



TEST REPORT

Report No.: 2501A89115A

Date: December 23, 2025

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Shenzhen Tuozhu Technology Co., Ltd.

深圳拓竹科技有限公司

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深圳市前海深港合作区南山街道临海大道2228号恒昌科技大厦西区903

Report on the submitted samples said to be:

委托检测的样品及申请者对样品的说明如下：

Sample Description: PLA Basic
样品描述：3D打印线材

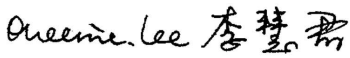
Style/Item No.: A00-W0
型号：

Sample Receiving Date: December 10, 2025
收样日期：2025 年 12 月 10 日

Testing Period: December 10, 2025 - December 20, 2025
测试周期：2025 年 12 月 10 日 - 2025 年 12 月 20 日

Result: Please refer to next page(s).
测试结果：请参见后续页。

Signed for and on behalf of BACL (BACL 授权签名)

Checked by: 
审核：_____
Queenie Lee 李慧君

Approved by: 
核准：_____
Len xie 谢创

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Summary of Test Result:

测试结果概要:

TEST REQUEST

测试要求

CONCLUSION

结论

A. Annex XVII of European regulation (EC) No. 1907/2006 (REACH) with Amendment (s)

欧盟法规 (EC) No. 1907/2006 (REACH) 附件XVII及其修正案

A.1 Organostannic compounds content (Entry 20)

有机锡化合物含量 (第20条)

Pass

合格

A.2 Polycyclic-aromatic hydrocarbons (PAHs) content (Entry 50)

多环芳烃含量 (第50条)

Pass

合格

A.3 C9-C14 Perfluorocarboxylic Acids (PFCAs) and Their Salts Content (Entry 68)

C9-C14全氟羧酸 (PFCAs) 及其盐类含量 (第68条)

Pass

合格

A.4 C9-C14 PFCA-related Substances Content (Entry 68)

C9-C14 PFCA相关物质含量 (第68条)

Pass

合格

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Result:

测试结果:

Tested part(s):

测试部位:

(1) White plastic (wire)

白色塑胶 线材

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A. Annex XVII of European regulation (EC) No. 1907/2006 (REACH) with Amendment(s)

欧盟法规 (EC) No. 1907/2006 (REACH) 附件XVII及其修正案

A.1 Organostannic compounds content (Entry 20)

有机锡化合物含量 (第20条)

Test Method/测试方法: ISO 16179:2025

Item 项目	Unit 单位	MDL	Result 测试结果	Limit 限量
			(1)	
Dibutyltin(DBT) 二丁基锡	mg/kg	50	N.D.	1000
Diocetyl tin(DOT) 二辛基锡	mg/kg	50	N.D.	1000
Tributyltin(TBT) 三丁基锡	mg/kg	50	N.D.	-
Triphenyltin(TPhT) 三苯基锡	mg/kg	50	N.D.	-
Tricyclohexyltin(TCyHT) 三环己基锡	mg/kg	50	N.D.	-
Triocetyl tin(TOT) 三辛基锡	mg/kg	50	N.D.	-
Tripropyltin compounds(TPT) 三丙基锡化合物	mg/kg	50	N.D.	-
sum of TBT,TPhT,TCyHT,TOT,TPT	mg/kg	-	N.D.	1000
Conclusion 结论	/	/	Pass 合格	/

A.2 Polycyclic-aromatic hydrocarbons (PAHs) content (Entry 50)

多环芳烃含量 (第50条)

Test Method/测试方法: AfPS GS 2019:01 PAK

Item 项目	Unit 单位	MDL	Result 测试结果	Limit 限量
			(1)	
Benzo[a]anthracene(BaA) 苯并[a]蒽	mg/kg	0.2	N.D.	1.0
Chrysene(CHR) 屈	mg/kg	0.2	N.D.	1.0
Benzo[b]fluoranthene(BbFA) 苯并[b]荧蒽	mg/kg	0.2	N.D.	1.0

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Item 项目	Unit 单位	MDL	Result 测试结果	Limit 限量
			(1)	
Benzo[j]fluoranthene (BjFA) 苯并[j]荧蒽	mg/kg	0.2	N.D.	1.0
Benzo[k]fluoranthene (BkFA) 苯并[k]荧蒽	mg/kg	0.2	N.D.	1.0
Benzo[e]pyrene (BeP) 苯并[e]芘	mg/kg	0.2	N.D.	1.0
Dibenzo(a,h)anthracene(DBA) 二苯并[a,h]蒽	mg/kg	0.2	N.D.	1.0
Benzo[a]pyrene(BaP) 苯并[a]芘	mg/kg	0.2	N.D.	1.0
Conclusion 结论	/	/	Pass 合格	/

Remark:

Category 1:

Articles placed on the market for supply to the general public, such articles include amongst others:

- 1) Sport equipment such as bicycles, golf clubs, racquets
- 2) Household utensils, trolleys, walking frames
- 3) Tools for domestic use
- 4) Clothing, footwear, gloves and sportswear
- 5) Watch-straps, wrist-bands, masks, head-bands

Category2: Toys, including activity toys, and childcare articles.

备注:

一类: 供大众使用的任何销售的物品, 包括并不限于以下产品:

- 运动设施: 如自行车, 高尔夫球杆, 网球拍等
- 家居用品: 如手推车, 学步车等
- 家用工具
- 衣服, 鞋类, 手套, 运动服
- 表带, 护腕, 口罩, 头箍

二类: 玩具包括运动玩具和儿童护理产品。

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A.3 C9-C14 Perfluorocarboxylic Acids (PFCAs) and Their Salts Content (Entry 68)

C9-C14全氟羧酸 (PFCAs) 及其盐类含量 (第68条)

Test Method/测试方法: ISO 23702-1:2023

Item 项目	Unit 单位	MDL	Result 测试结果	Limit 限量
			(1)	
Perfluorononanoic Acid (PFNA,C9-PFCA) 全氟壬酸	ppb	25	N.D.	-
Perfluorodecanoic Acid (PFDA,C10-PFCA) 全氟癸酸	ppb	25	N.D.	-
Perfluoroundecanoic Acid (PFUnA,C11-PFCA) 全氟十一烷酸	ppb	25	N.D.	-
Perfluorododecanoic Acid (PFDoA,C12-PFCA) 全氟十二烷酸	ppb	25	N.D.	-
Perfluorotridecanoic Acid (PFTrDA,C13-PFCA) 全氟十三烷酸	ppb	25	N.D.	-
Perfluorotetradecanoic Acid (PFTeDA,C14-PFCA) 全氟十四烷酸	ppb	25	N.D.	-
Perfluoro-3,7- dimethyloctanecarboxylate(PF -3,7-DMOA) 全氟-3,7-二甲基辛烷羧酸盐	ppb	25	N.D.	-
sum of all	ppb	-	N.D.	25
Conclusion 结论	/	/	Pass 合格	/

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A.4 C9-C14 PFCA-related Substances Content (Entry 68)

C9-C14 PFCA相关物质含量 (第68条)

Test Method/测试方法: ISO 23702-1:2023

Item 项目	Unit 单位	MDL	Result 测试结果	Limit 限量
			(1)	
1H,1H,2H,2H-Perfluorododecyl acrylate(10:2 FTA) 1H,1H,2H,2H-全氟十二烷基丙烯酸酯	ppb	250	N.D.	-
1H,1H,2H,2H-Perfluorododecyl methacrylate(10:2 FTMA) 1H,1H,2H,2H-全氟十二烷基甲基丙烯酸酯	ppb	250	N.D.	-
1H,1H,2H,2H-Perfluorododecanol(10:2 FTOH) 1H,1H,2H,2H-全氟十二烷醇	ppb	250	N.D.	-
2H,2H,3H,3H-Perfluoroundecanoic Acid (H4PFUnA) 2H,2H,3H,3H-全氟十一烷酸	ppb	250	N.D.	-
Perfluorocylethanol 8:2(8:2 FTOH) 全氟烷基乙醇 8:2	ppb	250	N.D.	-
1H,1H,2H,2H-perfluorotetradecan-1-ol(12:2 FTOH) 1H,1H,2H,2H-全氟十四烷-1-醇	ppb	250	N.D.	-
1H,1H,2H,2H-Perfluorododecanesulphonic acid(10:2 FTS) 1H,1H,2H,2H-全氟十二烷磺酸	ppb	250	N.D.	-
1H,1H,2H,2H-Perfluorododecyl iodide(10:2 FTI) 1H,1H,2H,2H-全氟十二烷基碘	ppb	250	N.D.	-
1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI) 1H,1H,2H,2H-全氟十四烷基碘	ppb	250	N.D.	-

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Item 项目	Unit 单位	MDL	Result 测试结果	Limit 限量
			(1)	
sum of all	ppb	-	N.D.	260
Conclusion 结论	/	/	Pass 合格	/

Note:

- N.D.= Not Detected or less than MDL
- MDL = Method Detection Limit
- The Result less than MDL are not taken into account while calculating the sum contents.

注释：

- N.D.=未检出或小于方法检出限
- MDL = 方法检出限
- 加和含量计算时未计入小于方法检出限的结果。

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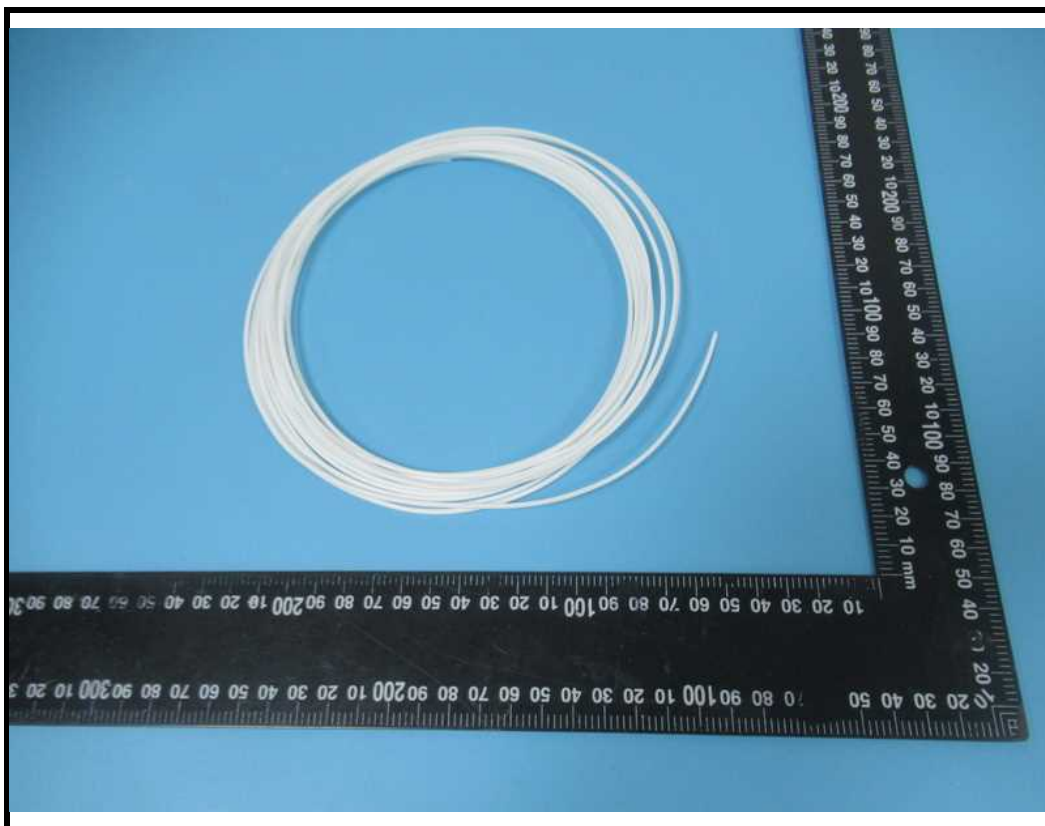
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Photograph of Sample

样品照片



BACL authenticate the photo on original report only
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- 6.The test samples were in good condition before testing.
在进行测试前，测试样品已确认状态完好。
- 7.本报告中的数据结果用于学习、研究、内部质量控制、产品研发、科研，教学等目的。

*** End of Report ***

*** 报告结束***

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