



## Report

No.: T52410360161TA

Date: JAN 04, 2025

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SHENZHEN ESUN INDUSTRIAL CO.,LTD.  
15A, MICROSOFT KETONG BUILDING, NO. 55 GAOXINNAN 9TH ROAD, HIGH TECH COMMUNITY,  
YUEHAI STREET, NANSHAN DISTRICT, SHENZHEN.

### Toxicological Risk Assessment (TRA) Cover Page

The following samples were submitted and identified on behalf of the client as:

ESILK-PLA FILAMENT (1 formula and 4 additional colors)

Net Weight : 1000G  
Item No. : WHITE, BLUE, GOLD, SILVER, COPPER  
Manufacturer : SHENZHEN ESUN INDUSTRIAL CO.,LTD.  
Region of Origin : CHINA  
Region of Destination : UNITED STATES

\*\*\*\*\*

SGS Ref No. : WHIN2412001069PL02  
Sample Information : FORMULATION WITH CHEMICAL NAME, CAS NO. AND  
Received PERCENTAGE  
Order Receiving Date : DEC 26, 2024  
Last Information Date : JAN 03, 2025  
Assessment Period : DEC 26, 2024 TO JAN 04, 2025

### Service Requested

Toxicological Risk Assessment (TRA) for the said product per information provided.

### Conclusion

Please refer to *the section "CONCLUSION"*

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### Sample Photo:

Pic.1



Pic.2



SGS authenticate the photo on original report only

The validity of this review depends on accurate disclosure by both the manufacturer(s) of the components and of the finished products. Best professional capabilities are used in performing this review. If client wishes to use this opinion with any alterations to the submitted formula, SGS-CSTC Standard Technical Services Co., Ltd. Shenzhen Branch- Hardlines or any of its employees will not be held liable for any injury or damage resulting from this product. A review of this assessment should be programmed at regular and frequent intervals (upon reformulation of the components or the finished products or upon any change to health and safety regulations).

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\*\*\*\*\* For Further Details, Please Refer to the Following Page(s) \*\*\*\*\*

Signed for and on behalf of  
SGS-CSTC Standards Technical  
Services Co., Ltd. Shenzhen Branch Testing Center




Jia Fengjuan, Shelly  
Dept. Manager

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## TOXICOLOGICAL RISK ASSESSMENT REPORT

The formula of ESILK-PLA FILAMENT(white, blue, gold, silver, copper) is reviewed. The product is for US market and intended for printing by adult as client claims. The net weight of solid (The formula under assessment) is 1000g.

### This risk assessment takes account of:

Corrosivity  
Skin irritation  
Eye irritation  
Strong sensitization  
Oral toxicity  
Inhalation toxicity (if applicable)

### According to:

16 CFR 1500.3(c)(4), 1500.3(c)(2), 1500.3(c)(3) and 1500.3(c)(5)

### The followings were considered in this toxicological assessment

Ingredient toxicological profile  
Potential ingredient interaction  
Consumer exposure scenario

## Section I. FORMULATION REVIEW

According to the client's needs and to protect business secrecy, detailed formulations are NOT presented in this report, whereas they are recorded in the SGS Archives. In case of medical events, it is the client's responsibility to provide the formulations to a patient's physician, or SGS upon request may furnish relevant medical units, on a confidential basis, information necessary to diagnose or treat cases of exposure without prior written authorization.

The formulation is not classified according to the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

No allergenic fragrance has been indicated to be present in the formulation.

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## Section II. CONSUMER HEALTH RISK ASSESSMENT

Afore-mentioned formulation has been reviewed for safety at the basis of the following assumptions.

### Exposure assessment

The following assumptions have been made for assessment of exposure:

- Product category: eSilk-PLA filament
- Physical form: solid
- Intended use (suggested use): printing
- Accessibility: this product will contact with the consumer directly
- Exposure route(s): primarily via dermal contact
- Default body weight: 60 kg
- Target population: adult as client claims

## Section III. RISK EVALUATION

Provided the manufacturer's instructions are followed, this product is unlikely to cause damage to internal organs through skin in majority of consumers under normal and reasonably foreseeable conditions of use.

## Section IV. CONCLUSION

The formulation is not expected to cause acute or chronic skin and eye irritation, acute or chronic oral, dermal toxicity or be a strong sensitizer or corrosive as defined in 16 CFR 1500.3(c)(4), 1500.3(c)(2), 1500.3(c)(3) and 1500.3(c)(5). Provided the manufacturer's instructions are followed, it is considered that, in the present state of knowledge, the submitted formulation put on the market is unlikely to pose a significant risk to the health of intended consumer under normal and reasonably foreseeable conditions of use.

### Recommended Safety Labeling

Not Applicable

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**The TRA assessment is valid under the following conditions:**

1. Potential physical, mechanical, electrical and microbiological risks of the product have not been assessed and evaluated.
2. The formulation, description and other supporting documents of the product were submitted and identified by/on behalf of the client, assumed to be valid and accurate.
3. It was assumed that either the ingredients, or the finished product contain no contaminants or residues that cause toxicity to a consumer who may be exposed. All polymers should be well-cured if they are present in the formulation.
4. The risk evaluation can solely be applied to and appropriate for, the product described above under the stated conditions. Modification of any components of the finished product, such as net weight, adjustment of ingredient concentrations, should therefore require re-evaluation.
5. Heavy metal contents in the product were not assessed and evaluated.
6. This product has been assessed for compliance only with the regulation(s) specified herein.
7. If there is an adverse reaction from using this formulation then the undersigned should be informed so that the formulation can be further reviewed.
8. This product has been evaluated for human health only, environmental concern/ ecotoxicity is not assessed in this report.
9. The assessment is performed by in-house method, taking reference of available consumer product exposure database, literature data to the best of knowledge by the time of assessment.
10. This product has not been assessed for compliance with California Proposition 65 & TSCA inventory list.



HONGJING XU MB, MPH,  
Diplomate, American Board of Toxicology,  
European Registered Toxicologist,  
Certified Toxicologist of CSOT  
Certified Cosmetic Safety Assessor

\*\*\*\*\* End of Report \*\*\*\*\*

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