



## Material Safety Data Sheet

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### SECTION 1. Chemical Product and Company Identification

Product name: Siraya Tech Flex TPU 95A Filament, ISO 10993, High Flow and High Speed, Flexible and Tough, Easy to Print, Moisture-Resistant Aluminum Resealable Bag - for Footwear, Protective Gear (Black, 1kg)

Other name: Flex TPU by Siraya Tech

Recommended use of the chemical and restrictions on use:

For model making and 3D printing

Names, addresses, and phone numbers of the manufacturer or supplier:

Siraya Tech

417 S San Gabriel Blvd, San Gabriel, CA, 91776 United States +1 6267338422

Emergency contact phone numbers/fax numbers:

Shuy Peng/+1 6267338422

### SECTION 2. Hazard Identification

2.1 Classification The material is **not hazardous** according EC 1272/2008

2.2 Label elements

Health hazards: Not hazardous

Environmental hazards Not hazardous

Hazard symbol None

Signal Word None

Hazard Statement None

Precautionary statement None

PBT and vPvB substances Material does not contain PBT and vPvB substances

GHS / CLP Hazard Classification of the mixture:

None

Transport Information

Department of transportation classification: Not hazardous by D.O.T. regulations

D.O.T. proper shipping name: Not regulated

International Maritime Dangerous Goods Code (IMDG): **Not regulated**

International Air Transportation Association (IATA): **Not regulated**

Precautionary: None

Transport Information

Department of transportation classification: Not hazardous by D.O.T. regulations

D.O.T. proper shipping name: Not regulated

International Maritime Dangerous Goods Code (IMDG): **Not regulated**

International Air Transportation Association (IATA): **Not regulated**

### SECTION 3、Composition/Information on Ingredients

Mixtures :

Chemical property:

| Substance Identity          | CAS No.   | Approx. Weight (%) |
|-----------------------------|-----------|--------------------|
| Thermoplastic polyurethanes | 1211-14-9 | 100                |

### SECTION 4、First Aid Measures

4.1 Skin contact If burned by contact with molten material, cool down with water for at least 10 minutes. In case of severe burns, do not remove molten material from skin and consult a physician.

4.2 Eye contact Not likely due to physical state. Grinding or pelletizing of filament may lead to fine dust particles which can cause eye irritation. Wash with plenty of water and get medical attention if symptoms persist.

4.3 Inhalation Not likely due to physical state.

4.4 Ingestion Not likely due to physical state. Material is not expected

### SECTION 5、Fire Fighting Measures

5.1 Extinguishing media Water mist, carbon dioxide, foam, dry powder

5.2 Extinguishing media not to be used for safety reasons High pressure water jet

5.3 Special hazards arising from the mixture During incomplete combustion release of carbon monoxide, acetic acid and decomposition products possible

5.4 Protective equipment for fire fighters Use full protective clothing for chemicals and a self-contained breathing apparatus

**SECTION 6、Accidental Release Measures**

- 6.1 Personal precautions Avoid dust formation and static discharge. Do not overheat material
- 6.2 Environmental precautions Should not be released into environment. Do not allow material to enter drains or water courses.
- 6.3 Cleanup, containment and disposal of spill Avoid dust formation. Sweep up into suitable container for disposal.
- 6.4 Reference to other sections See section 8 and 13

**SECTION 7、Safe Handling and Storage Measures**

- 7.1 Precautions for safe handling Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke at the workplace. Avoid dust formation by cutting or grinding. During printing, ensure good ventilation and local exhaust.
- 7.2 Conditions for safe storage To ensure technical integrity of the product store in the original container/box and keep at temperatures below 50°C and in a dry place. Protect from moisture, product may be hygroscopic
- 7.3 Specific use Under anticipated conditions of use no further measures required. No available exposure scenario's.

**SECTION 8、Exposure Controls Measures**

- 8.1 Control parameters Exposure limits Material contains no substances with occupational exposure limit values Biological limit values Not established Recommended monitoring procedures No information available Derived No Effect Level (DNEL) No information available
- 8.2 Exposure controls Appropriate Engineering Controls Keep at temperatures below 240°C. Ensure adequate ventilation in confined areas. Individual protection measures Eye protection Not required (for FDM printing) Hand protection Not required (for FDM printing) Skin protection Not required (for FDM printing) Respiratory protection Not required (for FDM printing) Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Environmental exposure controls Do not allow product to enter drains, water courses or soil

**SECTION 9、Physical and Chemical Properties**

Appearance (physical state, color, etc) :

|                              |                                      |
|------------------------------|--------------------------------------|
| Gray liquid at 25°C          | Odor : Low Odor                      |
| Odor threshold :—            | Melting point/freezing point :—      |
| pH value : AP 6.8 - 7.2      | Boiling point/boiling range : >250°C |
| Flammability (solid, gas) :— | Flash point : 450°C                  |
| Decomposition temperature :— | Test method : Closed cup             |
| Autoignition temperature :—  | Explosion limits :—                  |
| Vapor pressure :—            | Vapor density :—                     |
| Density : 1.2~1.3            | Solubility : Water: Negligible       |

Partition coefficient of n-octanol/water:—

Evaporation rate:—

## **SECTION 10、Chemical Stability and Reactivity Information**

10.1 Reactivity Not reactive under normal handling conditions

10.2 Chemical stability Stable for handling under normal handling conditions

10.3 Possibility of hazardous reactions No hazardous reactions with other chemicals known, under normal handling conditions.

10.4 Conditions to avoid Do not grind, pelletize or mill the material . Avoid temperatures above 240°C.

10.5 Incompatible materials Avoid water which can cause degradation of material. Material can react with strong oxidizers.

10.6 Hazardous decomposition products Carbon monoxide, carbon dioxide, aldehydes, acetic acid, low molecular weight oligomers.

## **SECTION 11、Toxicological Information**

LD 50 (Rat oral) >5000 mg/kg (PLA) Skin irritation Not tested (not to be expected) Eye irritation Not tested (not to be expected) Skin sensation Not tested (not to be expected) Respiratory sensation Not tested (not to be expected) CMR effects None of the ingredients is listed as CMR substance General remarks No harmful, toxic and sensitive effects have been reported to date Information listed in this section is transferred from safety data from the ingredients of this product.

## **SECTION 12、Ecological Information**

12.1 Aquatic toxicity No information available 12.2 Persistence and degradability Product is biodegradable.

12.3 Bioaccumulative potential No information available 12.4 Mobility in soil No information available 12.5

Results of PBT and vPvB assessment Product does not contain PBT or vPvB substances 12.6 Other adverse

effects No adverse effects known to date 12.7 Additional ecotoxicological information The material is practically non soluble in water and solid. Therefore, under environmental conditions, no detrimental effects on plants, animals and micro-organisms are to be expected.

## **SECTION 13、Waste Disposal Measures**

### **Sewage disposal-relevant information**

13.1 Waste treatment methods Dispose of in accordance with local regulations

13.2 Additional information n.a.

13.3 Packaging Dispose of in accordance with local regulations

## **SECTION 14、Transport Information**

Department of transportation classification: Not hazardous by D.O.T. regulations

D.O.T. proper shipping name: Not regulated

International Maritime Dangerous Goods Code (IMDG): **Not regulated**

International Air Transportation Association (IATA): **Not regulated**

**SECTION 15、Regulatory Information**

Applicable regulations: N/DA

SECTION 16、Other Information

Reference documents

MSDS prepared by

Organization name:

Siraya Tech

417 S San Gabriel Blvd, San Gabriel, CA, 91776 United States +1 6267338422

Title: Lead Chemist          Name (signature): Emma Wang

Date: 2024/7/05

Remark: “ – “ = not available ; “ / “ = not applicable