APPROVAL SHEET

Customer: ALL

Customer P/N:

Connfly P/N: DS1004

Description: DIP STRIP ADAPTER PITCH 2.54mm

File Number: CXAS-0218005

Customer Signature:

Quality Department	Engineer Department	Approved By
Date:	Date:	Date:

Made By	Checked By	Approved By
YCH	~	LJC
Date: 2014-02-18	Date:	Date: 2014-02-18

CONNFLY ELECTRONIC CO., LTD

ADD: East Industry Zone KuangYan Town Cixi Ningbo China P.C:315321

Tel:+86-574-63508787 +86-574-63509600 Fax: +86-574-63510817

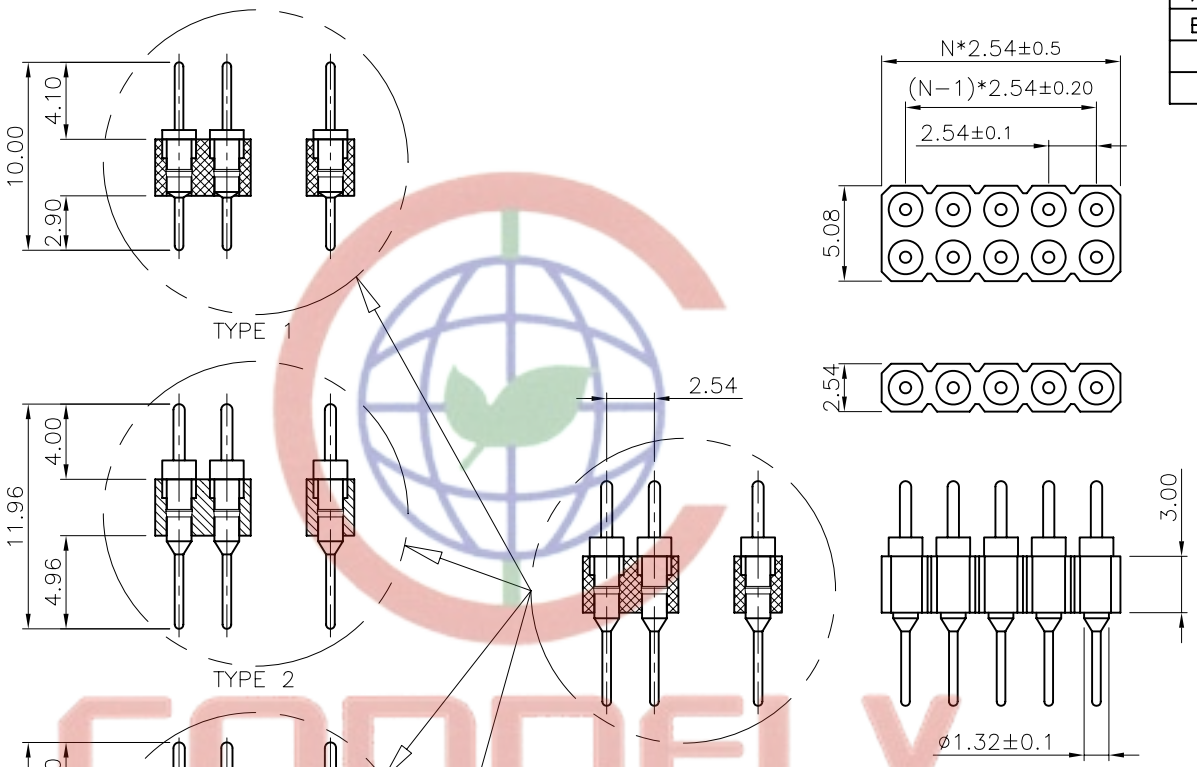
E-mail:sale@zhenqin.com.cn http://www.connfly.com

Content

Materials Information

Item	Part Name	Materials	Finished
1	Pin	Brass	Full Gold
2	Housing	PBT	UL94 V-0

REV.	DESCRIPTION	DRAWN	CHECKED	APPROVED
A	NEW RELEASE	LJH 03/30/06'	~	LJC 03/30/06'
B	整理图纸	YCH 10/18/10'	~	

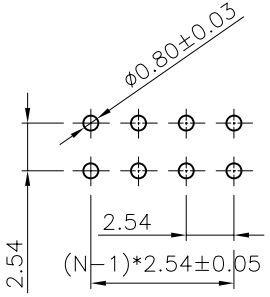


NOTES:

1. ELECTRICAL CHARACTERISTICS:
   - 1.1 CONTACT RESISTANCE: 20mΩ Max. INITIAL.
   - 1.2 DIELECTRIC WITHSTANDING VOLTAGE: 500V AC(rms) FOR 1 MINUTE.
   - 1.3 INSULATION RESISTANCE: 1000MΩ Min.
2. ENVIRONMENT CHARACTERISTICS:
   - 2.1 TEMPERATURE: −40°C~+105°C.
3. PART NUMBER: DS1004
4. PRODUCT NUMBER CODE:

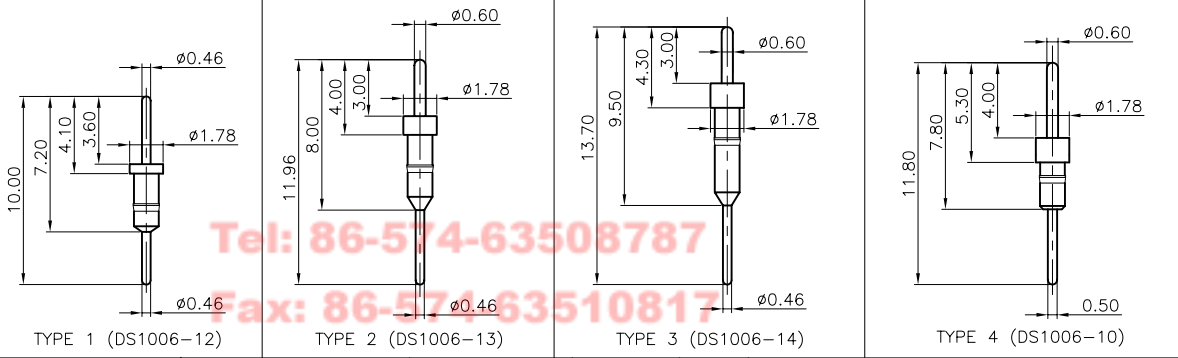
DS1004 − X X X

- CONTACT TYPE
  - 1: TYPE 1 3: TYPE 3
  - 2: TYPE 2 4: TYPE 4
- CONTACT PLATING
  - F1: Full GOLD FLASH
- No.OF CONTACTS
  - 1*1 − 1*40
  - 2*1 − 2*40



RECOMMAND PCB LAYOUT
(TOLERANCE=±0.05)

TYPE1/2/3/4 DIA. (TOLERANCE=±0.05)



GENERAL TOLERANCE		ANGLE TOLERANCE	
X.	±0.60	X.	±5°
.X	±0.38	.X	±3°
.XX	±0.25	.XX	±2°

DRAWING TYPE	CUSTOMER		
SCALE	1:1	SHEET	1OF1
DRAWING NO.	C−DS1004−XXX		

PROJECTION		TITLE	DIP STRIP ADAPTER PITCH 2.54mm
UNITS	mm		
SHEET SIZE	A4	SERIES	DS1004 SERIES

晨翔电子有限公司
CONNFLY CONNFLY ELECTRONIC CO. LTD

Product Specification
For
MACHINE PIN HEADER ICSeries

Rev.	Description	Written/Date	Checked/Date	Approved/Date
A	New Release	LJC 2006-2-24		

1.0 Scope : This specification covers the requirements for product performance and test methods of Connfly's MACHINE PIN HEADER IC Series Connectors of the part numbers specified as bellow. Product shall be of the design, construction and physical dimensions specified in the applicable product drawing.

2.0 Rating :

2.1 Voltage Rating : 30 Vac (rms)

2.2 Temperature Range: -40℃ to +105℃.

3.0 Test Condition:

All tests shall be performed as bellow conditions unless otherwise specified.

3.1 Temperature range : +15℃ to +35℃

3.2 Humidity range: 25% to 85%

3.3 Atmospheric Pressure : 86KPa to 106KPa

4.0 Test Methods and Requirements:

4.1 Examination of product:

Item	Test Description	Test Methods	Requirement
4.1.1	**Examination of product (Outward Appearance Structure)**	**EIA 364-18** Shall be confirmed with eyes in accordance with each drawing. Shall be confirmed by using proper measuring instruments.	1).Outward appearance shall be good without such injurious problem 2).Structure shall be meet the design and dimensional requirements of drawing.

4.2 Electrical Performance:

Item	Test Description	Test Methods	Requirement
4.2.1	**Low Level Contact Resistance**	**EIA 364-23** (or MIL-STD-1344A, Method 3002.1, Test Condition B) Subject mated contacts assembled in housing to 20mV maximum open circuit at 100 mA maximum The object of this test is to detail a standard method to measure the electrical resistance across a pair of mated contacts such that the insulating films, if present will not be broken or asperity melting will not occur.	1).Initial: **20 mΩ** Maximum 2).After test: **20 mΩ** Maximum
4.2.2	**Insulation Resistance**	**EIA 364-21** (or MIL-STD-202F, Method 302, Test Condition B) Test between adjacent contacts of mated and unmated connector assemblies. The object of this test procedure is to detail a standard method to assess the insulation resistance of MACHINE PIN HEADER IC connectors. This test procedure is used to determine the resistance offered by insulation connector to a DC potential current through or on the surface of the members.	1).Initial: **1000 MΩ** Minimum 2).After test: **1000 MΩ** Minimum

4.2 Electrical Performance: (Continued)

Item	Test Description	Test Methods	Requirement
4.2.3	**Dielectric Withstanding Voltage**	**EIA 364-20** (or MIL-STD-202F, Method 301, Test Condition B) Test between adjacent contacts of mated and unmated connector assemblies. The object of this test procedure is to detail a test method to prove that a MACHINE PIN HEADER IC connector can operate safely at its rated voltage and withstand momentary over potentials due to switching, surges and/or other similar phenomena.	**500 V AC** for one minute at sea level 1).No flashover or insulation breakdown

4.3 Mechanical Performance:

Item	Test Description	Test Methods	Requirement
4.3.1	**Durability**	**EIA 364-09** Mate and unmate Connector assemblies for **30 cycles** at maximum rated of 200 cycles per hour. The object of this test procedure is to detail a uniform test method for determining the effects caused by subjecting a MACHINE PIN HEADER IC connector to the conditioning action of inserting and extraction, simulating the expected life of the connectors. Durability cycling with a gauge is intended only to produce mechanical stress. Durability performed with mating components is intended to produce both mechanical and wear stress.	**1).**
4.3.2	**Connector Mating Force**	**EIA 364-13** Shall be measured with Tension gauge or Tension tester. Measure force necessary to mate assemblies at maximum rate of 12.5mm (or 0.492") per minute. The object of this test is to detail a standard method for determining the mechanical forces required for inserting a MACHINE PIN HEADER IC connector.	**1). 4 finger(inner pin)** **0.5*pos. Kgf Max.** **2). 6 finger(inner pin)** **0.6*pos. Kgf Max.**

4.3 Mechanical Performance: (Continued)

Item	Test Description	Test Methods	Requirement
4.3.3	**Connector Unmating Force**	**EIA 364-13** Shall be measured with Tension gauge or Tension tester. Measure force necessary to mate assemblies at maximum rate of 12.5mm (or 0.492") per minute. The object of this test is to detail a standard method for determining the mechanical forces required for extracting a MACHINE PIN HEADER IC connector.	**1). 6~10 pos.: 0.5Kgf Min.** **2). 11~20 pos.: 1.0Kgf Min.** **3). 21~30 pos.: 1.5Kgf Min.** **4). 31~40 pos.: 2.0Kgf Min.** **5). 41~50 pos.: 2.5Kgf Min.** **6). 51~64 pos.: 3.0Kgf Min.**
4.3.4	**Contact Retention Force**	**EIA 364-35** Shall be measured with Tension gauge or Tension tester in same direction. Measure force necessary to mate assemblies at maximum rate of 12.5mm (or 0.492") per minute.	**1). 1 Kgf /pin Min.**

4.4 Environmental Performance:

Item	Test Description	Test Methods	Requirement
4.4.1	**Salt Spray**	**MIL-STD-202F, Method 101D, Test Condition B** Subject to **4 hours**(Tin plated) or **8 hours**(Gold plated) at 35℃ with 5% Salt-solution concentration.	1).Shall meet visual requirement, show no physical damage.
4.4.2	**Solderability**	**EIA 364-52** After **half hour** steam aging. The object of test procedure is to detail a uniform test methods for determining MACHINE PIN HEADER IC connector solderability. The test procedure contained here utilizes the solder dip technique. It is not intended to test or evaluate solder cup, solder eyelet, other hand-soldered type or SMT type terminations.	The surface of the portion to be soldered shall at least **95%** (tin plated only)covered with new solder coating.
4.4.3	**Resistance to Soldering Heat**	1) for WAVE SOLDERING : MIL-STD-202F, Method 210A, Test Condition B. Pre-heat **: 80℃, 60 Seconds** Temperature **: 260±5** ℃ Immersion duration : **5 ± 1 sec**.	1). No mechanical defect on housing or other parts.
		2) for MANUAL SOLDERING : MIL-STD-202F, Method 210A, Test Condition A. Pre-heat **: No** Temperature **: 330 ± 10** ℃ Immersion duration **: 3.5 ± 0.5 sec.**	

5.0 Test Sequence:

Test Group (a)		Sample Groups											
Test Item	Test Description	A	B	C	D	E	F	G	H	I	J	K	L
4.1.1	Examination of product	1,7	1,8	1,3	1,3	1,3	1,3						
4.2.1	Low Level Contact Resistance	2	5										
4.2.2	Insulation Resistance	3	6										
4.2.3	Dielectric Withstanding Voltage	4	7										
4.3.1	Durability		2										
4.3.2	Connector Mating Force	5	3										
4.3.3	Contact Unmating Force	6	4										
4.3.4	Contact Retension Force			2									
4.4.1	Salt Spray				2								
4.4.2	Solderability					2							
4.4.3	Resistance to Soldering Heat						2						
Number of Test Samples (Minimum)		5	5	5	5	5							

Notes:

a. Samples shall be prepare in accordance with applicable manufacture's instructions and shall be selected at random from current production.

b. The numbers in the table indicate sequence in which tests are performed.

c. Precondition samples with **5** cycles durability.

d. All the tests shall be performed in the sequence, indicated by the number in the columns.

e. Each test groups shall consist of minimum of eight connectors. A minimum of 30 contacts shall be selected and identified. Unless otherwise specified, these contacts shall be used for all measurements.

f. this specification application to all series of MACHINE PIN HEADER IC.

宁波盛发铜业有限公司

宁波一拉得

产品质量证明书

使用单位:

检查依据：GB/T5232—2001

产品名称		牌号	规格	状态	加工方法	实发数
黄铜线		HPb59-3	Φ1.8	Y2	拉制	
化学成分	主成份%	铜 Cu		铅 Pb		锌 Zn
		58.8		2.85		余量
	杂质含量%不大于	铁 Fe	锡 Sn	镍 Ni	铝 Al	镉 Cd
		0.2	0.1	0.1	0.05	0.002
机性能	抗拉强度 N/m m²	伸长率 δ，%	硬度 Hv	椭圆质量	表面质量	内应力测试
	380	4	7150	合格	合格	合格

盛发铜业有限公司 质检科: 质量检验专用章

检验员: 徐国云

06 年 8 月 15 日

D2009

SHINITE™ PBT

性質	METHOD	UNIT	D201	D201G15	D201G30	D202
比重	D792	---	1.31	1.39	1.52	1.40
含水率	D570	%	0.09	0.07	0.07	0.08
模收縮 流動方向 垂直方向	D955	%	 0,8 - 2,0 0,8 - 2,0	 0,3 - 0,5 0,5 - 0,9	 0,2 - 0,4 0,5 - 0,9	 0,6 - 1,9 0,6 - 1,9
抗張強度	D638	kg/cm²	550	1000	1250	600
伸長率	D638	%	40	4	4	6
彎曲強度	D790	kg/cm²	850	1600	2100	900
彎曲模數	D790	kg/cm²	25000	52000	90000	26000
衝擊強度缺口 1/8" (23°C)	D256	kg x cm/cm	4	8	10	4
洛式硬度	D785	R	118	120	120	118
熱變形溫度	D648	°C	65	205	210	70
耐燃性	UL-94	---	HB	HB	HB	V0
介電強度	D149	KV/MM	15	15	20	15
介電常數	D150	---	3	3	4	3
體積電阻	D257	Ω-CM	1.00E+16	1.00E+16	1.00E+16	1.00E+16

性質	METHOD	UNIT	D202G15	D202G20	D202G30	E202G15	E202G30
比重	D792	---	1.49	1.53	1.62	1.50	1.61
含水率	D570	%	0.07	0.07	0.07	0.07	0.07
模收縮 流動方向 垂直方向	D955	%	 0,3 - 0,5 0,5 - 0,9	 0,3 - 0,5 0,5 - 0,9	 0,2 - 0,4 0,5 - 0,9	 0,3 - 0,5 0,5 - 0,9	 0,2 - 0,4 0,5 - 0,9
抗張強度	D638	kg/cm²	950	1100	1300	920	1300
伸長率	D638	%	4	4	4	4	3
彎曲強度	D790	kg/cm²	1600	1750	1950	1470	2000
彎曲模數	D790	kg/cm²	60000	70000	95000	56000	93000
衝擊強度缺口 1/8" (23°C)	D256	kg x cm/cm	6	7.5	9	5.5	8.5
洛式硬度	D785	R	120	120	120	120	120
熱變形溫度	D648	°C	200	205	210	205	210
耐燃性	UL-94	---	V0	V0	V0	V0	V0
介電強度	D149	KV/MM	20	20	20	20	20
介電常數	D150	---	3	4	4	3	4
體積電阻	D257	Ω-CM	1.00E+16	1.00E+16	1.00E+16	1.00E+16	1.00E+16

一般級	D201	
玻璃纖維強化級	D201G15	D201G30
防火級	D202	
玻纖強化防火級	D202G15-G30	
玻璃纖維強化級E系列	E202G15-G30	

D201, D201G15, D201G30, D202, D202G5-30 UL File No. E107536 (M)

1. 以上數據僅供參考，實際數據以產品檢驗報告為準。
2. 如有任何特別需求，請洽營業人員，謝謝。

Material Safety Data Sheet

Product Name: SHINITE ® PBT E202G# (#: 5~40% glass content)
Revision Number: 3
Version Date: 2007/7/24

1. Chemical, Product and Company Identification

PRODUCT	SHINITE ® PBT E202G# (#: 5~40% glass content)
COMPANY	Shinkong Synthetic Fibers Corporation, Engineering Plastic Division, 8F, 123, Sec. 2, Nanking East Road, Taipei, Taiwan
PHONE	886-2-2507-1251, 886-3-493-2131
FAX	886-2-2506-5047, 886-3-491-5763

2. Composition/ Information on Ingredients

Chemical Characterization :
Polybutylene Terephthalate (PBT) (CAS# 30965-26-5)
ISO 1043-4 Code number for Flame retardants: FR(17)
Glass Fiber (CAS# 65997-17-3).

3. Hazards Identification

Hazardous Decomposition Products :
Processing fumes evolved at recommended processing conditions contain trace levels of THF (tetrahydrofuran) and may also contain trace levels of hydrogen bromide.

4. First Aid Measures

If molten polymer contacts the skin or eyes, cool rapidly with cold water. DO NOT use solvent for removal.
DO NOT attempt to remove the polymer from the skin!
Obtain IMMEDIATE medical attention.

5. Fire Fighting Measures

Suitable - water spray and foam. Water is the best.
Approved pressure demand breathing apparatus and protective clothing should be used for all fires.

6. Accidental release measures

Sweep up and dispose in proper containers to prevent slipping hazards.

Material Safety Data Sheet

Product Name: SHINITE ® PBT E202G# (#: 5~40% glass content)
Revision Number: 3
Version Date: 2007/7/24

7. Handling and storage

Handling :
Follow recommendations in processing guide. Prevent contact with skin and eyes.
Provide adequate ventilation in molding work.

Storage :
Store in a cool and dry place. Keep containers tightly closed to prevent moisture absorption and contamination

8. Exposure Controls/ Personal Protection

Industrial Hygiene :
A continuous supply of fresh air to the workplace together with removal of processing fumes through exhaust systems is recommended.

Personal Protective Equipment :
Respiratory protection - dust mask
Eye protection - safety glasses
Hand protection - thermal protective gloves should be worn around molten plastic

9. Exposure Controls/ Personal Protection

Melting Point (℃) : 225℃
Density @ 25℃ : 1.35 – 1.75 g/cm^3 ASTM D 1505
Form : Granules
Vapor Pressure : Not applicable
Solubility in Water : Insoluble
Ignition Temperature (℃) : 450℃, estimated

10. Stability and Reactivity

Stability : Stable under recommended conditions of storage and handling.
Reactivity : Not reactive under recommended conditions of storage, handling, processing and use.
Thermal Decomposition : None under 400℃
Explosion : Not sensitive to impact and static discharge.

Material Safety Data Sheet

Product Name: SHINITE ® PBT E202G# (#: 5~40% glass content)
Revision Number: 3
Version Date: 2007/7/24

11. Toxicological information

Product not considered primary eye and skin irritant.
TOXIC : N/A

12. Ecological information

We recommend this material be disposed of by properly scrubbed incineration or recycling
Not expected to present any significant ecological problems.

13. Disposal considerations

Product is not a RCRA hazardous waste. Recycling is encouraged. Dispose of using good manufacturing practices under local regulations for your area.

14. Transport information

GGVSEE/IMDG Code :	UN No. : None
ICAO/IATA-DGR : Not Regulated	GGVE/GGVS :
RID/ADR :	ADNR :

DOT Hazard Class : Not Regulated
Proper Shipping Name : Not Regulated
Identification Number : Not Listed
TDGA : Not Listed

15. Regulatory Information

TSCA Status : This product complies with Chemical Substance Inventory requirements of the US EPA Toxic Substances Control Act (TSCA).
WHMIS Classification : Not a controlled product.

16. Other information

SHINITE is a registered trademark of the SHINKONG SYNTHETIC FIBERS CO.

物質安全資料表

一.物品與廠商資料

物品名稱: 黃銅方线
物品編號: C2600W□0.5mm，0.64mm
製造商或供應商名稱、地址及電話:名稱:上海青浦冶金輔料廠 地址:上海市青浦區新建路1269號 電話:021-69210841
緊急聯絡電話或傳真電話:13701863298/021-69211293

二.成分辨識資料

純物質:

中英文名稱:黃銅（C2600W(H70)）
同義名稱:/
化學文摘社登記號碼（CASNo.）:/
危害物質成分（成分百分比）: 無

混合物:

化學物質: 合金化合物		
危害物質成分之中英文名稱	濃度或濃度範圍（成分百分比）	危害物質分類及圖示
無	無	無

三.危害辨識資料

最重要危害效應	健康危害效應: 無 環境影響: 無 物理性及化學性危害: 無 特殊危害: 無
主要症狀: 無相關資料	
物品危害分類: 無	

四.急救措施

不同暴露途徑之 急救方法:

＊吸入: 本產品不會產生氣味及蒸汽

＊皮膚接觸: 正常操作不會有刺激性氣味發生

＊眼睛接觸: 正常操作不可能接觸眼睛部位

＊食入: 因本產品特性，故不可能被誤食

最重要症狀及危害效應: 無

對急救人員之防護: 無

對醫師之提示: 無

五.滅火措施

適用滅火劑: 不適用

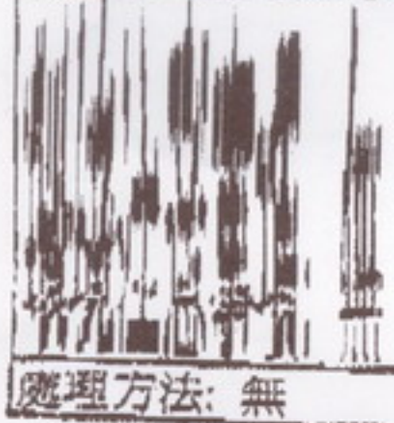
滅火時可能遭遇之特殊危害: 無

特殊滅火程式: 無

消防人員之特殊防護設備: 無

六.洩漏處理方法

個人應注意事項: 無



應變方法: 無

七.安全處置與儲存方法

處置: 無

儲存:避免產品受潮、秋季 溫度:0-35℃ 濕度≤70%RH

八.暴露預防措施

工程控制: 不適用
控制參數: ＊八小時日時量平均容許濃度/短時間時量平均容許濃度/最高容許濃度: ＊生物指標: 不適用
個人防護設備: ＊呼吸防護: 無 ＊手部防護: 佩戴品管手套，以防止電鍍產品直接與手接觸而產生氧化 ＊眼睛防護: 無 ＊皮膚及身體防護: 無
衛生措施:

九.物理及化學性質

物質狀態: 固態	形狀: 四方
顏色: 黃色	氣味: 無
PH值: 無	沸點/沸點範圍: 無
分解溫度: 無	閃火點: 無 測試方法: /開杯 /閉杯
自燃溫度: 無	爆炸界限: 無
蒸氣壓: 無	蒸氣密度: 無
密度: 無	溶解密度: 無

十.安全性及反應性

安全性: 不適用
特殊狀況下之危害反應: 不適用
應避免之狀況: 不適用
應避免之物質: 不適用
危害分解物: 不適用

十一.毒性資料

急毒性: 不適用
局部效應: 不適用
致敏感性: 不適用
慢毒性或長期毒性: 不適用
特殊效應: 不適用

十二.生態資料

可能之環境影響/環境流佈: 不適用

十三.廢棄處置方法

廢棄處置方法: 報廢後變賣

十四.運送資料

國際運送規定: 無
聯合國編號: 無
國內運送規定: 無
特殊運送方法及注意事項: 無

十五.法規資料

適用法規: 無

十六.其他資料

參考文獻: 無

製表單位

名稱:上海青浦冶金輔料廠
地址:上海市青浦區新進路1269號
電話:021-69210841
傳真:021-69211293

製表人	職稱: 品管	姓名（簽章）: 胡建烟
日期:2008.05.15		

NIINGBO CONNFLY ELECTRONIC CO.,LTD
EAST INDUSTRY ZONE KUANGYAN TOWN CIXI NONGBO CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : PBT Plastic

SGS Job No. :	SP14-000120 - SH
Composition :	Resin
Date of Sample Received :	10 Jan 2014
Testing Period :	10 Jan 2014 - 20 Jan 2014
Test Requested :	Selected test(s) as requested by client.
Test Method :	Please refer to next page(s).
Test Results :	Please refer to next page(s).
Conclusion :	Based on the performed tests on submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of
SGS-CSTC Ltd.

JJ Fan
Approved Signatory

3 "Building,No.889 Yishan Road Xuhui District,Shanghai China 200233 t E&E (86-21) 61402553 f E&E (86-21)64953679 www.sgsgroup.com.cn
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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA14-006133.015	Black plastic pellet

Remarks :

(1) 1 mg/kg = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

RoHS Directive 2011/65/EU

Test Method : (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
(2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
(3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
(4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
(5) With reference to IEC 62321:2008, determination of PBBs and PBDEs by GC-MS.

Test Item(s)	Limit	Unit	MDL	015
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	9
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	2	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	-	118
Monobromodiphenyl ether	-	mg/kg	5	ND

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Test Item(s)	Limit	Unit	MDL	015
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
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	5
Decabromodiphenyl ether	-	mg/kg	5	113

Notes :

(1) The maximum permissible limit is quoted from the directive 2011/65/EU, Annex II

Phthalates

Test Method : Determination of phthalates by GC-MS based on EN 14372:2004.

Test Item(s)	CAS NO.	Unit	MDL	015
Dibutyl Phthalate (DBP)	84-74-2	%	0.003	ND
Benzylbutyl Phthalate (BBP)	85-68-7	%	0.003	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	%	0.003	ND

Notes :

(1) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC:
Bis (2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP) and Dibutyl phthalate (DBP) are considered as a priority for risk evaluation and substance restriction.

Hexabromocyclododecane (HBCDD)

Test Method : Determination of HBCDD by GC-MS based on IEC 62321:2008.

Test Item(s)	Unit	MDL	015
Hexabromocyclododecane (HBCDD)	mg/kg	10	ND

Notes :

(1) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC:
Hexabromocyclododecane (HBCDD) is considered as a priority for risk evaluation and substance

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restriction.

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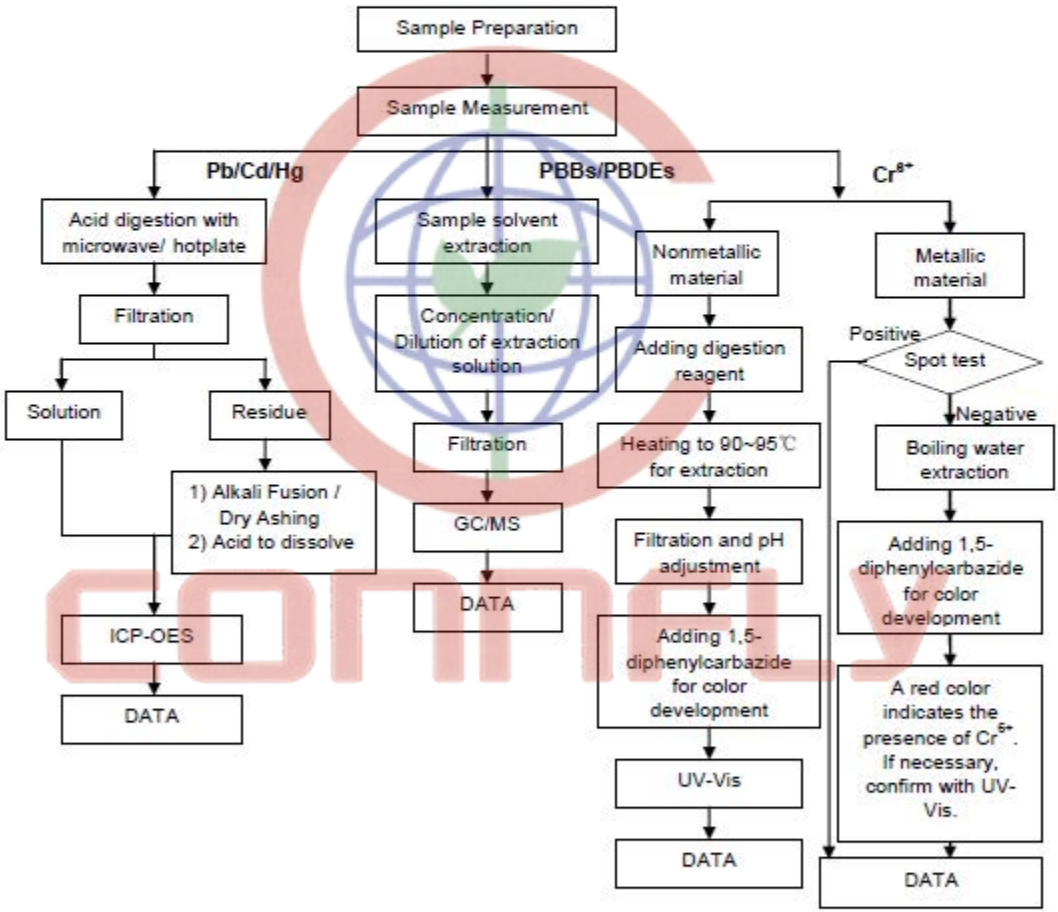
ATTACHMENTS

RoHS Testing Flow Chart

1) Name of the person who made testing: Jan Shi/Star Wang/Shara Wang/Gary Xu
2) Name of the person in charge of testing: Jeff Zhang/George Xu/ Jessy Huang
3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} and PBBs/PBDEs test method excluded)



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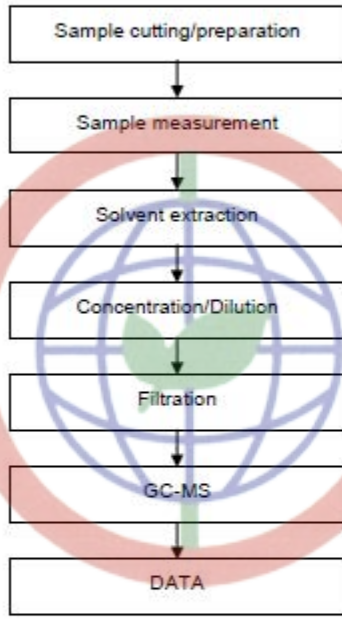
Phthalates Testing Flow Chart

1) Name of the person who made testing: Elyn Yao

2) Name of the person in charge of testing: Myra Ma



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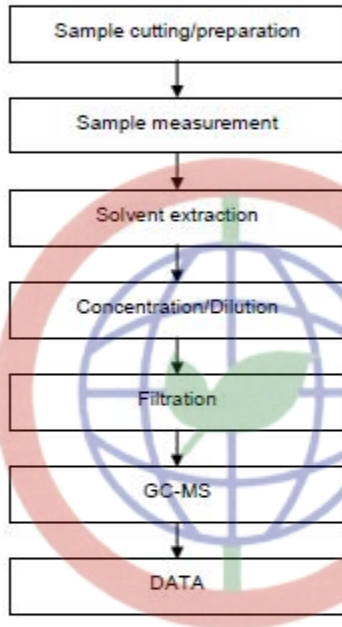
HBCDD Testing Flow Chart

1) Name of the person who made testing: Gary Xu

2) Name of the person in charge of testing: Jessy Huang



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Sample photo:

SHA14-006133.015

SGS authenticate the photo on original report only

*** End of Report ***

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Test Report

No. SHAEC1400613304 Date: 20 Jan 2014

NIINGBO CONNFLY ELECTRONIC CO.,LTD

EAST INDUSTRY ZONE KUANGYAN TOWN CIXI NONGBO CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : IC Socket Pin

SGS Job No. :	SP14-000120 - SH
Composition :	Cu
Date of Sample Received :	10 Jan 2014
Testing Period :	10 Jan 2014 - 20 Jan 2014
Test Requested :	Selected test(s) as requested by client.
Test Method :	Please refer to next page(s).
Test Results :	Please refer to next page(s).
Conclusion :	Based on the performed tests on submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of
SGS-CSTC Ltd.

JJ Fan
Approved Signatory

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA14-006133.004	Silvery metal

Remarks :

(1) 1 mg/kg = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

RoHS Directive 2011/65/EU

Test Method : (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
(2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
(3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
(4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by spot test / Colorimetric Method using UV-Vis.

Test Item(s)	Limit	Unit	MDL	*004*
Cadmium (Cd)	100	mg/kg	2	6
Lead (Pb)	1000	mg/kg	2	23214▲
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	-	-	◇	Negative

Notes :

(1) The maximum permissible limit is quoted from directive 2011/65/EU, Annex II

(2) ◇Spot-test:
Negative = Absence of Cr(VI) coating, Positive = Presence of Cr(VI) coating;
(The tested sample should be further verified by boiling-water-extraction method if the spot test result is Negative or cannot be confirmed.)
◇Boiling-water-extraction:
Negative = Absence of Cr(VI) coating
Positive = Presence of Cr(VI) coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm^2 sample surface area.
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.

(3) ▲According to the declaration from the client, Lead (Pb) in No.004 is exempted by EU RoHS Directive 2011/65/EU based on: Copper alloy containing up to 4 % lead by weight.

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RoHS Testing Flow Chart

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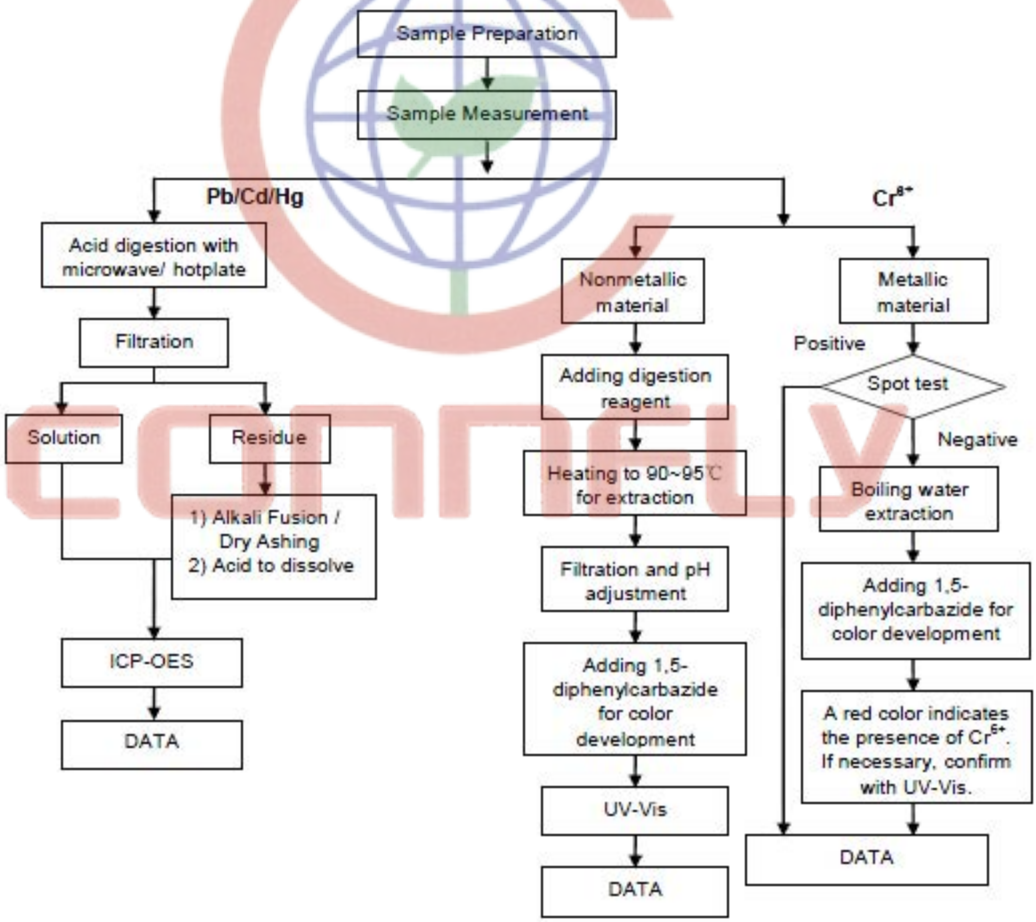

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Sample photo:

SHA14-006133.004

SGS authenticate the photo on original report only

*** End of Report ***

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2008/9/8

SHINKONG SYNTHETIC FIBERS CORPORATION
CHUNGLI TECHNICAL CENTER
TAIWAN

Subject：Certification of Product Safety

Dear Sir：

This is to certify that our products:
SHINITE ® PBT (Polybutylene Terephthalate) , PET, NYLON, PP and SHINBLEND® ALLOY comply with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive 2002/95/EC, and none of the following substances are intentionally used in these products.

- Cadmium (Cd) and its compounds
- Lead (Pb) and its compounds
- Chromium VI($Cr^{+}6$) and its compounds
- Mercury (Hg) and its compounds
- Polybrominated biphenyls (PBB)
- Polybrominated diphenyl ethers (PBDE)
- Polychlorinated biphenyls (PCB)
- Polychlorinated naphthalenes (PCN)
- Polychlorinated terphenyls(PCT)
- Chlorinated paraffins (CP)
- Organic tin compounds
- Asbestos
- Azo compounds
- Formaldehyde
- Polyvinyl chloride(PVC) and PVC blends
- Ozone depleting chemicals(CFC's & HCFC's)
- Tetrabromobisphenol-A-bis-(2,3-dibromopropylether) (TBBP-A-bis)
- Tetrabromobisphenol-A (TBBP-A)
- Phthalates
- PFOS, PFOA
- Polyaromatic Hydrocarbons(PAHs)
- Beryllium oxide; Beryllium copper
- Substances depleting the ozone layer (Hydrofluorocarbon[HFC], Perfluorocarbon[PFC])
- 2-(2H-benzotnazol-2-yl)-4,6-bis(1,1-dlmehylthyl)-phenol(UV320，Cas No.3848-71-7)

2008/9/8

None of the 16 SVHC substances listed below are intentionally used in our products.

Substance identification			Authority	Reason for proposing	Date of publication	Deadline for commenting
Substance name	CAS number	EC number				
Anthracene	120-12-7	204-371-1	Germany	PBT	1930/6/8	2014/8/8
4,4'- Diaminodiphenylmethane	101-77-9	202-974-4	Germany	CMR	1930/6/8	2014/8/8
Dibutyl phthalate	84-74-2	201-557-4	Austria	CMR	1930/6/8	2014/8/8
Cyclododecane	294-62-2	206-33-9	France	PBT	1930/6/8	2014/8/8
Cobalt dichloride	7546-79-9	231-589-4	France	CMR	1930/6/8	2014/8/8
Diarsenic pentaoxide	1303-28-2	215-116-9	France	CMR	1930/6/8	2014/8/8
Diarsenic trioxide	1327-53-3	215-481-4	France	CMR	1930/6/8	2014/8/8
Sodium dichromate, dihydrate	7789-12-0	-	France	CMR	1930/6/8	2014/8/8
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	Netherlands	vPvB	1930/6/8	2014/8/8
Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	204-211-0	Sweden	CMR	1930/6/8	2014/8/8
Hexabromocyclododecane (HBCDD)	25637-99-4	247-148-4	Sweden	PBT	1930/6/8	2014/8/8
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	287-476-5	United Kingdom	PBT	1930/6/8	2014/8/8
Bis(tributyltin)oxide	56-35-9	200-268-0	Norway	PBT	1930/6/8	2014/8/8
Lead hydrogen arsenate	7784-40-9	232-064-2	Norway	CMR	1930/6/8	2014/8/8
Triethyl arsenate	15606-95-8	427-700-2	Norway	CMR	1930/6/8	2014/8/8
Benzyl butyl phthalate	85-68-7	201-622-7	Austria	CMR	1930/6/8	2014/8/8

ABBREVIATIONS

- Cat. 1 & 2 CMR: Category 1 & 2 Carcinogen, Mutagen, & toxic for Reproduction
- ECHA: European Chemical Agency
- PBT: Persistent Bioaccumulative Toxic
- REACH: Registration, Evaluation, Authorization and restriction of Chemicals
- SVHC: Substances of Very High Concern (include CMR, PBT, vPvB or substances of equivalent concern – E.g. endocrine disruptor)
- vPvB: very Persistent very Bioaccumulative

Should you have any questions, please feel free to contact me. Thanks.

Yours truly,
J. K. Liew
ENPLA division, QA Section Chief

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