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: KODAK 3D Printing Filament PVA

Importer:

Smart International 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

A. 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:

Dusts may irritate the respiratory tract, skin and eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Liberated dust may irritate throat and respiratory system and cause coughing. Prolonged contact may cause dryness of the skin.

B. Label elements

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

Contains:
Polyvinyl alcohol compound
Hazard pictograms:
None
Signal word:
None

Hazard statements:
The mixture does not meet the criteria for classification.

Precautionary statements

Prevention: Use personal protective equipment as required.

Response: No specific first aid measures noted.
Storage: Store in a dry area. Store in a closed container
Disposal: Dispose of waste and residues in accordance with local authority requirements.

Supplemental label information:
None

C. Other hazards
Fine particles may form explosive mixtures with air. This material does not ignite easily; however, feasible precautions against dust explosion are recommended.

Section 3. Composition/Information on ingredients

Chemical name: Polyvinyl alcohol compound

Chemical Family: Polymer, thermoplastic polymer resin

Product Use:

Chemical name	CAS n./ECL n./EINECS n.	Contents (%)
Polyvinyl alcohol compound	N/A	>96
Methanol (Impurity)	67-56-1 200-659-6	

Section 4. First-Aid Measures

Skin Contact
Wash off with soap and water. Get medical attention if irritation develops and persists.

Inhalation
Move to fresh air. Call a physician if symptoms develop or persist.

Eye Contact
Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. Get medical attention if symptoms occur.

Section 5. Fire-fighting Measures

Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Apply extinguishing media carefully to avoid creating airborne dust.

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

A. 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.

B. 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:

Keep unnecessary personnel away. Use only non-sparking tools. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

Environmental precautions and protective procedures:

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

The methods of purification and removal:

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

The methods of purification and removal:

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

Section 7. Handling and Storage

Handling

Minimise dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Explosion-proof general and local exhaust ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Storage

Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see section 10 of the SDS).

7.3. Specific end use(s)
For industrial use only. Thermoplastic processing.

Section 8. Exposure Controls / Personal Protection

8.1. Control parameters Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Dust	TWA	4 mg/m3	Respirable dust. Inhalable dust.
		333mg/m3	
Methanol (impurity) (CAS STEL 67-56-1)	STEL	333mg/m3	
	TWA	250ppm	

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU Components Type Value

Components	Type	Value
Methanol (impurity) (CAS TWA 260 mg/m3 67-56-1)	TWA	260mg/m3

Biological limit values :
No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures:
Follow standard monitoring procedures.

Derived no-effect level (DNEL):
Not available

Predicted no effect concentrations (PNECs) :

Not available

Exposure guidelines

UK EH40 WEL: Skin designation

Methanol (impurity) (CAS 67-56-1)	Can be absorbed through the skin.

B. Exposure controls

Appropriate engineering controls:

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) 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. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn.

General information:

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Make sure to provide adequate control by applying the "COSHH Essentials" procedure.

C. Personal protective equipment

Respiratory Protection:

In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter.

Eye protection:

Wear safety glasses with side shields (or goggles).

Hand protection:

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

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:

Environmental manager must be informed of all major releases.

Section 9. Physical & Chemical Properties

Appearance:	Pellets
Physical form:	Solid
Odor: not available	Not available
pH:	With water at 5%: 5-6,5
Melting point:	180-200 ºC
Initial Boiling Point/Boiling Ranges:	Not applicable
Flash point:	79,44 ºC/174,99 ºF
Evapourating Rate:	0.2 %
Solubility:	In water at 80-100ºC
Density:	1.27 g/cm3
Autoignition Temperature:	Not applicable
Decomposition Temperature:	>240 ºC
Viscosity:	Not available
Explosive Propierties :	Not explosive
Oxidising Propierties:	Not oxidising

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
Keep away from heat, sparks and open flame. Contact with incompatible materials. Minimise dust generation and accumulation

Materials to Avoid
Strong oxidising agents. Strong acids

Hazardous Decomposition Products
Carbon oxides.

Section 11. Toxicological Information

Inhalation:
Dust may irritate respiratory system.

Ingestion:
May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Skin/ eye corrosion
Dust or powder may irritate the skin.

Components	Species	Test Results
Methanol (impurity) (CAS STEL 67-56-1)		
Acute		
Dermal LD50	Rabbit	17100 mg/kg
Inhalation LC50	Rat	128200 mg/m3, 4 hours
Oral LD50	Rat	1187- 2769 mg/kg

Skin corrosion/irritation:
Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation :
Direct contact with eyes may cause temporary irritation.

Respiratory sensitization:
Not a respiratory sensitiser.

Skin sensitization:
This product is not expected to cause skin sensitisation.

Germ cell mutagenicity :
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity :
Not classifiable as to carcinogenicity to humans

Reproductive toxicity:
Based on available data, the classification criteria are not met

Specific target organ toxicity - single exposure:
Not classified.

Specific target organ toxicity - repeated exposure :
Not classified.

Aspiration hazard:
Not an aspiration hazard

Mixture versus substance information :
No information available.

Section 12. Ecological Information

A. 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.

Components	Species	Test Results
Methanol (impurity) (CAS STEL 67-56-1)		

Aquatic

Algae EC50	Algae	22000mg/l, 96 hours
Crustacea EC50	Daphnia magna	>10000mg/l, 48 hours
Fish LC50	Lepomis macrochirus	15400 mg/l, 96 hours

Section 13. Disposal Considerations

Waste treatment methods

Residual waste:
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging:
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal

EU waste code :
07 02 13
Waste codes should be assigned by the user based on the application for which the product was used.

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
Not regulated as dangerous goods.

RID
Not regulated as dangerous goods.

ADN
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk Not applicable. according to Annex II of Marpol and the IBC Code

Section 15. Regulatory Information

A. 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 (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended
Not listed.

Regulation (EC) No. 689/2008 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.

MOWIFLEX SDS UK 931760 Version #: 02 Revision date: 20-January-2016 Issue date: 20-January-2016 6 / 7
Not regulated as dangerous goods.

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.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended
Not listed.

Other EU regulations Directive 2012/18/EU on major accident hazards involving dangerous substances
Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
Methanol (impurity) (CAS 67-56-1)

Directive 94/33/EC on the protection of young people at work
Methanol (impurity) (CAS 67-56-1)

Other regulations
The product is classified and labelled in accordance with EC directives or respective national laws. 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.

B. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

Disclaimer

This SDS, based on current knowledge and experience, contains a general summary of hazards and is consistent with the information provided by the supplier. No liability can be assumed for the accuracy and completeness of this information.
The information in this SDS applies for this specific material only. It therefore does not apply for its usage in combination with other materials or ways of processing.
It is user's responsibility to read and understand this information and incorporate it into individual safety programs, according to all legal and regulatory applicable procedures.
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