pressure / vapor density: NA
- J. Relative density: 1.23
- K. Solubility: Water
- L. Octanol / water partition: NA
- M. Auto-ignition temperature: NA
- N. Decomposition temperature: NA
- O. Viscosity: NA
- P. Other properties: NA

## 10. Stability and reactivity

### 10.1 Reactivity

Non-applicable

### 10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

- No decomposition with storage and proper handling.
- Avoid impact, friction, heat, sparks, and electrostatic charges.

### 10.3 Possibility of dangerous reactions.

Non-applicable.

### 10.4 Conditions to be avoided

No further relevant information.

### 10.5 Strong decomposition products

- Not applicable.

## 11. Toxicological Information

### 11.1 Information on toxicological effects

#### Not applicable Primary irritant effect:

- on the skin: Dust may cause mechanical irritation.
- In the eye: Dust may cause mechanical irritation.
- Sensitization: No sensitizing effects known.
- Subacute to chronic toxicity: no data
- Additional toxicological information: According to our experience and the information we have about the product does not cause any adverse health effects when handled properly and used for the purposes specified.



Components	Species	Test result
<b>Methanol (impurity)</b> (CAS 67-56-1)		
<b>Acute</b>		
<b>Dermal</b>	<b>LD50</b> Rabbit	17100 mg/kg
<b>Inhalation</b>	<b>LC50</b> Rat	128200 mg/m <sup>3</sup> , 4 Hours
<b>Oral</b>	<b>LD50</b> Rat	1187-2769 mg/kg

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## 12. Ecological information

### 12.1 Ecotoxicity

It is not expected to be very toxic, but if ingested by birds or aquatic life, can cause adverse mechanical effects

Components	Species	Test result
<b>Methanol (impurity)</b> (CAS 67-56-1)		
<b>Aquatic</b>		
<b>Algae</b>	<b>EC50</b> Algae	22000mg/l 96 horas
<b>Crustacea</b>	<b>EC50</b> Daphnia magna	>10000 mg/l, 48 horas
<b>Fish</b>	<b>LC50</b> Lepomis macrochirus	15400 mg/l, 96 horas.

### 12.2 Mobility

No data available

### 12.3 Persistence and degradability

No data is available on the degradability of this product.

### 12.4 Additional ecological information

General instructions: CPA 1 (auto classification): not dangerous for water.

### 12.5 Results of PBT y mPmB

PBT: Non-applicable.

mPmB: Non-applicable.

## 13 Disposal considerations

### 13.1 Methods for treating waste

Recommendation: Disposal according to official regulations.

#### European waste catalog:

Allocation of waste codes according to the European waste list depends on the source generating the waste.

#### Contaminated packaging:

Recommendation: Disposal according to official regulations.

## 14 Transport information

Not regulated.

## 15 Regulatory information

Not regulated.

## 16 Other information

The data is based on the current state of knowledge, but it is not a guarantee of the product features and it is not legally valid in a contractual relationship.