

化学品安全技术说明书
MATERIAL SAFETY DATA SHEETS
3D 打印线材

Bambu PETG HF

客户名称 : 深圳拓竹科技有限公司
Prepared for : Shenzhen TuoZhu Technology Co., Ltd.
地址 : 深圳市前海深港合作区前湾一路1号A栋201室
Address : Room 201, Building A, No. 1 First Qianwan Road, Qianhai Shengang Cooperation Zone, Shenzhen

编制单位 : 苏州市信测标准技术服务有限公司
Prepared by : EMTEK (SUZHOU) CO., LTD
地址 : 苏州市吴中经济开发区郭巷街道淞葭路1388号
No. 1388 Songjia Road, Guoxiang Street, Wuzhong Economic
Address : Development Zone, Suzhou
电话 : +86-0512-80996798
Tel : +86-0512-80996798
传真 : +86-0512-80996689
Fax : +86-0512-80996689

报告编号 : ESZ2404180081C00101R
Report Number : ESZ2404180081C00101R
报告接受日期 : 2024年04月19日
Date of Conduct : Apr. 19, 2024
报告生成日期 : 2024年04月25日
Date of Report : Apr. 25, 2024



谨代表
苏州市信测标准技术服务有限公司

编 制:

朱松妹

朱松妹, Sally

审 核:

杜适

杜适, Damon

签 发:

姜宇锋

姜宇锋, Jason

授权签字人

2024年04月25日

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from data of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



化学品安全技术说明书

MATERIAL SAFETY DATA SHEETS

1 - 化学品及企业标识

1 - Identification of the substance /preparation and of the company/undertaking

名称	: 3D 打印线材
Sample Name	: Bambu ABS-GF
型号	: B50-xx (xx 代表任意后缀)
Model	: B50-xx (xx stands for any suffix)
最终用途	: 3D 打印线材
End Uses	: 3D printing filament
公司名称	: 深圳拓竹科技有限公司
Company Identification	: Shenzhen Tuozhu Technology Co., Ltd.
公司地址	: 深圳市前海深港合作区前湾一路 1 号 A 栋 201 室
Company Address	: Room 201, Building A, No. 1 First Qianwan Road, Qianhai Shengang Cooperation Zone, Shenzhen
传真	: /
FAX	: /
电话号码	: +86 15899878284
Telephone	: +86 15899878284
邮箱	: nina.yang@bambulab.com
Email	: nina.yang@bambulab.com

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



2 - 危险性概论

2 - Hazards Identification

危险性类别：根据GHS分类

Fatalness Grade : According to GHS.

象形图 : /

Hazard Symbols : /

警示词 : /

Signal word : /

侵入途径 : 皮肤接触, 眼睛接触, 吸入, 食入。

Invasion Route : Skin contact, eye contact, inhalation, ingestion.

健康危害 : /

Health Hazards : /

环境危害 : /

Environment Hazards : /

其它危害 : The mixture does not contain PBT/vPvB substance

Other hazards : 该混合物不含 PBT/vPvB 物质。

The mixture does not contain endocrine disruptor

该混合物不含内分泌干扰物。

3 - 成分/ 组成信息

3 - Composition / Information on Ingredients

物质 ☐ 混合物 ☐

Substance ☐ Mixture ☐

物质 Component/Substance	浓度 (范围) % by wt	CAS号 CAS Number	EC号 EC Number
丙烯腈-丁二烯-苯乙烯共聚物 (ABS) Acrylonitrile butadiene styrene copolymer (ABS)	82~92	9003-56-9	/
玻璃纤维 Glass Fiber	7~ 14	65997-17-3	266-046-0
添加剂 Additive	1~4	/	/

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from data of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



4 - 急救措施**4 - First Aid Measures**

吸入	: 如果吸入, 迅速脱离现场至空气新鲜处。保持呼吸道通畅。如有必要, 给予
Inhalation	: 输氧。就医。 If breathed in, remove to fresh air immediately. Keep the respiratory tract smooth. Use oxygen if available. Get medical aid.
皮肤接触	: 脱去污染的衣着, 用肥皂水和清水彻底冲洗皮肤。如有不适感, 就医。
Skin Contact	: Remove contaminated clothing and thoroughly rinse the skin with soapy water and clean water. If you feel unwell, seek medical attention.
眼睛接触	: 提起眼睑, 用流动清水和生理盐水冲洗。立即就医。
Eye Contact	: Filed eyelid, wash with flowing water and physiological saline. Immediate medical attention.
食入	: 立即就医。
Ingestion	: Get medical aid.

5 - 消防措施**5 - Fire-Fighting Measures**

灭火剂	: 用水雾, 耐醇泡沫, 干粉或二氧化碳灭火。
Extinguishing agent	: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
特别危险性	: /
Particularly dangerous	: /
灭火注意事项及防护措施	: 尽快将货物从火中移开。对于小火, 使用干粉, 二氧化碳, 水喷雾
Matters needing attention and protective measures	: 或耐酒精泡沫。对于大型火灾, 站在迎风, 使用水喷雾, 雾, 或耐酒精泡沫。用水喷雾冷却暴露在火中的容器。 As soon as possible, remove the goods from fire to open place. For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, Standing on the windward, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers.



6 - 泄露应急处理**6 - Leakage emergency treatment**

- 作业人员防护措施、防护装备和应急处置程序 : 避免吸入气雾或气体, 保证充分的通风, 将人员疏散到安全区域。
Avoid inhaling aerosol or gas. Ensure adequate ventilation.
- Worker protection measures, protective equipment and emergency procedures : Evacuate people to a safe area.
- 泄漏化学品的收容、清除方法及所使用的处置材料 : 围堵溢出, 用吸附材料如干砂等吸附, 用防静电真空清洁器或湿刷子将溢出物收集起来, 并放置到容器中去, 根据当地规定处理。
Containment and removal methods of spilled chemicals and disposal materials used : Contain spillage, soak up residue with an absorbent such as dry quicksand and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

7 - 操作处置与储存**7 - Handling and Storage**

- 操作处置 : 操作区和贮存附近应有立即可得的灭火器等紧急处理设备。
Handling : Emergency equipment such as fire extinguishers should be immediately available in the operating area and near storage.
- 储存 : 尽可能存放在密闭的容器中, 以防止意外的灰尘产生并防止可能的产品污染。
Storing Notes : 保护容器免受物理损坏。保持干燥, 与酸, 苛性碱, 卤化物和氧化剂分离。不要存放在易燃材料附近。防止灰尘积聚和粉尘的空气传播。储存于阴凉, 干燥, 通风的库房。保持样品容易识别。配备相应品种和数量的消防器材。
Store in a closed container when possible to prevent accidental dust generation and to prevent possible product contamination. Protect containers from physical damage. Keep dry and isolated from acids, caustics, halogenated compounds and oxidizers. Do not store near combustible materials. Guard against dust accumulation and dust becoming airborne. Keep container tightly closed in a cool, well-ventilated place. Keep the sample as a easy identification. Equip with relevant type and quantities of the extinguishment instruments.



8 - 接触控制和个体防护

8 - Contact control and personal protection

最高容许浓度 : 无数据可获得。

Maximum Admissible : No data available.

Concentration

检测方法 : 无数据可获得。

Monitoring Method : No data available.

工程控制 : 作业场所建议与其它作业场所分开。密闭操作, 防止泄漏。加强通风。

Engineering Control : 设置自动报警装置和事故通风设施。设置应急撤离通道和必要的泻险区。
设置红色区域警示线、警示标识和中文警示说明, 并设置通讯报警系统。

It is recommended to separate the workplace from other workplaces.

Closed operation to prevent leakage. Strengthen ventilation.

Set up automatic alarm devices and accident ventilation facilities.

Set up emergency evacuation routes and necessary evacuation zones.

Set up red area warning lines, warning signs, and Chinese warning instructions, and set up a communication alarm system.

呼吸系统防护 : 正常条件下没有必要使用防护装备。

Respiratory Protection : It is not necessary to use protective equipment under normal use conditions.

手防护 : 戴防护手套。

Hands Protection : Wear protective gloves.

眼睛防护 : 安全眼镜、安全封闭式眼镜。

Eyes Protection : Safety glasses, safety closed glasses.

皮肤/身体防护 : 能够避免长时间和反复接触的服装。

Skin/body protection : Clothing that avoids prolonged and repeated contact.

9 -理化特性

9 - Physical and Chemical Properties

外观 : 线。

Appearance : Thread.

沸点 : 无数据可获得。

Boiling Point : No data available.

气味 : 无数据可获得。

Odor : No data available.

密度 : 无数据可获得。

Density : No data available.

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from data of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



熔点	: 无数据可获得。	闪点	: 无数据可获得。
Melting Point	: No data available.	Flashing Point	: No data available.
酸碱度	: 无数据可获得。	比热	: 无数据可获得。
pH	: No data available.	Specific Heat	: No data available.
蒸汽压	: 无数据可获得。	溶解性	: 无数据可获得。
Vapor Pressure	: No data available.	Solubility	: No data available.
粘度	: 无数据可获得。	蒸汽密度	: 无数据可获得。
Viscosity	: No data available.	Vapour density	: No data available.
颜色	: 无数据可获得。		
Colour	: No data available.		

10 - 稳定性和反应性

10 - Stability and Reactivity

稳定性	: 常态下稳定。
Stability	: Stable under normal use.
腐蚀性	: 无。
Causticity	: No.
危险反应	: 无数据可获得。
Dangerous reaction	: No data available.
避免接触条件	: 避免火灾, 高温, 阳光直射。
Conditions to Avoid	: Avoid fire, elevated temperatures. direct sunlight.
禁配物	: 无数据可获得。
Materials to Avoid	: No data available.
有害分解产物	: 无数据可获得。
Hazardous Reactions	: No data available.

11 - 毒理学信息

11 - Toxicological Information

急性毒性: /
Acute Toxicity: /

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



致突变性	: 无数据可获得。	致敏性	: 无数据可获得。
Mutagenicity	: No data available.	Allergenicity	: No data available.
致癌性	: 无数据可获得。	生殖毒性	: 无数据可获得。
Carcinogenicity	: No data available.	Reproductive Toxicity	: No data available.

12 - 生态学信息**12 - Ecological Information**

生态毒性	: 无数据可获得。
Ecotoxicity	: No data available.
持久性和降解性	: 无数据可获得。
Persistence And Degradability	: No data available.
潜在的生物累积性	: 无数据可获得。
Bioaccumulative Potential	: No data available.
土壤中的迁移性	: 无数据可获得。
MobilityIn Soil	: No data available.
其他有害作用	: 无数据可获得。
Other Harmful Effects	: No data available.

13 - 废弃处置**13 - Disposal Considerations**

废弃物性质	: 根据法规(EC)第 1272/2008 号, 该产品不被视为危险废物。
Nature Of Waste	: This product is not regarded as hazardous waste, as defined by Regulation (EC) No.1272/2008.
废弃物处置方法	: 回收利用或参阅国家和地方有关法规。
Waste Disposal Methods	: Refer to relevant national and local regulations before disposal.
废弃物注意事项	: 废弃处置前应参阅国家和地方有关法规。
Attention Abandoned	: Before disposal, refer to relevant national and local laws and regulations.

14 - 运输信息**14 - Transport Information**

危险货物编号	: /
UN Number	: /
运输名称	: 无。

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the testes requested by you and the results thereof based upon the information that you provided. You have 30 days from data of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



Shipping Name	: No.
危险性分类	: 非危害品
Classification	: Not hazardous goods
包装组（如果可能）	: 无。
Packaging Group	: No.
(if applicable)	
运输注意事项	: 请根据化学品的性质选择适当的运输方式和相应的运输和储存条件。该产品可以空运，陆运或海运方式运输。运输工具应配备相应品种和数量的灭火材料和泄漏应急处理设备。禁止与抗氧化剂，酸，碱金属和胺混合使用。防止阳光直射，雨淋和高温运输。具体请参照 ADR-RID/PG，IMO/IMDG/PG，IATA/ICAO/PG 以及第七部分的要求。
Transport Attentions	: Please select the appropriate transportation method and corresponding transportation and storage conditions according to the nature of the chemical. The product can be transported by air, land or sea. The means of transportation should be equipped with corresponding types and quantities of fire extinguishing materials and leakage emergency treatment equipment. Do not mix with antioxidants, acids, alkali metals and amines. Prevent direct sunlight, rain and high temperature transportation. Please refer to section 7-HANDING AND STORAGE also, and requirements of the IATA/ICAO/PG.

15 - 法规信息

15 - Regulatory Information

法规信息	: ISO 11014-2009 Safety data sheet for chemical products - Content and order of sections GB/T 16483-2008 化学品安全技术说明书内容和项目顺序 GB 13690-2009 化学品分类和危险性公示通则 国家危险性废弃物名录 GHS - Globally harmonized system of classification and labeling of chemicals, third revised edition. 加拿大有害物质信息法 (WHMIS2015) 消防法规
Regulatory Information	: ISO 11014-2009 Safety data sheet for chemical products - Content and order of sections

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the testes requested by you and the results thereof based upon the information that you provided. You have 30 days from data of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



GB/T 16483-2008

Safety data sheet for chemical products—Content and order of sections

GB 13690-2009

General rule for classification and hazard communication of chemicals

National Hazardous Waste List

GHS - Globally harmonized system of classification and labeling of chemicals, third revised edition.

Law of Hazardous Material Information System (WHMIS2015)

Fire regulations

16 - 其他信息**16 - Other Information**

日期 : 2024-04-25

Date : Apr. 25, 2024

数据审核单位 : 苏州市信测标准技术服务有限公司

Data Audit Units : EMTEK (SUZHOU) CO., LTD

缩写 : EC: European Inventory of Existing Commercial chemical Substances
CAS : Chemical Abstracts Service (division of the American Chemical Society)Abbreviation : EC: European Inventory of Existing Commercial chemical Substances
CAS : Chemical Abstracts Service (division of the American Chemical Society)

术语 : /

The term : /

其他信息 : 以上信息基于数据准确的基础上, 因为此信息可能在我们无法控制的情况下被应用, 或者被修改, 对此我们不承担任何责任。此信息在收件人决定对材料的专有目的的情况下而配置。

Other InformationOther : The above information based on accurate data, because this information may be applied under conditions beyond our control, or is modified, and we do not bear any responsibility. This information determines the purpose of the case of proprietary materials and configurations in the recipient.

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the testes requested by you and the results thereof based upon the information that you provided. You have 30 days from data of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



声明 Statement

1. 本检测报告首页所列信息中除样品来源、接样日期、检测日期、检测结果和检测结论外，均由委托方提供，委托方对样品的代表性和资料的真实性负责，本实验室不承担任何相关责任。
The information as listed on the first page of this test report was all provided by the client except the sample from, date received, test period, test results and test conclusion. The client shall be responsible for the representativeness of sample and authenticity of materials, for which EMTEK shall bear no responsibilities.
2. 本检测报告以实测值进行符合性判定，未考虑不确定度所带来的风险，特别约定、标准或规范中有明确规定的除外。此种判定方式所带来的风险由客户自行承担，本实验室不承担相关责任。
The judgment method of determining the conformity in this test report is according to the measured value without considering the risk caused by uncertainty, unless otherwise clearly stipulated in special agreement, standard or specification. The client shall assume the risk caused by the judgment method, and EMTEK shall not bear related responsibilities.
3. 检测报告无批准人签字及“检验检测专用章”无效，未经本实验室书面同意，不得整体或部分复制本报告。
The test report is effective only with both signature and specialized stamp. Without written approval of EMTEK, this report can't be reproduced in full or in part.
4. 本检测报告的检测结果仅对送测样品负责，未加盖资质认定标志的检测报告不对社会具有公证证明作用，对于检测数据、结果的使用，所产生的直接或间接损失及一切法律后果，本实验室不承担任何经济 and 法律责任。
This test data is only responsible for the tested sample. The data and results provided by the report without CMA accreditation are not to prove to the society, and EMTEK is not responsible for any economic and legal responsibility for the use of the test data, the direct or indirect losses resulting from the use of the test and all legal consequences.
5. 本检测报告中检测项目标注有下划线则该项目不在本实验室资质认定能力范围内，该项目检测结果仅作为客户委托、科研、教学或内部质量控制等目的使用。
The underlined test item in the report is out of the scope of CMA accreditation. The test result only used for client's requirement, scientific researching, teaching or internal quality control.
6. 其它声明请查阅报告页脚及书面报告背页。
For other statements, please refer to the footer of the report.

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the testes requested by you and the results thereof based upon the information that you provided. You have 30 days from data of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



签发测试报告条款 Conditions of Issuance of Test Reports

1. 苏州市信测标准技术服务有限公司（以下简称[本公司]）为提供符合下述条款的测试和报告，而接受有关样品和货品。本公司基于下述条款提供服务，下述条款为本公司与申请服务的个人、企业或公司（以下简称[客户]）的协议。
All samples and goods are accepted by the EMTEK(Suzhou) Co., Ltd. (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the Company and any person, firm or company requesting its services (the "Clients").
2. 由此测试申请所发出的任何报告（以下简称[报告]），本公司会严格为客户保密。未经本公司的书面同意，报告的整体或部分不得复制，也不得用于广告或授权的其他用途。然而，客户可以将本公司印制的报告或认可的副本，向其客户、供货商或直接相关的其他人出示或提交。除非相关政府部门、法律或法规要求，否则未经客户同意，本公司不得将报告内容向任何第三方讨论或披露。
Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3. 除非相关政府部门、法律或法院要求，否则未经公司预先书面同意，本公司毋需，也并无义务到法院对有关报告作证。
The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. 如果本公司确定报告被不当地使用，本公司保留撤回报告的权利，并有权要求其它适当的额外赔偿。
In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. 本公司接受样品进行测试的前提是，该测试报告不能作为针对本公司法律行动的依据。
Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. 如因使用本公司中心任何报告内的资料，或任何传播信息所描述与之有关的测试或研究导致的任何损失或损害，本公司概不负责。
The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7. 若需要在法院审理程序或者仲裁过程中使用测试报告，客户必须在提交测试样品前将该意图告知本公司。
Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. 该测试报告的支持数据和信息本公司保存 10 年。个别评审机构有特别要求的，检测数据和报告的保存期可依情况变动。一旦超过上述提交的保存期限，数据和信息将被处理掉。任何情况下，本公司不必提供任何被处理的过期数据或信息。即使本公司事先被告知可能会发生相关的损害，本公司在任何情况下也不必承担任何损害，包括（但不限于）补偿性赔偿、利润损失、数据遗失、或任何形式的特殊损害、附带损害、间接损害、从属损害或任何违反约定、违反承诺、侵权（包括疏忽）、产品责任或其他原因的惩罚性损害。
Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of ten years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the testes requested by you and the results thereof based upon the information that you provided. You have 30 days from data of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

