

承 认 书

CUSTOMER APPROVAL SHEET

供应商名称: 互连精密技术(深圳)有限公司

客 户 名 称: 互连精密技术(深圳)有限公司

物 料 规 格: 2.54x2.54mm 金手指 DIP 90° 2*8P 1u'' 灰色无

LOGO供应商料号: AAR1016G1099C

互 连 料 号: AAR1016G1099C

送 样 日 期: 2023/09/05

承 认 书 编 号 : 20230905001

供应商内部审批:

批准	审核	制作	签章
JACK	CLARE	FH	

客户审批:

研发工程师	研发经理	CE	签章
确认结果: ☐ 合格 ☐ 不合格 ☐ 其它			

互连精密技术(深圳)有限公司

ADD:深圳市宝安区西乡街道劳动社区西乡大道和宝源路交汇处中央大道c座18D

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目 录

1、规格书（必须）-----	3-11
2、关键器件清单（必须）-----	4
3、2D图纸（必须）-----	12
4、CMF&样品实物照片（必须）-----	13
5、包装SOP（必须）-----	14
6、全尺寸测量报告（FAI）（必须，至少5pcs）-----	15
7、关键尺寸CPK报告（必须）-----	16
8、电气性能测试报告（仅适用电子及电子结构料）-----	17-27
9、可靠性测试报告（必须）-----	17-27
10、物料ROHS2.0符合性宣告表（必须，依如下受控表单格式填写）	



CONSHARE-FM-
23-015 REV1.2物

11、PMP或QC工程图（可选）	
12、试模报告（可选）	
13、色差报告（可选）	
14、材料材质证明（ROHS）-----	28-40
15、安规证书（CCC/UL/CE等）（有安规要求之物料必须提供）----	41-42

说明：目录页请根据实际情况修订，其中“必须”项为物料承认时必须提供的资料，其他项根据物料属性及实际情况提供。除《物料ROHS2.0符合性宣告表》有固定格式外，其他格式不限。

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Product Specification 【產品規範】		Subject 【主題】	金手指 SERIES		
Document No: 【文件編號】	HL-QA-005	Rev: 【版本】	A/0	Page 1 of 9 【頁碼】	

Revision Record 【修訂記錄】					
Rev 【版本】	Date 【日期】	Page 【頁碼】	ECN No.	Description of Change 【說明】	
A2	2023/08/03	10			CHANGE STAND OFF

Page	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Content Rev	A/0																			
Attachment Rev																				

Approved by	Andy	Checked by	Jack	Prepared by	FDL
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Document No: 【文件編號】	HL-QA-005	Rev: 【版本】	A/0	Page 2 of 9 【頁碼】

一 SCOPE (適用範圍): 1.Contents This specification covers the performance, tests and quality requirements for the 金手指系列 Connector 本規範適用金手指系列 Connector, 內容包括:物料規格,產品規格及電氣特性,機構特性,環境特性及測試方式. 二 Qualification When tests are performed on the subject product line, the procedures specified specifications shall be used. All inspections shall be performed using the applicable inspection plan and product drawing. 所有测试样品从生产线提取,测试要求按主品规范来测试, ,产品的检测是按该产品的检测计划和工程图面要求来执行。 三 Applicable Document (适用文件) The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence. 以下部分测试规范来源于产品规范, 如有不相一致之处, 以此产品规范具体要求为准。 四 Requirements 需求 4.1DESIGN AND CONSTRUCTION 设计与开发 Product shall be of the design, construction and physical dimensions specified on the applicable product drawing. 产品从设计到开要符合产品规范和工程图面要求。 4.2MATERIALS (材质) Housing 胶芯: LCP BLACK Contact 端子: C7025 五 RATING 电气特性 Current 額定電流:: 12A Max/1 contact Temperature 适用温度: - 40 °C to +105 °C(Storage) -25 °C to +85°C(Operating) 六 Perfomance REQUEIREMENT and Test description 其它特性 The product shall be designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1. All tests shall be performed at ambient environmental conditions. 产品需满足规范所要求的机械性能、电气特性及环境测试要求,

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Product Specification 【產品規範】		Subject 【主題】	金手指 SERIES	
Document No: 【文件編號】	HL-QA-005	Rev: 【版本】	A/0	Page 3 of 9 【頁碼】

Test Item 项目 (Frequency)		Test Condition 测试条件	Requirement 测试要求
1	Examination of Product (每批全检)	Meets requirements of product drawing. No physical damage.	Visual inspection. 目视检查
Electrical Requirement 电气性能			
2	Contact Resistance 接触阻抗	Mated connectors, Contact : measure by dry circuit, 20 mVolts maximum.,10mA. Shell : measured by open circuit, 5 Volts maximum ,100mA. (ANSI/EIA-364-06B)	Initial Contact resistance excluding conductor resistance: 20 milliohms maximum . (Target design value)
3	Dielectric withstanding Voltage 耐电压	Unmated connectors, apply 750 VDC /1 minute between adjacent terminal and ground. (ANSI/EIA-364-20C, Method A)	No Breakdown
4	Insulation Resistance 绝缘阻抗	Unmated connectors, apply 500 Volts DC between adjacent terminal or ground. (ANSI/EIA 364-21C)	1000 megaohms minimum (unmated)
5	Thermal Shock	10 cycles of: a) -55°C for 30 minutes b) +85°C for 30 minutes (ANSI/EIA-364-32C, Condition I)	A:Appearance No Damage B:Contact Resistance for Contact : Change from initial value: 20 milliohms maximum.
Mechanical Requirement 机械性能			
6	Connector Mating Force 插入力	Initial:133.28N(13.62Kgf) Max.	Operation Speed: 25.4mm/min. Measure the force required to mate connector. ANSI/EIA-364-13

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Product Specification 【產品規範】		Subject 【主題】	金手指 SERIES	
Document No: 【文件編號】	HL-QA-005	Rev: 【版本】	A/0	Page 4 of 9 【頁碼】

7	Connector Unmating Force 拔出力	Final:9.3N(0.95Kgf) Min.	Operation Speed: 25.4 mm/min. Measure the force required to unmate connector. ANSI/EIA-364-13
8	Durability 耐插拔	Operation Speed: 250 cycles/hour. Durability Cycles: 50Cycles EIA-364-9C	Contact Resistance: 20m Ohm Max(final)
9	Vibration 振动实验	Values for test-condition: 5.0Hz-0.00200g ² /Hz 12.5Hz-0.24800g ² /Hz 77.5Hz-0.00320g ² /Hz 145.0Hz-0.00200g ² /Hz 200.0Hz-0.01180g ² /Hz 230.0Hz-0.00032g ² /Hz 1000.0Hz-0.00002g ² /Hz {Grms=1.81} Duration: 8 hours in each (Total of 24 hours) X, Y, Z axis. Electrical load: 100mA DC current shall be flowing during the test. (SAE/USCAR-2 5.4.6)	A:Appearance:No Damage B:Contact Resistance::Contact : Change from initial value: 20 milliohms maximum. Shell Part : Change from initial value: 20 milliohms maximum. C:Discontinuity:1 μsec maximum.

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Product Specification 【產品規範】		Subject 【主題】	金手指 SERIES	
Document No: 【文件編號】	HL-QA-005	Rev: 【版本】	A/0	Page 5 of 9 【頁碼】

10	Physical shock (每年一次)	Pulse width: 10msec Waveform: half sine, 343m/s ² {35G}, 10strokes in each X, Y, Z axis (SAE/USCAR-2 5.4.6)Discontinuity: 1μsec max.	A:Appearance:No Damage B:Contact Resistance:: Contact : Change from initial value: 20 milliohms maximum. Shell Part : Change from initial value: 20 milliohms maximum. C:Discontinuity::1 μsec maximum.
11	Solder ability 沾锡性	1. Test method complies with EIA-364-52. 測試方法依據 EIA- 364-52. 1.The connector shall be immersed into solder of 245±5℃ for 5.0±0.5 sec. 本產品端子浸在溫度 245±5℃錫爐中,沾錫 5±0.5 sec.	A new uniform coating of solder shall cover 95% of the surface being immersed 焊錫面積 95%以上

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Document No: 【文件編號】	HL-QA-005	Rev: 【版本】	A/0	Page 6 of 9 【頁碼】

Environmental Requirements 环境要求:				
12	Resistance to Soldering Heat 耐焊锡热性	1.Test method complies with EIA-364-56. 測試方法依據 EIA-364-56. 2.1Connector mounted on PCB, Solder tail shall be immersed in soldering bath at temperature of $265\pm 5^{\circ}\text{C}$ for 10.0 ± 0.5 sec (be Applied SMT Type). 產品貼於 PCB 板, PCB 板與連接器同處於溫度 $265\pm 5^{\circ}\text{C}$ 中,時間 10.0 ± 0.5 sec(適用於 SMT 型). 2.2.Connector mounted on PCB, Solder tail shall be immersed in soldering bath at temperature of $265\pm 5^{\circ}\text{C}$ for 5.0 ± 0.5 sec(be Applied DIP Type). 本產品穿過 PCB 板, 焊接尾部浸在溫度 $265\pm 5^{\circ}\text{C}$ 錫爐中浸錫 5.0 ± 0.5 sec(適用於 DIP 型). 3. Soldered manually at $390\pm 10^{\circ}\text{C}$ for 3.0 ± 0.5sec. 2 cycles. 手焊作業時,焊槍溫度 $390\pm 10^{\circ}\text{C}$, 時間 3.0 ± 0.5 秒,來回兩次.		No physical damage shall occur.
13	Thermal Shock 热冲击	Mated Connector $-55\pm 3^{\circ}\text{C}$(30 minutes), $+85\pm 2^{\circ}\text{C}$(30 minutes) Perform this 1 cycle, repeat 10 cycles ANSI/EIA-364-32C condition		Withstand Voltage: 750VAC Insulation resistance:1000 MΩ Min.
14	Humidity 恒温恒湿	A:Mate connectors together and perform the test as Appearance No Damage follows. Temperature : -25 to $+85^{\circ}\text{C}$ Relative Humidity : 90 to 95% Duration : 4 cycles (96 hours)		A: Appearance:No Damage B: Contact Resistance::Contact :Change from initial value: 20 milliohms maximum. C: Discontinuity:1 μsec maximum.

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Document No: 【文件編號】	HL-QA-005	Rev: 【版本】	A/0	Page 7 of 9 【頁碼】

		Upon completion of the test, specimens shall be conditioned at ambient room conditions for 24 hours, after which the specified measurements shall be performed. (ANSI/EIA-364-31B) B:Unmated each connectors and perform the test as follows. Temperature : -25 to +85°C Relative Humidity : 90 to 95% Duration : 4 cycles (96 hours) Upon completion of the test, specimens shall be conditioned at ambient room conditions for 24 hours, after which the specified measurements shall be performed. (ANSI/EIA-364-31B)	D: Dielectric Withstanding Voltage and Insulation Resistance:Conform to item of Dielectric Withstanding Voltage and Insulation Resistance
15	Temperature Life (Heat Aging)耐温寿命	Mated Connector 85°C , 250 hours, EIA-364-17B.	See Note
16	Salt Spray(每个 LOT) 喷水盐雾	Subject mated connectors to 35+/-2 °C and 5+/-1% salt condition for 24 hours. After test, rinse the sample with water and recondition the room temperature for 1 hour. EIA-364-26B.	No detrimental corrosion allowed in contact area and base metal exposed.
17	Current Rating	测试电流： 12 Amp	12A 电流通电平稳后， 温升值不得超过 30℃

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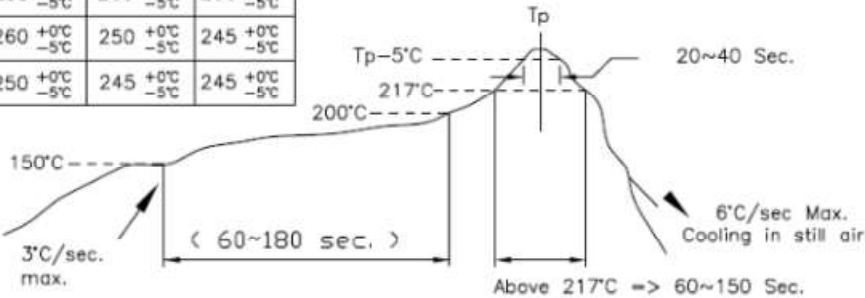
Product Specification 【產品規範】		Subject 【主題】	金手指 SERIES	
Document No: 【文件編號】	HL-QA-005	Rev: 【版本】	A/0	Page 8 of 9 【頁碼】

RECOMMENDED SOLDERING PROFILE:

Lead-Free-IPC/JEDEC-STD-020C

Solder Heat Resistance (Lead-Free)

Package Thk	Tp Volume mm³		
	<350	350~2000	>2000
<1.6mm	260 +0℃ -5℃	260 +0℃ -5℃	260 +0℃ -5℃
1.6~2.5mm	260 +0℃ -5℃	250 +0℃ -5℃	245 +0℃ -5℃
≥2.5mm	250 +0℃ -5℃	245 +0℃ -5℃	245 +0℃ -5℃

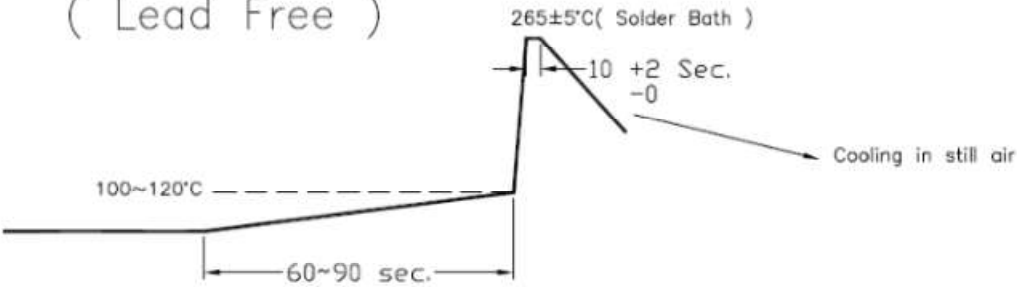


- * Time 25°C to Peak Temp. ----- 8 Minutes Max.
 - * Time within 5°C of Actual Peak Temp. -- 20~40 Seconds
- (REFLOW SOLDERING CONDITION)

Lead-Free-JESD22-B106C

Lead-Free

Solder Heat Resistance for PTH device
(Lead Free)



- * The immersion and emersion rates shall be 25±6/sec.
- (WAVE SOLDERING)

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Product Specification 【產品規範】		Subject 【主題】	金手指 SERIES	
Document No: 【文件編號】	HL-QA-005	Rev: 【版本】	A/0	Page 9 of 9 【頁碼】

	十 TEST SEQUENCE (測試順序)										
ITEM 序號	TEST DESCRIPTION 測試內容		TEST SEQUENCE 測試頻次								TEST METHODS 測試方法
		A	B	C	D	E	F	G	H	J	
1	EXAMINATION FOR PRODUCT 外觀	1,9	1,10	1,5	1,9	1,4	1,9	1,9	1	1,9	
2	CONTACT RESISTANCE 接觸阻抗	2,8	2,9	2,4	2,8		2,8	2,8	2	2,8	
3	DIELECTRIC WITHSTANDING VOLTAGE 耐電壓	4,6	4,7		4,6		4,6	4,6	3	4,6	
4	INSULATION RESISTANCE 絕緣阻抗	3,7	3,8		3,7		3,7	3,7		3,7	
5	TEMPERATURE LIFE 耐溫壽命				5						
6	INSERTION FORCE 插入力										
7	WITHDRAW FORCE 拔出力										
8	DURABILITY 耐插拔		6								
9	VIBRATION 振動試驗							5			
10	SOLDERABILITY 沾錫性					3					
11	RESISTANCE TO SOLDER HEAT 耐焊錫熱性					2					
12	THERMAL SHOCK 熱衝擊試驗									5	
13	HUMIDITY 恆溫恆濕	5									
14	TEMPERATURE LIFE 耐溫壽命				5						
15	SALT SPRAY 鹽水噴霧			3							
16	Current Rating 溫升								4		
17	SAMPLE SIZE 樣品數量	5	5	5	5	5	5	5	3	5	

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客户图

NOTES:

1. FINISH:

1.1 HOUSING: PBT GREY,UL94V-0.

1.2 CONTACT: C5191,GOLD (SEE P/N) PLATED
IN CONTACT AREA, 80u" MIN MATTE TIN PLATED IN
SOLDER AREA,50u" MIN. NICKEL UNDERPLATED OVERALL.

2. ELECTRICAL:

2.1 VOLTAGE RATING:300V;

2.2 CURRENT RATING:3A;

2.3 DIELECTRIC WITHSTANDING VOLTAGE: 750V AC/MINUTE.

2.4 CONTACT RESISTANCE: 20mΩ MAX.

2.5 INSULATION RESISTANCE: 1000MΩ MIN.

2.6 OPERATION TEMPERATURE:-40°C TO +105°C.

3.ORDER INFORMATION:

2.54x2.54mm 90° 折弯

AA R1 XXX XX 099 C

Pin数目
SEE TABLE
006=2*3PIN
~
100=2*50PIN

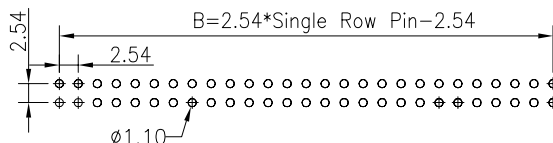
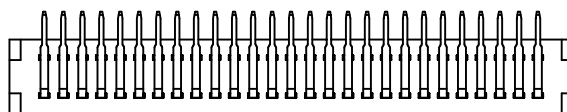
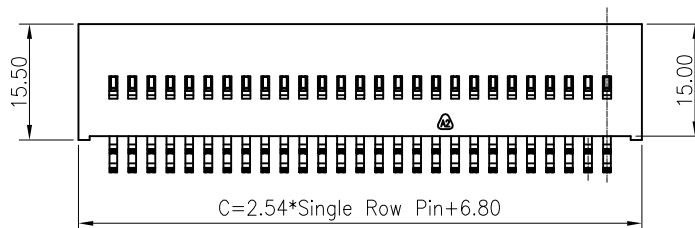
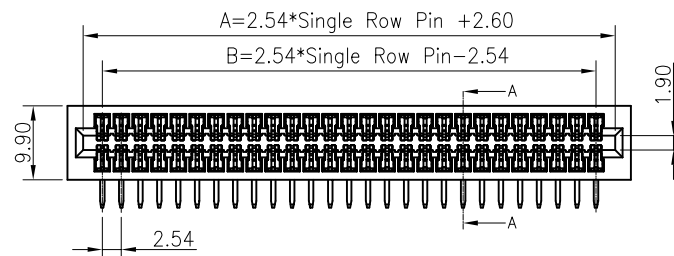
端子电镀:
G0=Gold Flash
G1=1u" Gold
G2=3u" Gold
G3=5u" Gold
S0=Gold Flash/Tin
S1=1u" Gold/Tin
S2=3u" Gold/Tin
S3=5u" Gold/Tin
S4=10u" Gold/Tin
S5=15u" Gold/Tin
S6=30u" Gold/Tin

塑胶高度:
099=9.90mm

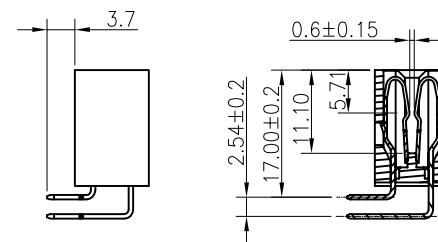
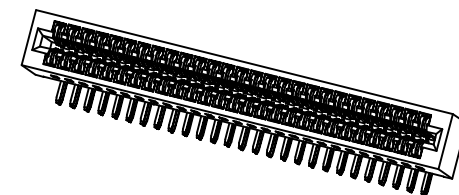
包装方式:
C=TRAY

TABLE 1:

No. OF PIN	A	B	C
006=2x3PIN	10.22	5.08	14.42
008=2x4PIN	12.76	7.62	16.96
010=2x5PIN	15.30	10.16	19.50
012=2x6PIN	17.84	12.70	22.04
016=2x8PIN	22.92	17.78	27.12
032=2x16PIN	43.24	38.10	47.44
050=2x25PIN	66.10	60.96	70.30
.....			
100=2x50PIN	129.60	124.46	133.80



Recommended P.C.B Layout (Top Side)
(PCB BOARD TOLFRANCE+0.05)



SECTION:A-A

REV	DATE	MODIFICATION DESCRIPTION	CHANGE	APPROVE	OPERATION	DRAW	WLY	2021.05.13				
A2	2023. 08. 03	取消中间台阶	WLY		X.X ±0.40	DESIGN	Jensen	2021.05.13				
A1	2021. 04. 08	更正铜材型号	WLY		X.XX ±0.25	CHECK	Jack	2021.05.13	SIZE	A4	PART NO.	AAR1XXXXX099C
AO		NEW			X.XXX ±0.15	APPROVE	Andy	2021.05.13	SHEET	1/2	TITLE:	2.54x2.54mm 金手指 DIP 90°
					Angle ±3°				PROJ.	1/2	DRAW NO.	SP-378
					DIM. TOL	UNIT	mm	SCALE	1:1			

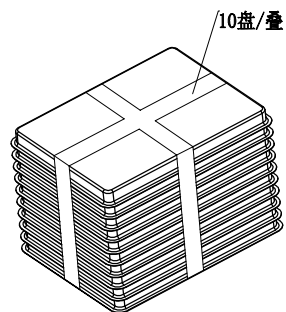
样品图片



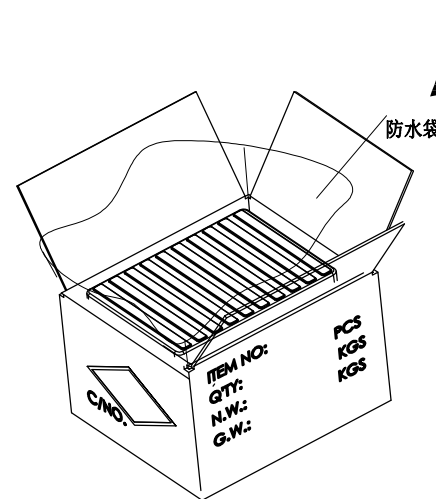
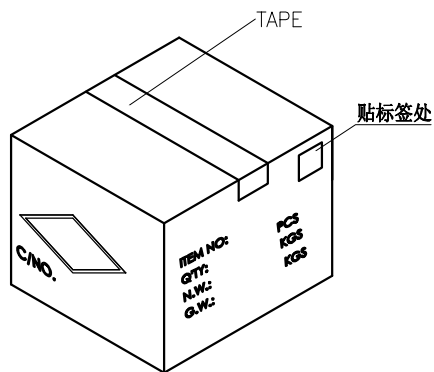
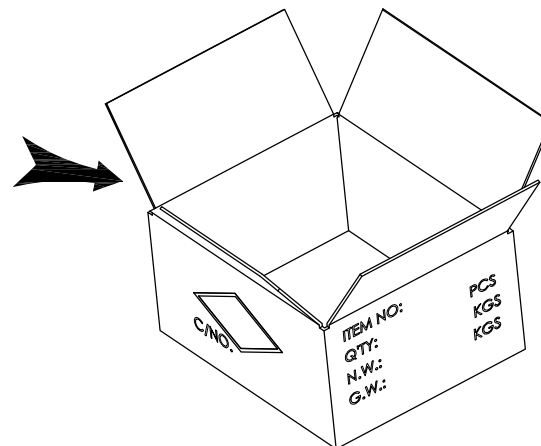
客户图

要求:

1. 真空盒330*265*15.0, 不可有破损, 120PCS/盒。
2. 纸箱350*350*260, 材质: K=K, 不可有破损, 加装防水PE袋及干燥剂。
(10*120PCS/盒=1200PCS/箱)
3. 将装好产品的10个真空盒整齐叠放在一起, 共两叠1200PCS, 放入纸箱中, 用封箱胶纸封好纸箱。



10盘用PE膜绑十字型



					OPERATION		DRAW		FDL		2019.08.30					
					X.X	±0.40	DESIGN		Jensen		2019.08.30					
					X.XX	±0.25	CHECK		Jack		2019.08.30		SIZE	A4	PART NO.	AAR1XXXXX099C
AO		NEW			X.XXX	±0.15	APPROVE		Andy		2019.08.30		SHEET	2/2	TITLE:	金手指PITCH 2.54 DIP型包装图
REV	DATE	MODIFICATION DESCRIPTION	CHANGE	APPROVE	Angle	±3°							PROJ.		DRAW NO.	SP-032
					DIM.	TOL	UNIT		mm	SCALE	1:1					

FAI Measurement(量測報告)

Project Code(料號): AAR1016G1099C Rev(版本): A2

Conclusion: PASS

Testrer	Date	Check	Date	Approve	Date	檢驗人員
						楊艷梅
Material	模號	模穴數量	送測數量			
		8	5			
CODE	A	B	C	D	E	F
Measure Tool	游標卡尺	分厘卡尺	投影機	二次元尺寸量測機	高度規	其他

項次	尺寸規格	公差		量測數據							判定結果	量測工具	備註
		+Tol	-Tol	1	2	3	4	5					
1	22.92	0.25	0.25	22.93	22.92	22.91	22.93	22.94			OK	D	
2	17.78	0.25	0.25	17.81	17.82	17.80	17.82	17.83			OK	D	
3	9.90	0.25	0.25	9.91	9.92	9.91	9.91	9.91			OK	D	
4	1.90	0.25	0.25	1.92	1.89	1.90	1.88	1.88			OK	D	
5	2.54	0.25	0.25	2.56	2.55	2.55	2.54	2.55			OK	D	
6	15.50	0.25	0.25	15.51	15.49	15.49	15.48	15.49			OK	D	
7	15.00	0.25	0.25	15.01	15.02	15.49	15.49	15.48			OK	D	
8	27.12	0.25	0.25	27.13	27.12	27.13	27.14	27.13			OK	D	
9	3.7	0.40	0.40	3.72	3.73	3.72	3.74	3.75			OK	D	
10	0.6	0.40	0.40	0.64	0.63	0.63	0.64	0.65			OK	D	
11	2.54	0.20	0.20	2.51	2.52	2.51	2.52	2.51			OK	D	
12	17.00	0.20	0.20	17.01	17.02	17.02	17.01	17.03			OK	D	
13	11.10	0.25	0.25	11.12	11.11	11.12	11.13	11.14			OK	D	
14	5.71	0.25	0.25	5.75	5.76	5.75	5.76	5.74			OK	D	
15	0.6	0.15	0.15	0.62	0.63	0.62	0.63	0.62			OK	D	

CPK Report

Part Number(料号)	AAR1016G1099C		Vendor(供应商)	自制	
Description(零件名称)	2.54*2.54mm金手指DIP 90°		Inspected(确认者)	邓建辉	
Tool Number(模号)	-		Inches/MM(英寸/毫米)	mm	
Cavity(穴号)	-		Material Name(材质名称)	LCP/C7025	
	-		Material Code(材质牌号)	-	
Revision(版本)	A		Date(日期)	2023.09.05	
Dim. Designator(尺寸序号)	11	12			
Nominal(公称尺寸)	2.54	17.00			
+ Tolerance(正公差)	0.20	0.20			
- Tolerance(负公差)	-0.20	-0.20			
Upper Limit(规格上限)	2.74	17.20			
Lower Limit(规格下限)	2.34	16.80			
1	2.50	17.02			
2	2.53	17.05			
3	2.53	17.05			
4	2.58	17.06			
5	2.55	17.05			
6	2.55	17.06			
7	2.55	17.08			
8	2.55	17.08			
9	2.53	17.04			
10	2.55	17.02			
11	2.55	17.02			
12	2.56	17.08			
13	2.55	17.08			
14	2.53	17.05			
15	2.53	17.03			
16	2.52	17.03			
17	2.53	17.02			
18	2.54	17.02			
19	2.54	17.05			
20	2.55	17.00			
21	2.53	17.05			
22	2.56	17.02			
23	2.51	17.02			
24	2.51	17.06			
25	2.53	17.05			
26	2.52	17.04			
27	2.51	17.05			
28	2.48	17.02			
29	2.57	17.02			
30	2.51	17.03			
31	2.52	17.05			
32	2.59	17.12			
MAX.	2.59	17.12			
MIN.	2.48	17.00			
AVERAGE	2.54	17.04			
STDEV	0.02	0.03			
CP	2.85	2.64			
Cpk	2.80	2.05			
TOOLING(测量工具)					

信 赖 性 测 试 报 告

报告编号： HL-23001

(A)测试项目:		盐雾测试		仪器照片																	
(B)测试日期:		2023/09/05																			
(C)测试规格:		参照EIA-364																			
(D)测试仪器说明:																					
1. 仪器型号		2. 仪器厂商																			
SJ-8669		深圳市三杰仪器设备有限公司																			
3. 仪器名称		精密型型盐水喷雾试验机																			
(E)测试仪器说明:																					
1. 样品		料号		AAR1016G1099C		2. 取样方法		样本		3PCS											
		产品名称		2.54x2.54mm金手指DIP90 ° 2*8P1u'' 灰色无LOGO				取样		3PCS											
(F) 测试																					
项目		方法和规格		测试数据（单位：mΩ）						判定		备注									
盐雾测试		将连接器放置于温度35±2 摄氏度，盐水浓度5±1%条件下 24小时后，用清水清洗样品置于室温条件下1小时		1#		1		2		3		4		5		6		OK			
						18.79		19.92		19.43		21.34		19.95		18.78					
				接触电阻：测试完成后最大增加10毫欧，对试验后的外观变化：通过目视检查端子没有明显的锈迹		2#		1		2		3		4		5		6		OK	
		20.73						19.64		20.94		19.83		19.43		20.10					
		3#				1		2		3		4		5		6		OK			
				20.56		20.91		21.14		20.60		20.49		19.46							

核准:Mr.Deng

制作: Mr.Zeng

信 赖 性 测 试 报 告

报告编号： HL-23002

(A)测试项目:		高温老化		仪器照片 						
(B)测试日期:		2023/09/05								
(C)测试规格:		参照EIA-364								
(D)测试仪器说明:										
1. 仪器型号		2. 仪器厂商								
/		深圳联欣科技有限公司								
3. 仪器名称		恒温恒湿试验机								
(E)测试仪器说明:										
1. 样品		料号	AAR1016G1099C		2. 取样方法		样本	3PCS		
		产品名称	2.54x2.54mm金手指DIP90° 2*8P1u'' 灰色无LOGO				取样	3PCS		
(F) 测试										
项目	方法和规格	测试数据 (单位: mΩ)						判定	备注	
高温老化	将连接器放在85±2摄氏度环境下250小时后取出放在室温下1到2小时候后按制定方法测量。 参考EIA-364-17B0	1#	1	2	3	4	5	6	OK	
			19.20	19.31	18.82	17.44	18.78	18.31		
		2#	1	2	3	4	5	6	OK	
			19.23	16.57	18.71	17.23	17.85	18.07		
		3#	1	2	3	4	5	6	OK	
			18.32	17.91	17.52	19.25	19.16	16.91		

核准:Mr.Deng

制作: Mr.Zeng

信 赖 性 测 试 报 告

报告编号： HL-23003

(A) 测试项目:		恒温恒湿		仪器照片 						
(B) 测试日期:		2023/09/05								
(C) 测试规格:		参照EIA-364								
(D) 测试仪器说明:										
1. 仪器型号		2. 仪器厂商								
/		深圳联欣科技有限公司								
3. 仪器名称		恒温恒湿试验机								
(E) 测试仪器说明:										
1. 样品		料号	AAR1016G1099C		2. 取样方法		样本	3PCS		
		产品名称	2.54x2.54mm金手指DIP90 ° 2*8P1u'' 灰色无LOGO				取样	3PCS		
(F) 测试										
项目	方法和规格	测试数据 (单位: mΩ)						判定	备注	
恒温恒湿	将连接器放置于温度-25~85摄氏度, 90~95% RH湿度中, 一次24小时, 共4次 参考EIA-364-31B0	1#	1	2	3	4	5	6	OK	
			18.23	18.36	18.88	17.12	19.62	17.00		
		2#	1	2	3	4	5	6	OK	
			18.36	18.37	17.20	17.70	18.51	16.86		
		3#	1	2	3	4	5	6	OK	
			18.27	17.97	17.21	18.14	17.66	17.84		

核准:Mr.Deng

制作: Mr.Zeng

信 赖 性 测 试 报 告

报告编号： HL-23004

(A) 测试项目:		热冲击		仪器照片							
(B) 测试日期:		2023/09/05									
(C) 测试规格:		参照EIA-364									
(D) 测试仪器说明:											
1. 仪器型号		2. 仪器厂商									
LX50C		深圳联欣科技有限公司									
3. 仪器名称		冷热冲击试验机									
(E) 测试仪器说明:											
1. 样品		料号	AAR1016G1099C		2. 取样方法		样本	3PCS			
		产品名称	2.54x2.54mm金手指DIP90 ° 2*8P1u'' 灰色无LOGO				取样	3PCS			
(F) 测试											
项目	方法和规格	测试数据 (单位: mΩ)						判定	备注		
热冲击	先将连接器放置于-55±3摄氏度环境中三十分钟, 再置于+85±2摄氏度环境中三十分钟, 此为一周期, 重复10周期次 参考EIA-364-32C 条件1 0	1#	1	2	3	4	5	6	OK		
			18.60	17.44	19.24	18.22	18.03	19.17			
		2#	1	2	3	4	5	6	OK		
			17.30	18.67	19.13	17.88	18.39	18.40			
		3#	1	2	3	4	5	6	OK		
			17.82	18.50	19.80	18.63	17.23	18.36			

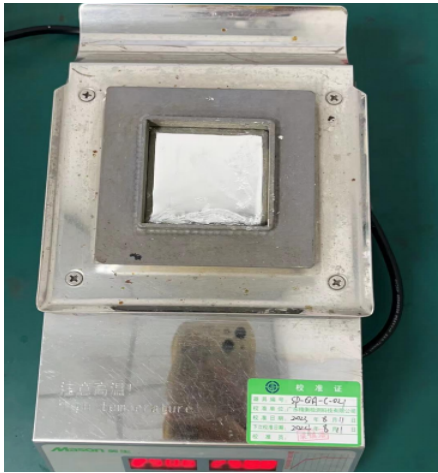
信 赖 性 测 试 报 告

报告编号： HL-23005

(A) 测试项目：		耐焊锡热量		仪器照片			
(B) 测试日期：		2023/09/05					
(C) 测试规格：		参照EIA-364					
(D) 测试仪器说明：							
1. 仪器型号	2. 仪器厂商						
/	/						
3. 仪器名称		回流焊					
(E) 测试仪器说明：							
1. 样品	料号	AAR1016G1099C		2. 取样方法	样本	3PCS	
	产品名称	2.54x2.54mm金手指DIP90 ° 2*8P1u'' 灰色无LOGO			取样	3PCS	
(F) 测试							
项目	方法和规格	测试结果			判定	备注	
耐焊锡热量	初始温度：150~180摄氏度，90±30秒 温度：最小230摄氏度，35±5秒 最高温度：最大265摄氏度 周期2次 无外观损伤	1#	无外观损伤			OK	
		2#	无外观损伤			OK	
		3#	无外观损伤			OK	

信 赖 性 测 试 报 告

报告编号： HL-23006

(A) 测试项目:		可焊接性		仪器照片 		
(B) 测试日期:		2023/09/05				
(C) 测试规格:		参照EIA-364				
(D) 测试仪器说明:						
1. 仪器型号		2. 仪器厂商				
FX308		TAKGIKO				
3. 仪器名称		无铅钛锡炉				
(E) 测试仪器说明:						
1. 样品	料号	AAR1016G1099C		2. 取样方法	样本	3PCS
	产品名称	2.54x2.54mm金手指DIP90 ° 2*8P1u'' 灰色无LOGO			取样	3PCS
(F) 测试						
项目	方法和规格	测试结果			判定	备注
可焊接性	焊接温度: 265±5° C 持续时间: 5±0.5sec . 参考EIA-364-52 粘锡面积最小95%	1#	粘锡面积>95%		OK	
		2#	粘锡面积>95%		OK	
		3#	粘锡面积>95%		OK	

核准:Mr.Deng

制作: Mr.Zeng

信 赖 性 测 试 报 告

报告编号： HL-23007

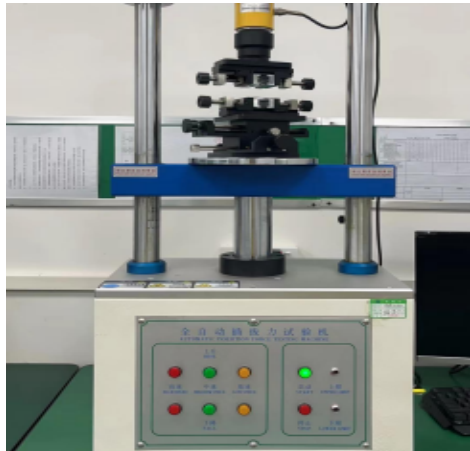
(A)测试项目:		耐久插拔		仪器照片 								
(B)测试日期:		2023/09/05										
(C)测试规格:		参照EIA-364										
(D)测试仪器说明:												
1. 仪器型号		2. 仪器厂商										
SJ2511		/										
3. 仪器名称		插拔力测试仪/直流低电阻测试仪										
(E)测试仪器说明:												
1. 样品		料号	AAR1016G1099C		2. 取样方法		样本	3PCS				
		产品名称	2.54x2.54mm金手指DIP90 ° 2*8P1u'' 灰色无LOGO				取样	3PCS				
(F) 测试												
项目	方法和规格		测试数据（单位：kgf）						判定	备注		
耐久插拔	插拔次数50周期, 速度250次每小时, 参考:EIA-364-09 0		样品	插入力 (首次)	拔出力 (首次)	插入力 5000次	拔出力 5000次	插入力 10000次	拔出力 10000次	OK		
			1#	2.40	2.46	2.43	2.21	1.83	1.81			
			2#	插入力 (首次)	拔出力 (首次)	插入力 5000次	拔出力 5000次	插入力 10000次	拔出力 10000次	OK		
				2.40	2.32	2.30	2.11	1.80	1.82			
			3#	插入力 (首次)	拔出力 (首次)	插入力 5000次	拔出力 5000次	插入力 10000次	拔出力 10000次	OK		
				2.30	2.50	2.28	2.18	1.80	1.82			

核准:Mr.Deng

制作: Mr.Zeng

信 赖 性 测 试 报 告

报告编号： HL-23008

(A)测试项目:		插拔力		仪器照片							
(B)测试日期:		2023/09/05									
(C)测试规格:		参照EIA-364									
(D)测试仪器说明:											
1. 仪器型号		2. 仪器厂商									
1220S		深圳联欣科技有限公司									
3. 仪器名称		全自动电脑插拔力试验机									
(E)测试仪器说明:											
1. 样品		料号	AAR1016G1099C		2. 取样方法		样本	3PCS			
		产品名称	2.54x2.54mm金手指DIP90 ° 2*8P1u'' 灰色无LOGO				取样	3PCS			
(F) 测试											
项目	方法和规格		测试数据（单位：kgf）						判定	备注	
插拔力	测试插入力需要配对的连接器完全契合, 运行速度30次每分钟 参考：EIA-364-130		样品	插入力	拔出力	插入力	拔出力	插入力	拔出力	OK	
			1#	2. 18	2. 39	2. 21	2. 37	2. 31	2. 29		
			2#	2. 32	2. 33	2. 35	2. 39	2. 31	2. 31	OK	
			3#	2. 29	2. 38	2. 35	2. 42	2. 38	2. 36	OK	

核准:Mr .Deng

制作： Mr .Zeng

信 赖 性 测 试 报 告

报告编号： HL-23009

(A) 测试项目:		绝缘阻抗		仪器照片 		
(B) 测试日期:		2023/09/05				
(C) 测试规格:		参照EIA-364				
(D) 测试仪器说明:						
1. 仪器型号		2. 仪器厂商				
Zentech9053		蓝光电子				
3. 仪器名称		可程式安规耐压测试仪				
(E) 测试仪器说明:						
1. 样品	料号	AAR1016G1099C		2. 取样方法	样本	3PCS
	产品名称	2.54x2.54mm金手指DIP90 ° 2*8P1u'' 灰色无LOGO			取样	3PCS
(F) 测试						
项目	方法和规格	测试结果			判定	备注
	500±10伏直流电 下测试相邻位配对 连接器间电路 参考EIA-364-21C 0	1#	PASS		OK	
		2#	PASS		OK	
		3#	PASS		OK	

核准:Mr.Deng

制作: Mr.Zeng

信 赖 性 测 试 报 告

报告编号： HL-23010

(A) 测试项目:		耐压		仪器照片 		
(B) 测试日期:		2023/09/05				
(C) 测试规格:		参照EIA-364				
(D) 测试仪器说明:						
1. 仪器型号		2. 仪器厂商				
Zentech9053		Taiwan Zentech				
3. 仪器名称		可程式安规耐压测试仪				
(E) 测试仪器说明:						
1. 样品	料号	AAR1016G1099C		2. 取样方法	样本	3PCS
	产品名称	2.54x2.54mm金手指DIP90 ° 2*8P1u'' 灰色无LOGO			取样	3PCS
(F) 测试						
项目	方法和规格	测试结果			判定	备注
耐压	750伏直流电下测试未配对连接器间相邻端子电路一分钟 参考EIA-364-20B 不可跳火，不可有火花，不可超出泄露额，不可击穿	1#	无击穿		OK	
		2#	无击穿		OK	
		3#	无击穿		OK	

核准:Mr.Deng

制作: Mr.Zeng

信 赖 性 测 试 报 告

报告编号： HL-23011

(A)测试项目：		接触阻抗		仪器照片						
(B)测试日期：		2023/09/05								
(C)测试规格：		参照EIA-364								
(D)测试仪器说明：										
1. 仪器型号	2. 仪器厂商									
SJ2511	/									
3. 仪器名称		直流低电阻测试仪								
(E)测试仪器说明：										
1. 样品	料号	AAR1016G1099C			2. 取样方法	样本	3PCS			
	产品名称	2.54x2.54mm金手指DIP90 ° 2*8P1u'' 灰色无LOGO				取样	3PCS			
(F) 测试										
项目	方法和规格	测试数据（单位：mΩ）						判定	备注	
接触阻抗	端子与胶芯组装后，最大电压20毫伏，短路电路最大100毫安培 参考EIA-364-23B 0	端子 样品	1	2	3	4	5	6	OK	
		1#	16.42	15.43	16.16	15.77	15.52	16.29		
		2#	1	2	3	4	5	6	OK	
			16.18	16.85	17.35	16.31	14.27	16.04		
		3#	1	2	3	4	5	6	OK	
			14.92	15.71	17.07	16.24	15.24	16.55		

核准:Mr.Deng

制作： Mr.Zeng



检测报告

编号: CANEC2301177904

日期: 2023年02月08日 第1页,共6页

客户名称: 东莞市精维塑胶原料有限公司
客户地址: 广东省东莞市常平镇环常西路49号1号楼

样品名称: LCP
型号: E130I
客户参考信息: E130I E130T A130S E473I E471I E463I E525T S475 S471
E4008 E5008L E5006 E6808LHF KD184 MG350 M450 270B3G
E6505HF E6807LHF 6030 E480 G301 E130G

以上样品及信息由客户提供。

SGS工作编号: CP23-002570 - SZ
样品接收日期: 2023年02月02日
检测周期: 2023年02月02日 - 2023年02月08日
检测要求: 根据客户要求检测
检测方法: 请参见下一页
检测结果: 请参见下一页
检测结果概要:

检测要求	结论
欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863- 铅, 汞, 镉, 六价铬, 多溴联苯(PBBs), 多溴二苯醚(PBDEs), 邻苯二甲酸二丁酯 (DBP), 邻苯二甲酸丁苄酯(BBP), 邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP)	符合

通标标准技术服务有限公司广州分公司
授权签名

鄧莎莎

Sasa Zhi 鄧莎莎
批准签署人



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检测报告

编号: CANEC2301177904

日期: 2023年02月08日 第2页,共6页

检测结果:

检测样品描述:

样品编号	SGS样品ID	描述
SN1	CAN23-011779.001	黑色塑胶粒

备注:

- (1) 1 mg/kg = 0.0001%
- (2) MDL = 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863-铅, 汞, 镉, 六价铬, 多溴联苯(PBBs), 多溴二苯醚(PBDEs), 邻苯二甲酸二丁酯 (DBP), 邻苯二甲酸丁苄酯(BBP), 邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP)

检测方法: 参考IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 和 IEC 62321-8:2017, 采用 ICP-OES, UV-Vis 和 GC-MS 进行分析.

检测项目	限值	单位	MDL	001
镉 (Cd)	100	mg/kg	2	ND
铅 (Pb)	1000	mg/kg	2	9
汞 (Hg)	1000	mg/kg	2	ND
六价铬(Cr(VI))	1000	mg/kg	8	ND
多溴联苯之和(PBBs)	1000	mg/kg	-	ND
一溴联苯	-	mg/kg	5	ND
二溴联苯	-	mg/kg	5	ND
三溴联苯	-	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯	-	mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	-	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND
二溴二苯醚	-	mg/kg	5	ND
三溴二苯醚	-	mg/kg	5	ND
四溴二苯醚	-	mg/kg	5	ND



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编号: CANEC2301177904

日期: 2023年02月08日 第3页,共6页

检测项目	限值	单位	MDL	001
五溴二苯醚	-	mg/kg	5	ND
六溴二苯醚	-	mg/kg	5	ND
七溴二苯醚	-	mg/kg	5	ND
八溴二苯醚	-	mg/kg	5	ND
九溴二苯醚	-	mg/kg	5	ND
十溴二苯醚	-	mg/kg	5	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND
邻苯二甲酸丁苄酯(BBP)	1000	mg/kg	50	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	1000	mg/kg	50	ND
邻苯二甲酸二异丁酯(DIBP)	1000	mg/kg	50	ND

备注:

(1)最大允许极限值引用自RoHS指令(EU) 2015/863。

(2) IEC 62321 系列等同于 EN 62321 系列

(3) 2021年7月22号开始, DEHP, BBP, DBP 和 DIBP的限制适用于医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。

除非另有说明, 参照ILAC-G8:09/2019, 使用简单接受 ($w=0$) 的二元判定规则进行符合性判定。

除非另有说明, 此报告结果仅对检测的样品负责。本报告未经本公司书面许可, 不可部分复制。

检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。

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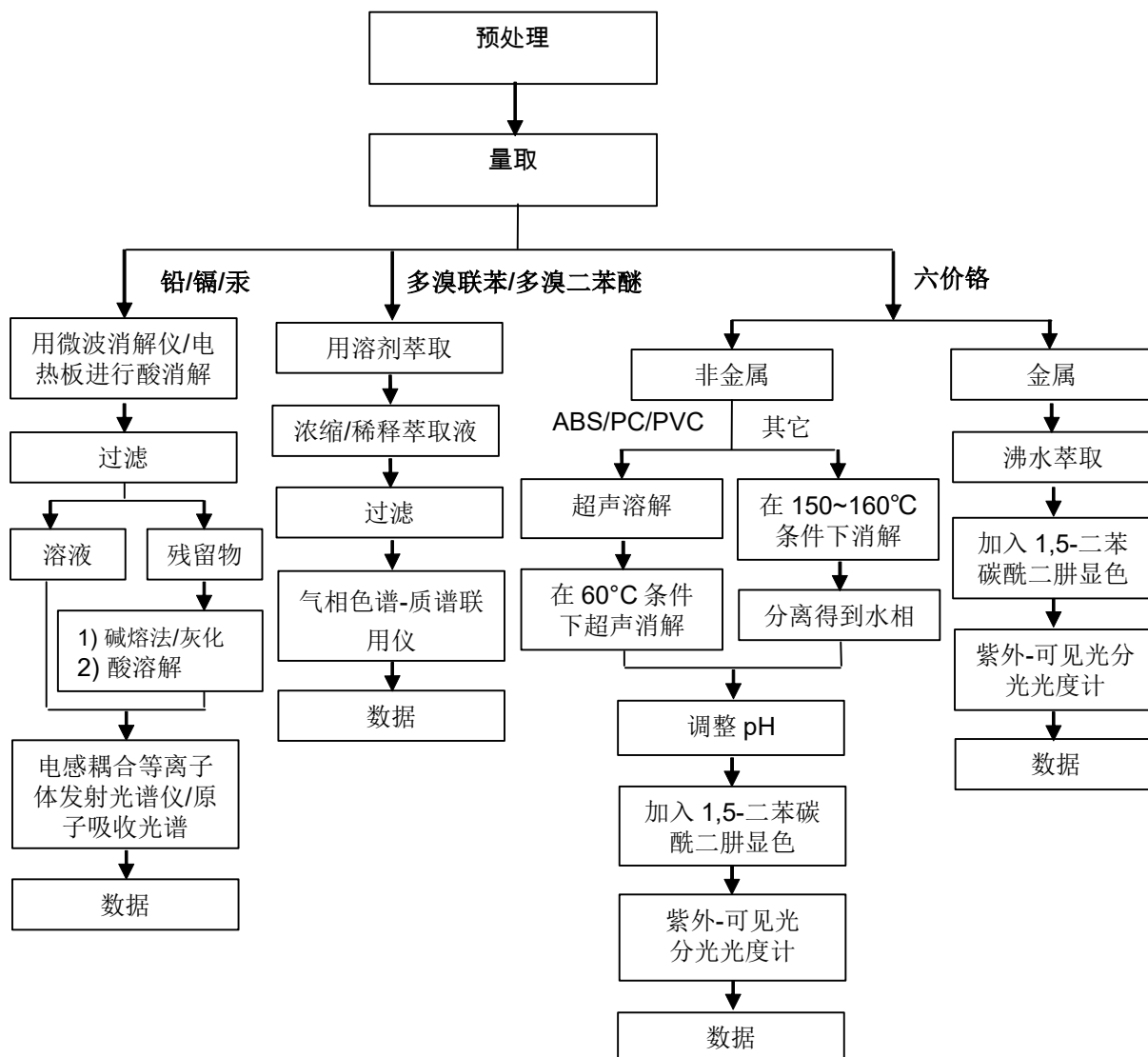
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附件

Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs 检测流程图

1) 样品按照下述流程被完全消解(六价铬和多溴联苯/多溴二苯醚检测除外)。



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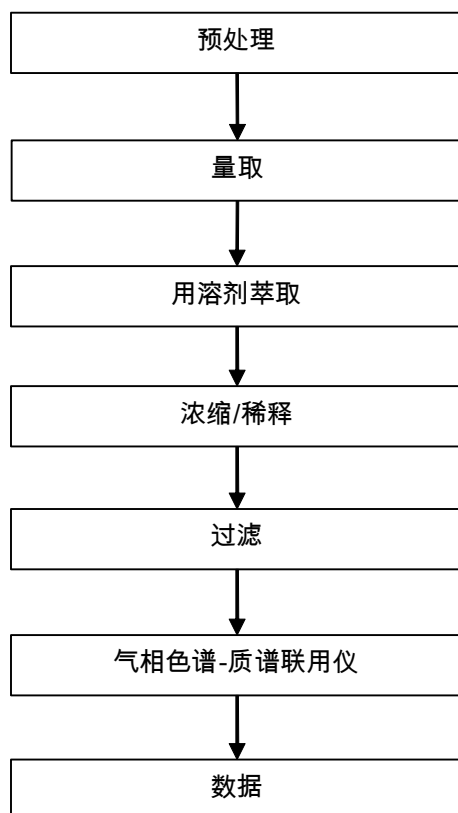
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附件

Phthalates 检测流程图



检测报告

编号: CANEC2301177904

日期: 2023年02月08日 第6页,共6页

样品照片:



此照片仅限于随SGS正本报告使用

*** 报告结束 ***



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Test Report

No. CANEC2301145829

Date: 08 Feb 2023

Page 1 of 7

Client Name : FUJIAN ZIJIN COPPER CO.,LTD

Client Address : NAN GANG DEVELOPMENT PARK SHANGHANG FUJIAN

Sample Name : Cu-Ni-Si(C7025)

The above sample(s) and information were provided by the client.

SGS Job No. : 23319230 - XM

Date of Sample Received : 01 Feb 2023

Testing Period : 01 Feb 2023 - 08 Feb 2023

Test Requested : Selected test(s) as requested by the client.

Test Method(s) : Please refer to next page(s).

Test Result(s) : Please refer to next page(s).

Result Summary :

Test Requested	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	PASS
Halogen	See Results

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

Jessie Li

Jessie Li
Approved Signatory

scan to see the report



E92454C8



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Test Report

No. CANEC2301145829

Date: 08 Feb 2023

Page 2 of 7

Test Result(s) :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN23-011458.005	Copper-colored metal sheet

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>005</u>
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	ND
Sum of PBBs	1000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND



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Test Report

No. CANEC2301145829

Date: 08 Feb 2023

Page 3 of 7

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>005</u>
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series
- (3) ▼= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination
Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

Halogen

Test Method : With reference to EN 14582:2016, analysis was performed by IC.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>005</u>
Fluorine (F)	mg/kg	50	ND
Chlorine (Cl)	mg/kg	50	ND
Bromine (Br)	mg/kg	50	ND
Iodine (I)	mg/kg	50	ND

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule ($w=0$) stated in ILAC-G8:09/2019.



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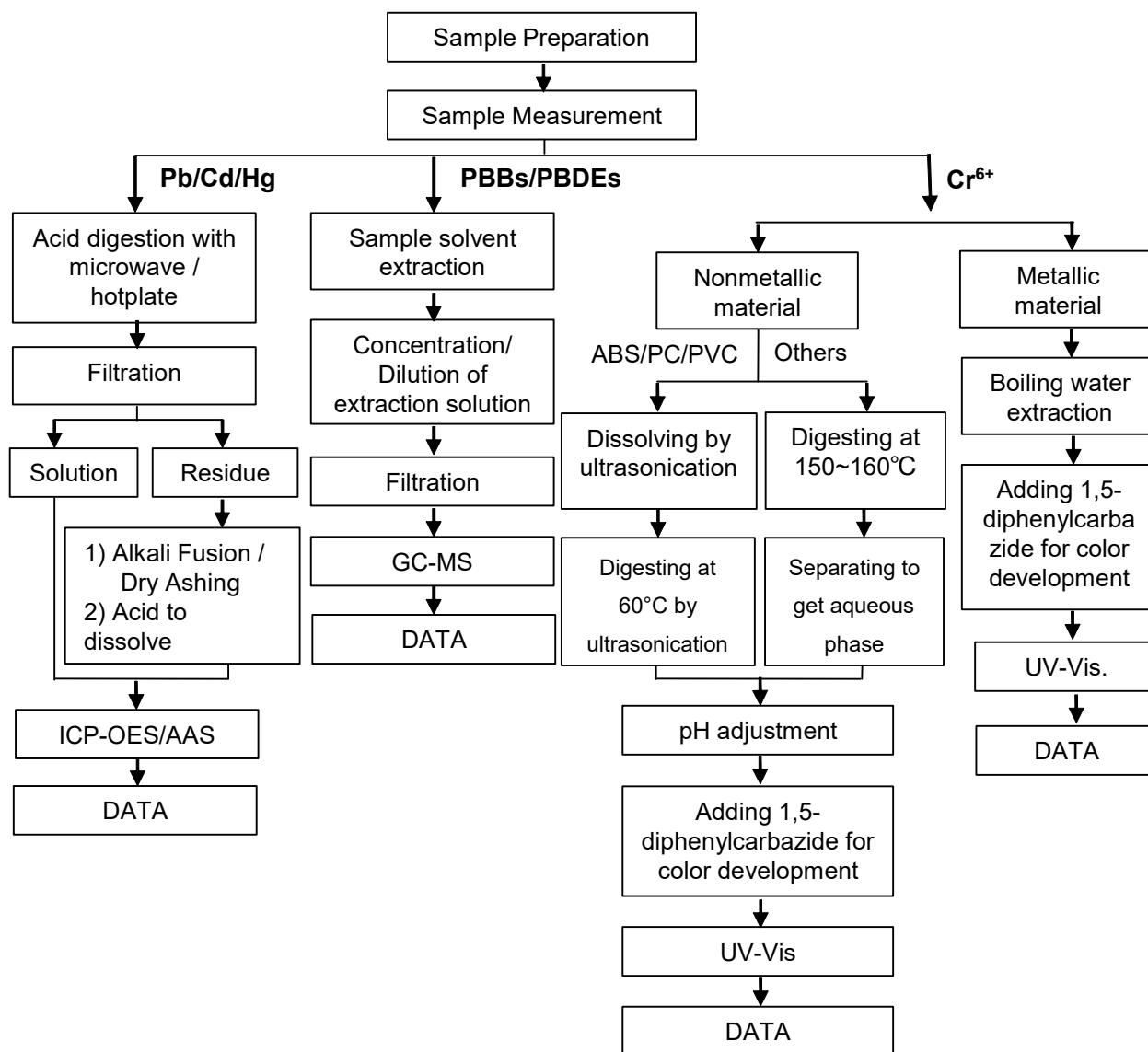
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ATTACHMENTS

Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
(Cr⁶⁺ and PBBs/PBDEs test method excluded).

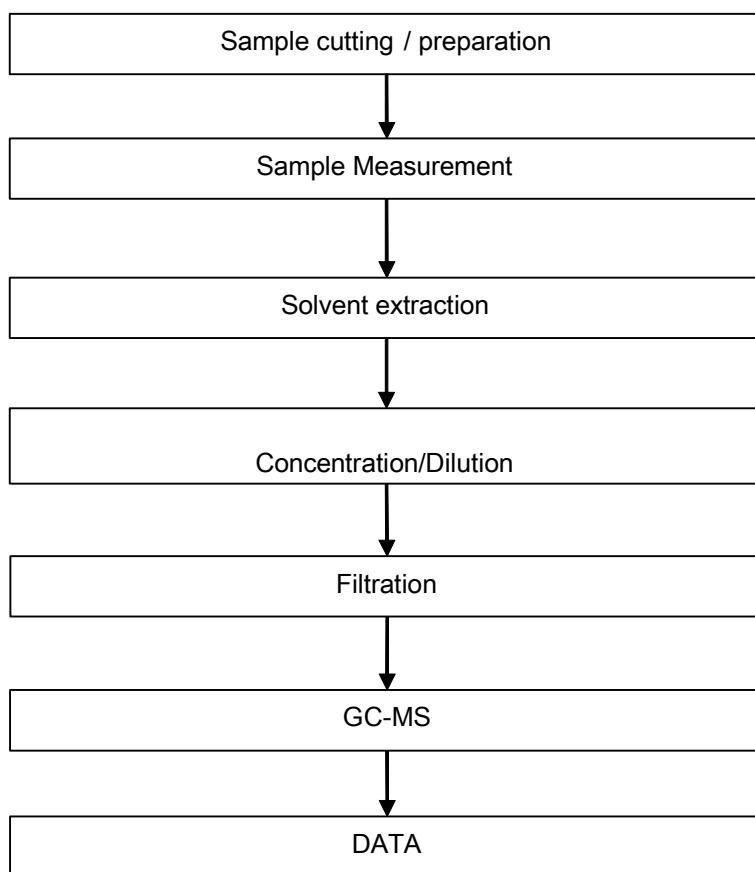


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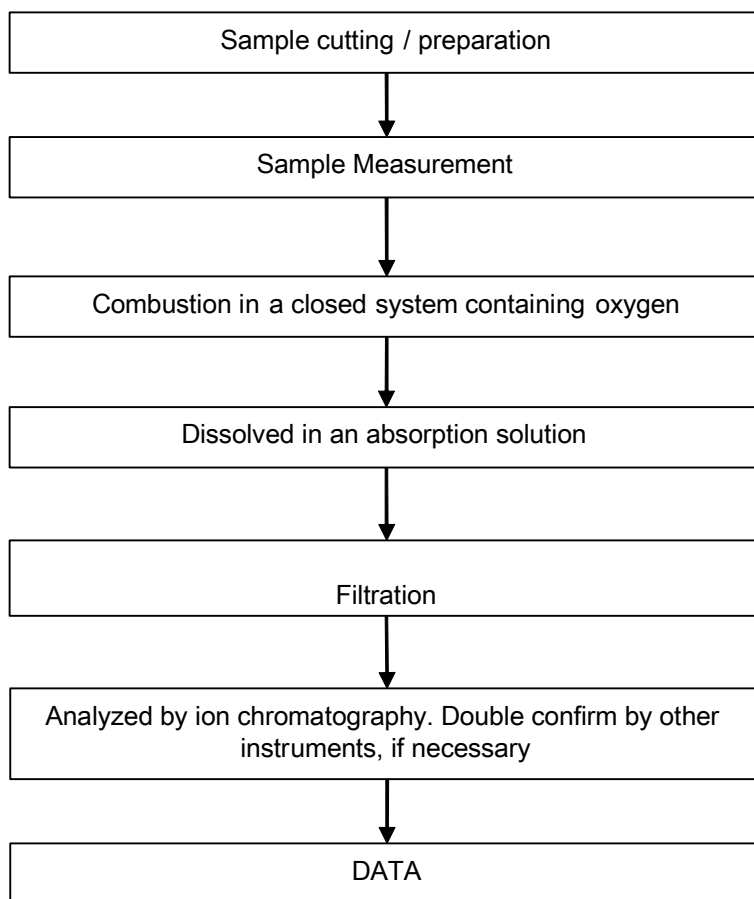
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Phthalates Testing Flow Chart



ATTACHMENTS

Halogen Testing Flow Chart



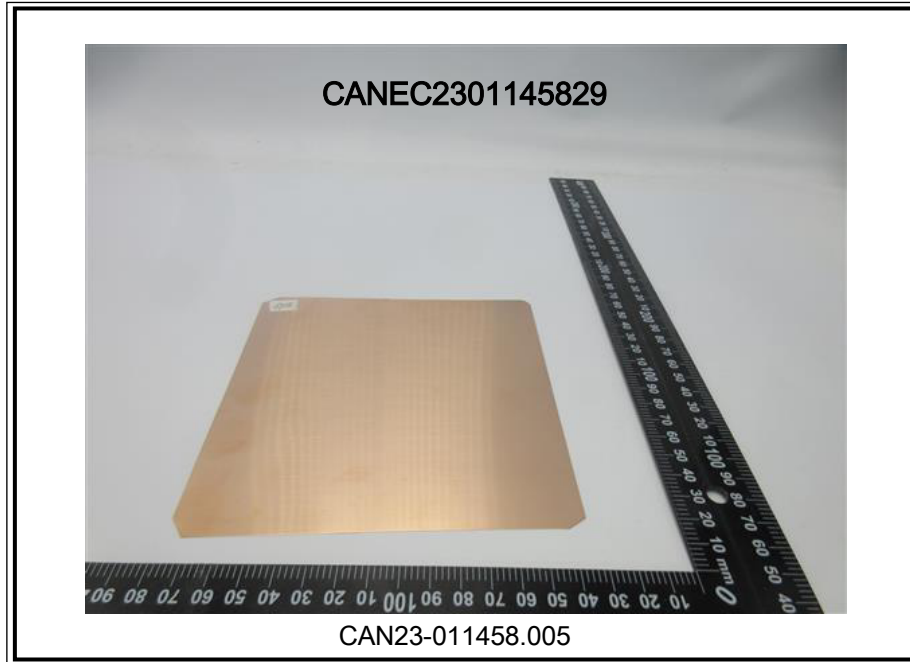
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No. CANEC2301145829

Date: 08 Feb 2023

Page 7 of 7

Sample photo:



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*** End of Report ***



SGS-CSI Standards Technical Service Co., Ltd.
Guangzhou Branch (China) Chemical Laboratory

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Component - Plastics

File Number: E106764

POLYPLASTICS CO LTD

18-1 KONAN 2 CHOME, MINATO-KU TOKYO 108-8280 JP



LAPEROS: E130i(d)(e)(f1)

Liquid Crystal Polymer (LCP), pellets, thermotropic aromatic polyester

- (d) - Virgin and regrind up to 50% by weight incl., have the same basic material characteristics in NC and BK with a minimum thickness of 0.75mm.
- (e) - Regrind from 26-50% by weight inclusive has an Impact RTI of 180C at thicknesses greater than 1.5mm.
- (f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

Flammability	Value	Test Method
Flame Rating		UL 94
0.75 mm, NC, BK	V-0	
1.5 mm, NC, BK	V-0	
3.0 mm, NC, BK	V-0	
Flammability Classification		IEC 60695-11-10, -20
0.75 mm, NC, BK	V-0	
1.5 mm, NC, BK	V-0	
3.0 mm, NC, BK	V-0	
Glow Wire Flammability Index		IEC 60695-2-12
0.75 mm	960 °C	
1.5 mm	960 °C	
3.0 mm	960 °C	
Glow Wire Ignition Temperature		IEC 60695-2-13
0.75 mm	850 °C	
1.5 mm	850 °C	
3.0 mm	900 °C	
Electrical	Value	Test Method
Hot-wire Ignition (HWI)		UL 746
0.75 mm	PLC 2	
1.5 mm	PLC 1	
3.0 mm	PLC 0	
High Amp Arc Ignition (HAI)		UL 746
0.75 mm	PLC 0	
1.5 mm	PLC 0	
3.0 mm	PLC 0	
Comparative Tracking Index (CTI)	PLC 4	UL 746
Dielectric Strength	39 kV/mm	ASTM D149
High Voltage Arc Tracking Rate (HVTR)	PLC 0	UL 746
Volume Resistivity	1.0E+16 ohms·cm	ASTM D257
Volume Resistivity	1.0E+16 ohms·cm	IEC 60093
Arc Resistance	PLC 5	ASTM D495
Electric Strength	39 kV/mm	IEC 60243-1

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Thermal	Value	Test Method
RTI Elec		UL 746
0.75 mm	240 °C	
1.5 mm	240 °C	
3.0 mm	240 °C	
RTI Imp		UL 746
0.75 mm	220 °C	
1.5 mm	220 °C	
3.0 mm	220 °C	
RTI Str		UL 746
0.75 mm	240 °C	
1.5 mm	240 °C	
3.0 mm	240 °C	
Physical	Value	Test Method
Dimensional Stability	0.0 %	ASTM D1042
Dimensional Stability	0.0 %	ISO 2796
Outdoor Suitability	f1	UL 746C

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