



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 ABS

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

GHS Classification: Not applicable

GHS label elements

Hazard symbols: None needed.

Signal word: None needed.

Hazard statement: None needed. Harmful if swallowed.

Precautionary statements

Prevention: None needed.

Response: None needed.

Storage: None needed.

EU Classification

Classification of substance or mixture:

REGULATION (EC) No 1272/2008

This product is not classified as dangerous according to EC criteria.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulation.

OSHA Regulatory Status

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Other hazards which do not result in classification:

NFPA rating: (0-4 steps) Health=1, Flammability=0, Reactivity=0



Section 3. Composition

Chemical name: Acrylonitrile-Butadiene-Styrene Copolymer.

Chemical Family: Polymer, thermoplastic copolymer.

Product Use: Monofilament for FFF 3D Printing

Chemical name	CAS n./ECL n./EINECS n.	Contents (%)
Acrylonitrile-butadiene-styrene co-polymer	9003-56-9/KE-29398	97~100
Stabilizer	Proprietary	0~1
Lubricant	Proprietary	0~2
Acrylonitrile monomer	107-13-1/KE-29393/203-466-5	<0.1
Butadiene monomer	106-99-0/KE-3719/203-450-8	<0.1
Styrene monomer	100-42-5/KE-35342/202-851-5	<0.1

Section 4. First-Aid Measures

Skin Contact

It is unlikely that first aid shall be needed. In case of contamination, rinse skin with running water. Molten material may cause thermal burns. Get medical attention when in case of burn or skin irritation.

Inhalation

Heating may release irritating fumes. Move exposed person to fresh air keep at rest in a comfortable position. Drink water to clean the throat and blow nose to remove the dust. Get medical advice.

Eye Contact

It is unlikely that first aid shall be needed. In case of dust in the eyes, rinse immediately eyes with plenty of water at least 15 minutes. If irritation persists, get medical advice from and ophthalmologist.

Ingestion

Not likely due to nature of product. It is unlikely that first aid shall be needed. The product is not considered toxic. Drink plenty of water. It may cause gastrointestinal blockage, get medical advice.

Notice to Physician

It is unlikely that first aid shall be needed if the product is used under ordinary conditions. Treat



symptomatically according to victim's conditions and specifics of incident.

Antidote

None known. Treat symptomatically and supportively.

Section 5. Fire-fighting Measures**Flammability:**

Autoignition temperature: 455°C.

Suitable extinguishing media

Water, foam, regular dry chemical, carbon dioxide.

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

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.

Hazardous Combustion Products

Carbon monoxide, Carbon dioxide, Hydrogen cyanide, HCN, Acrylonitrile, Styrene monomer.
Levels of fire hazard: Not available

Fire fighting procedures and equipments

Wear appropriate personal protective equipment (see section 9. EXPOSURE CONTROLS/PERSONAL PROTECTION).

Avoid inhalation of smoke or gas when fire fighting. Use self contained breathing apparatus (SCBA) for protection against possible exposure.

Isolate hazard area and deny entry. Stay upwind and keep out of low areas. Move container from fire area if it can be done without risk.

Cool containers with water until well after fire is out.

Special Protective Equipment and Precautions for Firefighters

Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Section 6. Accidental Release Measures**Personal Precautions, Protective Equipment and Emergency procedures**

Perform in accordance with section 9. EXPOSURE CONTROLS/PERSONAL PROTECTION. Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Methods and Materials for Containment and Cleaning Up

Where possible allow leak of molten material to solidify before disposal in an appropriate container. Dispose in accordance with all applicable regulations.



Environmental Precautions

Avoid dispersal of spilt material and runoff and contact with waterways, drains, sewers and basements or confined areas. If large spills, advise emergency services. Comply with all applicable regulations on spill and release reporting.

Section 7. Handling and Storage

Handling

Keep away from the molten plastic while printing in case of being burned.

Storage

Store at temperatures not exceeding 50°C/122°F. Keep cool. Avoid heat, flames, sparks and other sources of ignition. Keep away from incompatible materials.

Incompatible Materials

Oxidizing agents.

Section 8. Exposure Controls / Personal Protection

Component Exposure limit

Exposure limit under ISHL Not applicable

ACGIH Not applicable

Biological exposure limits Not applicable

EU - Occupational Exposure (98/24/EC) - Binding Biological Limit Values and Health

Surveillance Measures

There are no biological limit values for any of this product's components.

Engineering Controls

A system of local and/or general exhaust ventilation system is recommended to keep exposure below the Exposure Limits. Local exhaust ventilation is considered sufficient to effectively remove emissions (dusts and fumes) of the contaminant at its source, preventing dispersion during handling or thermal processing.

Personal Protective Equipment

Respiratory Protection

No respirator is required under normal conditions of use. Under conditions of frequent use or heavy exposure, Respiratory protection may be needed

Eye/face/skin Protection

None during normal use. Protect against molten solid by wearing protective gloves.



Section 9. Physical & Chemical Properties

Appearance:	Monofilament, spool
Physical State:	Solid
Odor:	Odorless, plastic
pH:	7
Melting point:	Not available
Initial Boiling Point/Boiling Ranges:	Not available
Flash point:	349°C (660°F)
Evapourating Rate:	Not available
Flammability (solid, gas):	1/16" HB (UL94)
Upper/Lower Flammability or explosive limits:	Not available
Vapour pressure:	Not available
Solubility:	Insoluble
Vapour density (Air=1):	Not available
Relative density:	1.02~1.17
Partition coefficient of n-octanol/water:	Not available
Autoignition Temperature:	455°C
Decomposition Temperature:	Not available
Viscosity:	150~170°C
Molecular weight:	50,000~200,000

Section 10. Stability & Reactivity

Reactivity/Stability

This product is chemical stable under recommended storage, handling, use and temperature conditions.

Possibility of Hazardous Reaction

Will not polymerize.

Conditions to Avoid

Avoid contact with heat above 320°C, sparks, flame or other ignition sources.

**Materials to Avoid**

Strong oxidizing agents.

Hazardous Decomposition Products

Gas/steam, oxides of carbon, oxides of nitrogen, HCN, acrylonitrile, styrene monomer.

Section 11. Toxicological Information**Information on the likely routes of exposure****Inhalation:**

No data available. Not expected to be harmful. Dust may cause irritation of the upper respiratory tract.

Ingestion:

No data available. Not expected to be harmful.

Eye/Skin:

No data available. Not expected to be harmful. Molten material may cause burns.

Genotoxicity:

No data available. Not expected to be harmful.

Medical Conditions Aggravated by Exposure

No data available.

Section 12. Ecological Information**Aquatic Toxicity**

No information is available. Toxicity is expected to be low based on insolubility in water.

Component Analysis - Aquatic Toxicity

Styrene	100-42-5
Fish:	LC50 96 h Pimephales promelas 3.24 - 4.99 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 19.03 - 33.53 mg/L [static]; LC50 96 h Pimephales promelas 6.75 - 14.5 mg/L [static]; LC50 96 h Poecilia reticulata 58.75 - 95.32 mg/L [static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata 1.4 mg/L IUCLID; EC50 96 h Pseudokirchneriella subcapitata 0.72 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 0.46 - 4.3 mg/L [static] EPA; EC50 96 h Pseudokirchneriella subcapitata 0.15 - 3.2 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 3.3 - 7.4 mg/L EPA

**Persistence and Degradability**

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Section 13. Disposal Considerations**Disposal methods**

Dispose of contents/container in accordance with applicable local, regional, national, and/or international laws and regulations. Avoid release to the environment. Incineration should be done in accordance with prevailing municipal, state, and federal laws and standards from local environmental agencies.

Section 14. Transport Information**US DOT Information**

UN/NA number: Not regulated for transport of dangerous goods

Proper shipping name: None

Hazard class: Not applicable

Packing group: None

IMDG:

UN/Id No.: Not regulated for transport of dangerous goods

Proper shipping name: None

Hazard class: Not applicable

Packing group: None

ICAO/IATA:

UN-No.: Not regulated for transport of dangerous goods

Proper shipping name: None

Hazard Class: Not applicable.

Packing group: None

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Styrene 100-42-5

IBC Code: Category Y



Section 15. Regulatory Information

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Styrene 100-42-5
 SARA 313 0.1 % minimum concentration
 CERCLA 1000 lb final RQ; 454 Kg final RQ

Component Analysis - Inventory

ABS resin (9003-56-9)

US	CA	EU	AU	PH	JP ENCS	JP ISHL	KR KECI/KECL	KR TCCA	CN	NZ	MX	TW
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

Styrene (100-42-5)

US	CA	EU	AU	PH	JP ENCS	JP ISHL	KR KECI/KECL	KR TCCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

NFPA Ratings

Health: 0

Fire: 1

Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Issue date: 2017. 10. 28

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.

Smart International gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the user shall determine the quality and suitability of the product.

Smart International expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.