

PVA · Safety Data Sheet

In accordance with paragraph (d) of 29 CFR 1910.1200:2012 Regulation (EU) No. 1907/2006

Section 1. Chemical Product and Company identification

Product Name

Smart3D PVA

Importer

Industry Supplies, Inc.
2035 Sunset Lake Road Newark, Delaware 19702 USA.
Email: support@smart3d.tech
USA Emergency Poison Control Hot Line (24/7): 1 (800) 222-1222 or call your LOCAL POISON CONTROL CENTER

Section 2. Hazards Identification

Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary

Not available

Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Hazard pictograms

None

Signal word

None

Hazard statements

The mixture does not meet the criteria for classification

Precautionary statements

Prevention

Not available

Response

Not available

Storage

Not available

Disposal

Not available

Supplemental label information

None

Other hazards

Not a PBT or vPvB substance or mixture

Section 3. Composition

Chemical name

Polyvinyl alcohol compound

Product use

Monofilament for FFF 3D Printing

Contens (%)

80 - < 90

CAS-No. / EC No.

Proprietary

REACH Registration No.

-

Chemical name

Methanol (impurity)

Product use

Flam. Liq. 2;H225, Acute Tox. 3;H301, Acute Tox. 3;H311, Acute Tox. 3;H331, STOTSE 1;H370

Contens (%)

< 1

CAS-No. / EC No.

67-56-1 / 200-659-6

REACH Registration No.

-

Index No.

603-001-00-X

Other components below reportable levels

10-<20

Composition components

The full text for all H-statements is displayed in section 16.

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Section 4. First-Aid Measures

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Skin contact

If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of burn. Do not peel polymer from the skin.

Inhalation

Not likely, due to the form of the product. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

Eye contact

Not likely, due to the form of the product. If hot product contacts eye, flush with water for at least 15 minutes and seek medical attention immediately.

Ingestion

Not likely, due to the form of the product.

Most important symptoms and effects, both acute and delayed

Exposure may cause temporary irritation, redness, or discomfort.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically

Section 5. Fire-fighting measures

General fire hazards

No unusual fire or explosion hazards noted

Extinguishing media Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂)

Unsuitable extinguishing media

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

Specific hazards arising from the substance or mixture

During fire, gases hazardous to health may be formed.

Advice for firefighters

Special protective equipment for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures

Move containers from fire area if you can do so without risk

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

Environmental Precautions

Avoid discharge into drains, water courses or onto the ground.

Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13 of the SDS.

Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

Section 7. Handling and Storage

Precautions for safe handling

Avoid prolonged exposure. Observe good industrial hygiene practices.

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Conditions for safe storage, including any incompatibilities

Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

Specific end use(s)

Not available.

Section 8. Exposure Controls / Personal Protection

Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	MAK	260 mg/m ³ 200 ppm
	STEL	1040 mg/m ³ 800 ppm

Belgium. Exposure Limit Values

Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	STEL	333 mg/m ³ 250 ppm
	TWA	266 mg/m ³ 200 ppm

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	MAC	260 mg/m ³ 200 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	Ceiling	1000 mg/m ³
	TWA	250 ppm

Denmark. Exposure Limit Values

Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	TLV	260 mg/m ³ 200 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	STEL	350 mg/m ³ 250 ppm
	TWA	250 mg/m ³ 200 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	STEL	330 mg/m ³ 250 ppm
	TWA	270 mg/m ³ 200 ppm

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France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984			
Components		Type	Value
Methanol (impurity) (CAS 67-56-1)	Regulatory status: Indicative limit (VL) Regulatory status: Indicative limit (VL)	VLE	1300mg/m ³ 1000 ppm
		VME	260 mg/m ³ 200 ppm
	Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)		
	Methanol (impurity) (CAS 67-56-1)	TWA	130 mg/m ³ 100 ppm
Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace			
Methanol (impurity) (CAS 67-56-1)	AGW	270 mg/m ³ 200 ppm	
Greece. OELs (Decree No. 90/1999, as amended)			
Methanol (impurity) (CAS 67-56-1)	STEL	325 mg/m ³ 250 ppm	
	TWA	260 mg/m ³ 200 ppm	
Hungary. OELs. Joint Decree on Chemical Safety of Workplaces			
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³	
Iceland. OELs. Regulation 154/1999 on occupational exposure limits			
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm	
Ireland. Occupational Exposure Limits			
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm	
Italy. Occupational Exposure Limits			
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm	
Latvia. OELs. Occupational exposure limit values of chemical substances in work environment			
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm	
Lithuania. OELs. Limit Values for Chemical Substances, General Requirements			
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm	
Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A			
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm	
Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V			
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm	

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Netherlands. OELs (binding)		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	TWA	133 mg/m ³
Norway. Administrative Norms for Contaminants in the Workplace		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	TLV	130 mg/m ³ 100 ppm
Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	STEL TWA	300 mg/m ³ 100 mg/m ³
Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm
Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	STEL TWA	250 ppm 200 ppm
Romania. OELs. Protection of workers from exposure to chemical agents at the workplace		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm
Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm
Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	TWA	260 mg/m ³ 200 ppm
Spain. Occupational Exposure Limits		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	TWA	266 mg/m ³ 200 ppm
Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	STEL	350 mg/m ³ 250 ppm
	TWA	250 mg/m ³ 200 ppm
Switzerland. SUVA Grenzwerte am Arbeitsplatz		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	STEL	1040 mg/m ³ 800 ppm
	TWA	260 mg/m ³ 200 ppm
Switzerland. SUVA Grenzwerte am Arbeitsplatz		
Components	Type	Value
Methanol (impurity) (CAS 67-56-1)	STEL	1040 mg/m ³ 800 ppm
	TWA	260 mg/m ³ 200 ppm

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UK. EH40 Workplace Exposure Limits (WELs)				
Components		Type	Value	
Methanol (impurity) (CAS 67-56-1)		STEL	333 mg/m ³ 250 ppm	
		TWA	266mg/m ³ 200 ppm	
EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU				
Components		Type	Value	
Methanol (CAS 67-56-1)		TWA	260 mg/m ³ 200 ppm	
Biological Limit Values				
Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)				
Components	Value	Determinant	Specimen	Sampling Time
Methanol (impurity) (CAS 67-56-1)	7 mg/g	Methanol	Creatinine in urine	-
	247mmol/mol	Methanol	Creatinine in urine	-
* - For sampling details, please see the source document.				
Czech Republic. Limit Values for Indicators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.				
Components	Value	Determinant	Specimen	Sampling Time
Methanol (impurity) (CAS 67-56-1)	15 mg/l	Methanol	Urine	-
	0.47 mmol/l	Methanol	Urine	-
* - For sampling details, please see the source document.				
France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)				
Components	Value	Determinant	Specimen	Sampling Time
Methanol (impurity) (CAS 67-56-1)	15 mg/l	Methanol	Urine	-
* - For sampling details, please see the source document.				
Germany. TRGS 903, BAT List (Biological Limit Values)				
Components	Value	Determinant	Specimen	Sampling Time
Methanol (impurity) (CAS 67-56-1)	30 mg/l	Methanol	Urine	-
* - For sampling details, please see the source document.				
Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2				
Components	Value	Determinant	Specimen	Sampling Time
Methanol (impurity) (CAS 67-56-1)	20mg/g	Methanol	Creatinine in urine	-
	30mg/l	Methanol	Urine	-
* - For sampling details, please see the source document.				
Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4				
Components	Value	Determinant	Specimen	Sampling Time
Methanol (impurity) (CAS 67-56-1)	15 mg/l	Methanol	Urine	-
* - For sampling details, please see the source document.				
Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)				
Components	Value	Determinant	Specimen	Sampling Time
Methanol (impurity) (CAS 67-56-1)	30 mg/l	Methanol	Urine	-
* - For sampling details, please see the source document.				
Recommended monitoring procedures		Individual protection measures, such as personal protective equipment General information Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Eye/face protection Wear safety glasses with side shields (or goggles). Skin protection - Hand protection Wear appropriate chemical resistant gloves. Other Wear suitable protective clothing.		
Derived no effect levels (DNELs)				
Predicted no effect concentrations (PNECs)				
Exposure controls				
Appropriate engineering controls				
Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.				

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Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment

Thermal hazards

Wear appropriate thermal protective clothing, when necessary

Hygiene measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Section 9. Physical & Chemical Properties

Appearance

Monofilament, spool

Vapour pressure

Not available

Physical State

Solid

Solubility

Soluble in Water

Odor

Slight

Vapour density (Air=1)

Not available

pH

Not available

Relative density

Not available

Melting point/freezing point

150-230°C (302 - 446°F)

Partition coefficient of n-octanol/water

Not available

Initial Boiling Point/Boiling Ranges

Not available

Autoignition Temperature

520 °C (968F)

Flash point

Not available

Decomposition Temperature

> 200 °C (> 392°F)

Evapourating Rate

Not available

Viscosity

Not available

Flammability (solid, gas)

Not available

Explosive properties

Not explosive

Upper/Lower Flammability or explosive limits

Not available

Oxidising properties

Not oxidising

Density

1.19 - 1.31g/cm³

Section 10. Stability & Reactivity

Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability

Material is stable under normal conditions

Possibility of hazardous reaction

No dangerous reaction known under conditions of normal use.

Conditions to avoid

Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials

Incompatible materials

Strong oxidising agents

Hazardous decomposition products

No hazardous decomposition products are known.

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Section 11. Toxicological information

<p>General information Occupational exposure to the substance or mixture may cause adverse effects</p>	<p>Skin sensitisation Based on available data, the classification criteria are not met.</p>
<p>Information on likely routes of exposure Inhalation Based on available data, the classification criteria are not met.</p>	<p>Germ cell mutagenicity Based on available data, the classification criteria are not met.</p>
<p>Ingestion May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.</p>	<p>Carcinogenicity Based on available data, the classification criteria are not met.</p>
<p>Eye/Skin Based on available data, the classification criteria are not met.</p>	<p>Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended) Not listed.</p>
<p>Symptoms Exposure may cause temporary irritation, redness, or discomfort.</p>	<p>Reproductive toxicity Based on available data, the classification criteria are not met.</p>
<p>Information on toxicological effects Acute toxicity Not known</p>	<p>Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.</p>
<p>Skin corrosion/irritation Based on available data, the classification criteria are not met.</p>	<p>Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.</p>
<p>Serious eye damage/eye irritation Based on available data, the classification criteria are not met.</p>	<p>Aspiration hazard Based on available data, the classification criteria are not met.</p>
<p>Respiratory sensitisation Based on available data, the classification criteria are not met.</p>	<p>Mixture versus substance information No information available.</p>
	<p>Other information This product has no known adverse effect on human health.</p>

Section 12. Ecological Information

<p>Toxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.</p>
<p>Persistence and Degradability No data is available on the degradability of any ingredients in the mixture</p>
<p>Bioaccumulative Potential Partition coefficient n-octanol/water (log Kow) Not available.</p>
<p>Bioconcentration factor (BCF) Not available.</p>
<p>Mobility in soil No data available</p>
<p>Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.</p>
<p>Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component</p>

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Section 13. Disposal Considerations

Waste treatment methods

Residual waste

Dispose of in accordance with local regulations

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

EU waste code

The Waste code should be assigned in discussion between the user, the producer and the waste disposal company

Disposal methods/information

Collect and reclaim or dispose in sealed containers at licensed waste disposal site

Special precautions

Dispose in accordance with all applicable regulations

Section 14. Transport Information

ADR 14.1. - 14.6.: Not regulated as dangerous goods	IATA 14.1. - 14.6.: Not regulated as dangerous goods.
RID 14.1. - 14.6.: Not regulated as dangerous goods.	IMDG 14.1. - 14.6.: Not regulated as dangerous goods.
ADN 14.1. - 14.6.: Not regulated as dangerous goods.	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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Section 15. Regulatory Information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

Chemical safety assessment

No Chemical Safety Assessment has been carried out.

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Section 16. Other Information

List of abbreviations

Not available

References

Not available

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any H-statements not written out in full under Sections 2 to 15

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

H370 Causes damage to organs.

Revision information

None

Training information

Follow training instructions when handling this material

Disclaimer:

This safety data sheet (SDS) is issued based on the latest reference, data etc currently available. The information in this SDS has been carefully assessed, but no guarantee is given for its accuracy. We cannot anticipate all conditions under which this product may be used. It is the user's responsibility to take appropriate safety measures for handling.