乔讯电子（上海）有限公司
Chyao Shiunn Electronics(Shang Hai) Co.,Ltd.

Specification For Approval

Customer	鈺緯科技
Part No.	**JS-1001S-XXKDM**
Customer Part No.	
Description	**2.50mm pitch Conector**
Samples	**5 PCS**

This Specification Is

Prepared By	Checked By	Approved By
Li Lian	Tang Nian	Tang Nian
Ini. Date	Rev. Date	Revision
2024.01.31	2024.01.31	A

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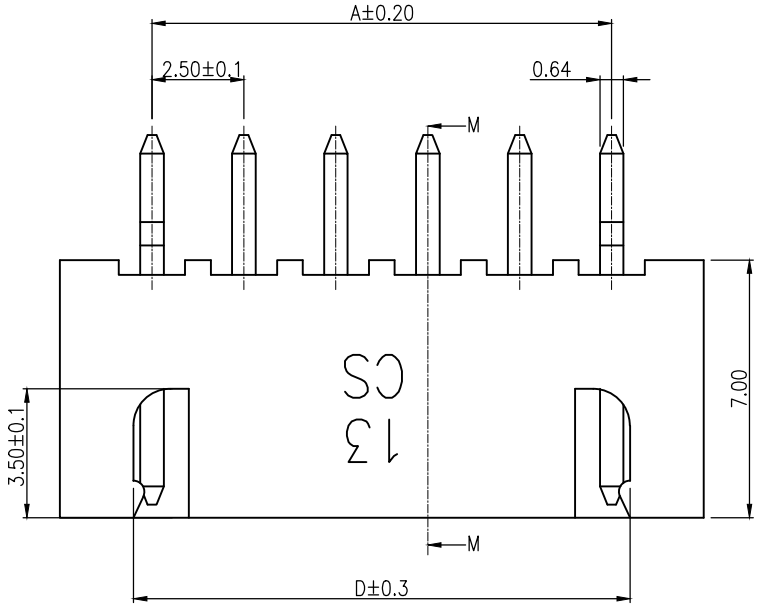
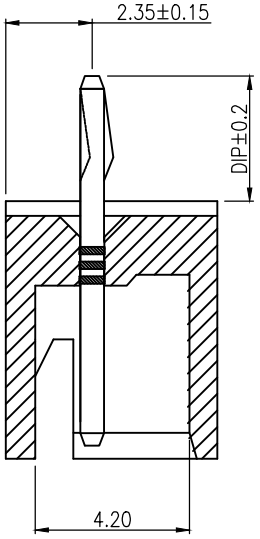
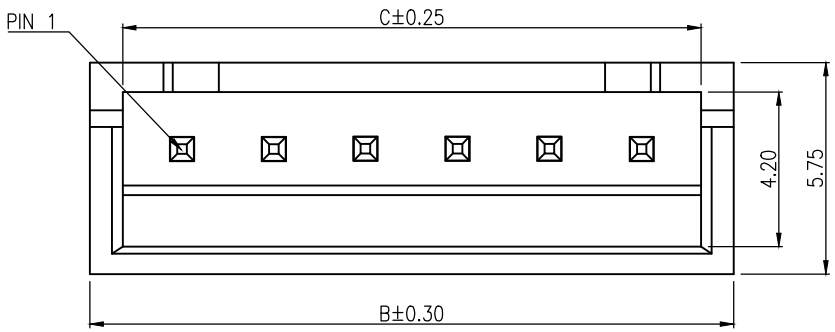
A4

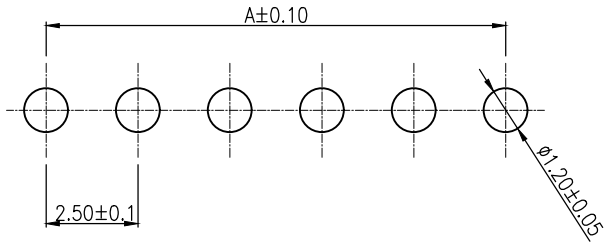
REV.	ECN.NO	REVISIONS	REV.DRAWN	DATE
N	15109	图面整合	sunquan	2015/12/16
O	----	增加绿色规格	YangSong	2018/05/10
P	----	增加卷装规格	ZQ	2024/01/03





SECTION M-M





Recommended PCB Layout(TOP VIEW)

SPECIFICATION
. Voltage Rating : 250V AC/DC
. Current Rating : 3A AC/DC
. Withstanding Voltage : 1000V AC/Minute
. Insulation Resistance : 1000MΩ Min.
. Temperature Range : -25°C~+85°C
. Contact Resistance : 20mΩ Max.

NOTES:
1. Material: Base: Nylon, UL94V-0
Contact: Copper Alloy
2. Packing : Bag
3. Part No.

JS-1001S-XXKDXX-XXXX-XX-X

- Poles : 2~20
- Blank : DIP 3.4 / D : DIP 2.7
- Blank : Tin plated / M&NM : Matte Sn / G0 : Gold Plated
- Blank : PA66 / D1 : PA66+15%GF / D5 : PA66+15%GF(NH)
- Blank : Nature / BK : Black / CB : Blue / GY : Gray / RD : Red (198C) / YW : Yellow / GN : Green (Allow error a color code)
- Blank : Normal / NH : Halogen Free
- Blank :Bag / R:Reel

4. Halogen free product identification LOGO on the packing

Poles	A	B	C	D	Poles	A	B	C	D
					11	25.00	30.00	28.40	26.15
02	2.50	7.50	5.90	3.65	12	27.50	32.50	30.90	28.65
03	5.00	10.00	8.40	6.15	13	30.00	35.00	33.40	31.15
04	7.50	12.50	10.90	8.65	14	32.50	37.50	35.90	33.65
05	10.00	15.00	13.40	11.15	15	35.00	40.00	38.40	36.15
06	12.50	17.50	15.90	13.65	16	37.50	42.50	40.90	38.65
07	15.00	20.00	18.40	16.15	17	40.00	45.00	43.40	41.15
08	17.50	22.50	20.90	18.65	18	42.50	47.50	45.90	43.65
09	20.00	25.00	23.40	21.15	19	45.00	50.00	48.40	46.15
10	22.50	27.50	25.90	23.65	20	47.50	52.50	50.90	48.65

X. ±0.40	X.° ±5.0°	UNITS mm	NAME(INTENDED USE) CUSTOMER
.X ±0.30	.X° ±2.0°	MAT'S SEE NOTE	PART NO.(INTENDED USE) JS-1001S-XXK XX
.XX ±0.20	.XX° ±1.0°	FINISH SEE NOTE	TITLE: 2.5mm Crimp Style Connectors
.XXX ±0.10	--- --	Q'TY -----	APPV'D
			CHK'D
			DR': hejihuai 2009/07/08

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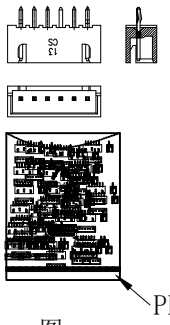
DWG NO. 020-0055-1001S-XXK

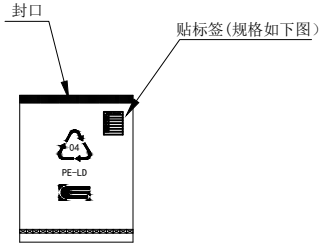
SCALE	SHEET	REV
5 : 1	1/1	O

禁止使用I级环境管理物质

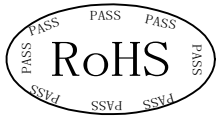
REV	ECN.NO.	REVISIONS	REV.DRAWN	DATE
D		初版发行	CaiQiang	2021.12.03
E		调整纸箱规格	CaiQiang	2023.05.12



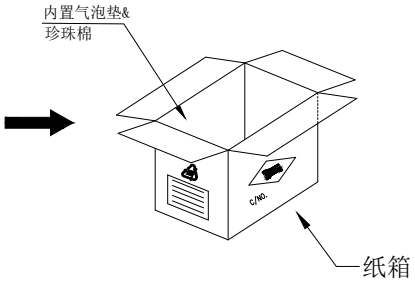
图一



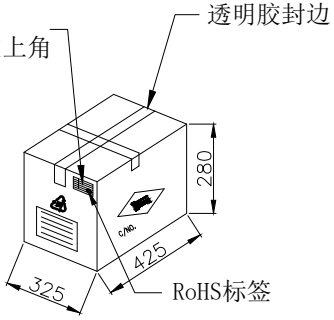
图二



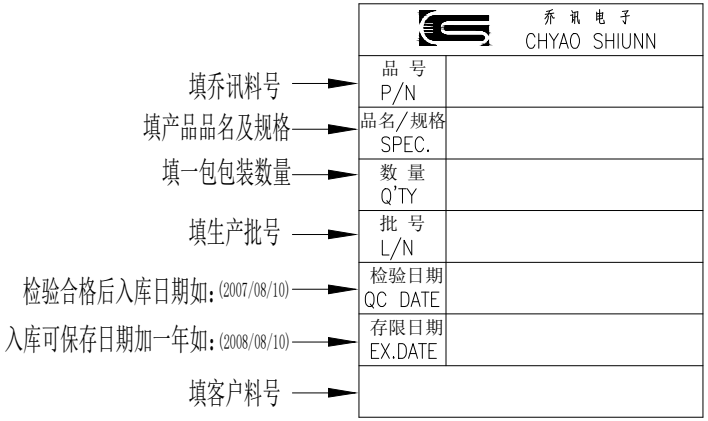
RoHS标签



图三



图四



PE袋&纸箱标签

包装方式:

1. 将检验合格的产品放入PE袋内。（如图一）
2. 将PE袋进行封口，并贴上标签。（如图二）。
3. 确认装箱数量无误后将外箱用透明胶纸封口并贴上外箱标签，
   然后再贴1PCS RoHS小标签于外箱的大标签上（如图三、四）。
4. 若有不满箱包装时，必须用其他填充物补充。

Poles	PE袋		纸箱
	尺寸 (mm)	制品数 (pcs/包)	制品数 (Kpcs/箱)
02	BA-250*150	1000	50
03	BA-300*200	1000	40
04	BA-300*200	1000	30
05	BA-300*200	1000	25
06	BA-300*200	1000	20
07	BA-300*200	1000	15
08	BA-300*200	1000	15
09	BA-300*200	1000	13
10	BA-300*200	1000	13
11	BA-300*200	1000	11
12	BA-300*200	1000	11
13	BA-350*250	1000	10
14	BA-350*250	1000	10
15	BA-350*250	1000	10

禁止使用I级环境管理物质

X.±	X°.±	UNITS mm	NAME(INTENDED USE) 包装规范	CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.,LTD.
.X±	.X°±	MAT'L	PART NO.(INTENDED USE) JS-1001X-XX	TITLE: 2.50mm Crimp Style Connector
.XX±	.XX°±	FINISH	APPD:	DWG NO.: JS-1001X-XX包装规范
.XXX±	.XXX°±	Q'TY	CHKD:	SCALE 1:1 SHEET 1/1 REV. /
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http://www.chyaoshiunn.com.tw E-mail:cs@chyaoshiunn.com.tw

Type Document	Product Specification	Revised / Edition	N
Date Issued	1998/12/01	Data Revised	2022/01/15
Subject: JS-1001(1001S 1001R 1001SB1)/ (K)/(HK) 、JS-1001H-XX JS-2001 JS-2001-T/TB/TE Pitch 2.50mm Series Wire to Board Connector			Issued By: Engineering Dept.

. This specification is referred to the 2.50mm DIP series wire to board connector.

-INDEX-

1.0 Product Name/Part Number & Drawing Number. (产品名称 / 产品型号及图面型号)

2.0 Construction/Dimensions/Material & Surface Finish. (材质以及表面镀层)

3.0 Characteristic. (产品特性)

4.0 Specimen. (样本图标)

5.0 Applicable Standards. .(适用规范)

6.0 Mechanical Performance. (机械性能)

7.0 Electrical Performance. (电气性能)

8.0 Environmental Performance. (环境性能)

9.0 Insertion Force & Retention Force Requirement. (插入力和保持力要求)

10.0 Remark. (备注).

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1.0 Product Name/Part Number & Drawing Number(产品名称 / 产品型号及图面型号):

Product Name (产品名称)		Part Number（零件型号）	Drawing Number (图面型号)
Crimp Terminal		JS-2001-T/TE (Stamping after tin plated)（先镀后冲）	JS-2001-T/TE
		JS-2001-TB (Stamping after tin plated)（先镀后冲）	JS-2001-TB
Housing		JS-2001-XX	JS-2001-XX
Wafer	Straight	JS-1001-XX/ XXK	JS-1001-XX/ XXK
		JS-1001S-XX/ XXK ; JS-1001SB1-XXK	JS-1001S-XX/ XXK JS-1001SB1-XXK
		JS-1001S-XX/ XXK-HK; JS-1001SB1-XXK-HK	JS-1001S-XX/ XXK-HK JS-1001SB1-XXK-HK
	Right Angle	JS-1001R-XX/ XXK	JS-1001R-XX/ XXK
		JS-1001R-XX/XXK-HK	JS-1001R-XX/XXK -HK
		JS-1001H-XX	JS-1001H-XX

2.0 Construction/Dimensions/Material & Surface Finish(材质以及表面镀层):

Part Name(零件名称)		Material(材质)	Surface Finish (表面镀层)
Crimp Terminal	JS-2001-T/TE	Phosphor Bronze(磷铜)	Tin-Plated（镀亮锡）
	JS-2001-TB	Brass	Tin-Plated（镀亮锡）
Housing		Nylon 66	UL 94V-0
Wafer	Square pin	Brass（黄铜）	Tin or Matte-Tin Plated(镀亮锡或镀雾锡)
	Base	Nylon 66 & Nylon 46	UL 94V-0

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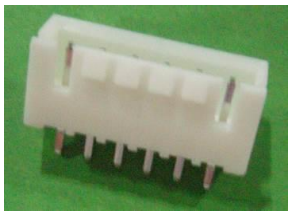
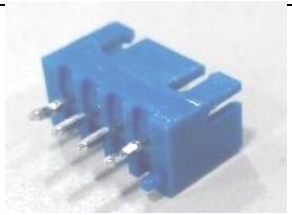
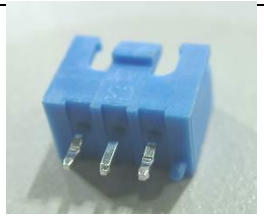
3.0 Characteristic（产品特性）:

Item(项目)			Standard
3.1	Rated Current（额定电流）		3A AC/DC (With AWG #24 is applied)
3.2	Ambient Temperature Range （环境温度范围）		Operating Temp.: -25℃~+85℃ （工作温度:-25℃~+85℃） Including 30℃ Terminal Temperature Rise at rated Current .（包括额定电流时 30℃的终端温升。） Storage temp.: -25℃~+85℃ （存储温度：-25℃~+85℃）
3.3	Applicable Wire （适用电线）	3.3.1	Conductor Construction Size（导线结构尺寸）: AWG #22~#28
		3.3.2	Wire Insulation O.D.（电线绝缘外径）: 1.2mm~1.6mm
3.4	Applicable Printed Circuit Board Layout （ 适用印刷电路板布局）	3.4.1	Thickness: 0.8 mm ~ 1.6 mm
		3.4.2	Hole Size: 1.2±0.05 mm
		3.4.3	Hole Pitch: 2.50 ± 0.05 mm

4.0 Specimen(样本图标):

Part Name/ Part Number/ Picture or Photograph			
Crimp Terminal JS-2001-T/TB/TE		Housing JS-2001	
Wafer Straight JS-1001&JS-1001S		Wafer Straight JS-1001/HK JS-1001S/HK	
Wafer Straight JS-1001SB1-XXK		Wafer Straight JS-1001SB1-XXK-HK	

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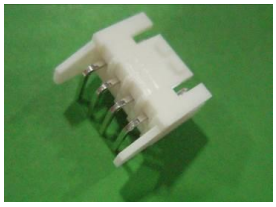
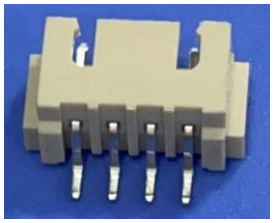
Wafer Right Angle JS-1001R/HK		Wafer Right Angle JS-1001R	
Wafer Right Angle JS-1001H-XX			

5.0 Applicable Standards(适用规范):

MIL-STD-202 Methods by test of connectors for electronic equipment.

（MIL-STD-202 电子设备连接器试验方法）

EIA 364 Testing method for electrical connectors.

（EIA-364 电连接器试验方法。）

6.0 Mechanical Performance(机械性能):

Item(项目)		Test Condition（测试条件）		Requirement（要求）
6.1	Insertion & Retention Force （插入力和保持力）	Insert and withdraw with connectors at the speed rate of 25±6 mm/minute. (EIA 364-13) （ 以 25 毫米/分钟的速度插入和取出 Housing）		Refer to paragraph 9.1 （参考第 9.1 段）
6.2	Wire Pullout Force(Axial) (线缆拔出力(轴向))	Pull out the cable from contact terminal at the speed rate of 25± 6 mm/minute. （以 25±6 mm/min 的速度从接触端子上拔出电缆。）	AWG#22 size wire	5.0kgf/Min.
			AWG#24 size wire	3.0kgf/Min.
			AWG#26 size wire	2.0kgf/Min.
			AWG#28 size wire	1.3kgf/Min.

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Item(项目)		Test Condition（测试条件）	Requirement（要求）
6.3	Crimp Terminal Retention Force (in Housing) （压接端子保持力）	Axial pull out force on the terminal in the housing at the speed rate of 25 ± 6 mm per minute. （以 25±6 mm/min 的速度施加在外壳端子上的轴向拔出力。）	Per Contact 2.5kgf/Min.
6.4	Square Pin Retention Force (in Base) （ 方Pin保持力）	Axial pullout force on the square pin in the base at the speed rate of 25 ± 6 mm per minute. (EIA 364-29C) （以 25±6 mm/min 的速度施加在塑壳方针上的轴向拔出力。）	Per Contact 2.0kgf/Min. After Soldering Heat Per Contact 0.7kgf/Min

7.0 Electrical Performance(电气性能):

Item(项目)		Test Condition（测试条件）	Requirement（要求）
7.1	Contact Resistance （接触阻抗）	A maximum voltage of 20mV and a maximum current of 10mA are applied to the Mate connectors. (EIA 364-23) （让其通过 10mA /20mV Max 电流）	Contact Resistance: 20 milliohms Max. （接触电阻：最大 20mΩ）
7.2	Current Continuity （电流连续性）	Each circuit of the connector shall be connected in series continuity meter shall detect current discontinuity longer than 1 microsecond during the vibration test. （连接器的每个电路应串联连接，连续性计应在振动试验期间检测超过 1 微秒的电流不连续性。）	No discontinuity current is longer than 1 microsecond. （回路瞬间断电不能超过1微秒）

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Item(项目)		Test Condition（测试条件）	Requirement（要求）
7.3	Insulation Resistance （绝缘阻抗）	Apply 500V D/C to any two adjacent contacts to measure the insulation resistance. (EIA 364-21) （试验电压 500V D/C，施加于相邻两端，测量绝缘电阻）	Insulation Resistance: Initial 1000 megohms Min. （绝缘电阻：初始 1000 兆欧（最小值））
7.4	Withstanding Voltage （耐电压）	Apply 1000V A/C (rms) for 1 minute and the leakage current shall not excced 0.5mA to the adjacent terminal and ground of the Mate connectors. (EIA 364-20) （施加 1000V A/C（rms）1 分钟，泄漏电流不得超过 0.5mA 至配对连接器的相邻端子和接地。）	No breakdown or flashover. （无击穿或者火花）

8.0 Environmental Performance(环境性能):

Item(项目)		Test Condition（测试条件）	Requirement（要求）
8.1	Vibration （振动）	Frequency: 10~55~10 Hz/minute. Amplitude: 1.5 mm P-P. Direction: 1. Axis of up and down. 2. Axis of right the left. 3. Axis of front and back. Period: 2 hours for each direction. (EIA 364-28A-23) （频率：10 ~ 55 ~ 10 Hz /分钟。 振幅：1.5 毫米。 方向：1.上下轴。 2.从左到右的轴。 3.前后轴。 周期：每个方向 2 小时。）	Initial Contact Resistance : 20 milliohms Max. (After the test) Contact Resistance: 40 milliohms Max. （振动前测试，最大接触阻抗20 mΩ 振动后测试，最大接触阻抗40 mΩ） No discontinuity current is longer than 1 microsecond （回路瞬间断电不能超过 1 微秒）

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CHYAO SHIUNN ELECTRONIC INDUSTRIAL LTD.
7FL., NO.17, LANE 3, SEC.1 CHUNG CHENG EAST RD.,
TAMSHUI, TAIPEI, TAIWAN, R.O.C.
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Type Document	Product Specification	Revised / Edition	N
Date Issued	1998/12/01	Data Revised	2022/01/15
Subject: JS-1001(1001S 1001R 1001SB1)/ (K)/(HK) 、JS-1001H-XX JS-2001 JS-2001-T/TB/TE Pitch 2.50mm Series Wire to Board Connector			Issued By: Engineering Dept.

Item（项目）		Test Condition（测试条件）	Requirement（要求）
8.2	Humidity Steady State （湿度稳定状态）	Temperature: 40±2℃. Humidity: 90%~95% (RH). Period: 96 hours continuously. (EIA 364-31) （将样品置于恒定湿热箱 温度：40±2℃, 湿度：湿度：90%~95%（相对湿度） 周期：连续 96 小时）	(After the test) Contact Resistance: 40 milliohms Max. （测试之后，最大接触阻抗40ｍΩ）
			(After the test) Insulation Resistance： 500 Megohms Min. （测试之后，最小绝缘阻抗500 MΩ）
			(After the test) Withstanding Voltage : No breakdown or flashover （测试之后，耐电压：无击穿或者火花）
8.3	Heat Aging （热老化）	Temperature: 85±2℃. Period: 96 hours continuously. (EIA 364-17) 温度：85±2℃。 周期：连续96小时。	(After the test) Contact Resistance: 40 milliohms Max. （测试之后，接触电阻最大 40ｍΩ）
8.4	Thermal Shock （冷热冲击）	One Cycle Consists Of: -55 +0/-3℃for 30 minutes. → Room Temp.5 minutes 85+3/-0℃ for 30 minutes. → Room Temp.5 minutes Total Cycles: 25 Cycles. (EIA 364-32) 一个循环包括： -55+0/-3℃30 分钟。→室温 5 分钟 85+3/-0℃30 分钟。→室温 5 分钟 总周期：25 个周期。	Same as paragraph 8.2 （数据和图表8.2一样）

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Item(项目)		Test Condition（测试条件）	Requirement（要求）
8.5	Salt Spray （盐雾）	A mated connector shall be subjected to a Salt Spray test of the following conditions. After the test , the specimen shall be washed with running water and dried naturally before the measurement of contact resistance. Temperature: 35±2℃. Density: 5 % in weight. Period: Terminal (Stamping after tin plated for 8 hours) ; Terminal or contact (Stamping before tin plated for 24 hours) （以组合状态下连接器作为试验样品，依照随附如下规格要求，进行盐水喷雾试验，试验过后将样品用清水冲洗并经过自然风干，而后测量其接触接触阻抗 温度：35±2℃。 密度：重量的 5%。 时间：端子（先镀后冲，8小时）& 端子（先冲后镀，24小时)）	(After the test) Contact Resistance: 40 milliohms Max （测试之后，接触电阻最大 40 mΩ）
8.6	Solder Ability （焊锡性）	Solder Temperature: 245 ± 5℃. Immersion Period: 3±0.5 Seconds Method : 1.5mm From Square Pin Tip. (EIA 364-52) （焊接温度：245±5℃。 浸泡时间：3±0.5 秒 方法：距方针尖1.5 mm）	Solder entirely 95% of immersed area must show no voids or pinholes. （焊料浸没区域的 95%不得有空隙或针孔）

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Item(项目)		Test Condition（测试条件）	Requirement（要求）
8.7	Resistance To Soldering Heat （焊锡耐热性）	Resistance to soldering heat when using PA66(G.F.) & PA46: Solder Temperature: 260 ± 5℃. Immersion Period : 3~5±0.5 Seconds (The part can't suitable to pass the IR reflow except JS-1001H-XX) （使用PA66(G.F.) & PA46的耐焊接热性： 焊接温度：260±5℃。 浸泡时间：3~5±0.5秒 （除JS-1001H-XX外，零件不适合通过IR回流焊)）	No deformation or damage. （没有变形或损坏。）
		By soldering iron:350 ± 5℃ 3±0.5 Seconds. Method : 1.5mm From Square Pin Tip （通过烙铁：350±5℃ ，3±0.5秒。 方法：距方针端部 1.5mm）	

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9.0 Insertion Force (I.F.) & Retention Force (R.F.)（插入力和保持力）

9.1 Requirement（要求）:

No. Of Circuits	AT INITIAL		AT 50TH	No. Of Circuits	AT INITIAL		AT 50TH
	I.F. (MAX)	R.F. (MIN)	R.F. (MIN)		I.F. (MAX)	R.F. (MIN)	R.F. (MIN)
				11	9.0	2.3	2.0
02	3.0	0.7	0.6	12	9.0	2.3	2.0
03	3.5	0.7	0.6	13	9.5	2.7	2.3
04	4.0	1.1	1.0	14	9.5	2.7	2.3
05	4.5	1.1	1.0	15	10.0	3.0	2.6
06	5.5	1.5	1.4	16	10.0	3.0	2.6
07	6.5	1.7	1.6	17	11.0	3.2	2.8
08	7.5	1.7	1.6	18	11.0	3.2	2.8
09	8.0	2.0	1.8	19	12.0	3.3	2.9
10	8.5	2.0	1.8	20	12.0	3.3	2.9

Unit: Kgf

10.0 Remark: Any change or revision for the product specification will not be announced in advance. Please contact our sales representative for the latest information.

（备注：产品规格如有变更或修订，恕不另行通知。有关最新信息，请与我们的销售代表联系。）

Component - Plastics [guide info] **E41797**

TORAY INDUSTRIES INC

NIHONBASHI-MITSUI TOWER, 1-1 NIHONBASHI-MUROMACHI 2-CHOME, CHUO-KU TOKYO 103-8666 JP

3004-V0(rr), CM3004-V0(rr)

Polyamide 66 (PA66), "AMILAN", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	0.25	V-0	-	-	-	-	-
	0.38	V-0	4	3	-	-	-
	0.66	V-0	4	0	130	105	105
	1.5	V-0	3	0	130	105	105
	3.0	V-0	2	0	130	105	105

Comparative Tracking Index (CTI): 0

Inclined Plane Tracking (IPT): -

Dielectric Strength (kV/mm): 28

Volume Resistivity (10^x ohm-cm): 13

High-Voltage Arc Tracking Rate (HVTR): 0

High Volt, Low Current Arc Resis (D495): 5

Dimensional Stability (%): 0.0

(rr) - Virgin and regrind up to 70% by weight inclusive have the same basic material characteristics.

NOTE - Polyamide (nylon) grades may be prefixed with the letters CM and may employ hyphens in various locations. The designations of ECODEAR products may employ hyphens and/or spaces in various locations. All grades that include ABS, SAN, and/or PC (designations of TOYOLAC or TOYOLACPAREL or TORAYCA products) may employ hyphens and/or spaces and may be suffixed with 3 or 4 digits of letters and/or numbers.

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1989-09-13

Last Revised: 2015-12-24

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IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.25	V-0 (ALL)
			0.38	V-0 (ALL)
			0.66	V-0 (ALL)
			1.5	V-0 (ALL)
			3.0	V-0 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m^2	-	-
ISO Izod Impact	ISO 180	kJ/m^2	-	-
ISO Charpy Impact	ISO 179-2	kJ/m^2	-	-

化学品安全技术说明书

1．化学品及企业标识

化学品名或商品名　东丽阿米兰尼龙树脂 (Toray Amilan Nylon Resin)
CM3004V0

MSDS编号　CD-N-7

供应商名称　东丽塑料（成都）有限公司(Toray Plastics(ChengDu)Limited.)

地址　中国四川省成都市新津县区工业区新材料功能区货运大道东侧新材18路北侧

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应急电话　+86-28-67779100(141)
技术部

2．危险性概述

分类

健康危害	急性毒性（经口）	非此类
	急性毒性（经皮）	非此类
	急性毒性（吸入）	非此类
	皮肤腐蚀/刺激	非此类
	严重眼损伤/眼刺激	非此类
	呼吸过敏	不能分类
	皮肤过敏	不能分类
	生殖细胞致突变性	不能分类
	致癌性	非此类
	生殖毒性	不能分类
	特异性靶器官系统毒性（一次接触）	非此类
	特异性靶器官系统毒性（反复接触）	非此类
	吸入危害	不能分类
环境危害	急性水生毒性	非此类
	慢性水生毒性	非此类

不为覆盖的其他危险　可能释放出刺激眼睛、鼻子和喉咙的挥发性气体。
在干燥和成型过程中，使用局部排气充分通风装置。
粉碎加工时，玻纤可能外泄。
将粉碎料立即置于空袋中，尽可能降低玻纤外泄的可能。
接触玻纤可能引起皮肤，眼睛,鼻子和喉咙刺激或瘙痒。
如感觉不适，就医。
清扫和处理泄漏树脂，消除滑倒危险。
不要堆放太高，以避免产品跌落造成伤害。

3．成分/组成信息

单一物质・混合物的区别　混合物
化学名（或：通用名）　聚己二酰己二胺树脂（Poly(hexamethyleneadipamide) resin）
别名　聚酰胺66，尼龙66（Polyamide-66 resin, Nylon-66 resin）

组分化学名称及俗名	CAS号	化学式	含量(%)	欧洲EC编号
聚己二酰己二胺（Poly(hexamethyleneadipamide)(1)	32131-17-2	$[NH(CH_2)_6NHCO(CH_2)_4CO]n$	90-98%	无资料
无卤阻燃剂 （氮系）（Non-Halogen flame retarder）(2)	非公开	-	2-8%	无资料

分子量　(1), (2) 无资料
ENCS No.　(1); 7-382
(2); 无资料
ISHL No.　(1); 7-382
(2); 无资料
TSCA法规　(1); 已列入
(2); 已列入

4．急救措施

吸　　入　立即将患者移至空气新鲜处。
如遇事故或感觉不适，立即就医。
将从熔融聚合物那里吸入气体的患者疏散到空气新鲜处。
如果患者没有恢复，就医。
皮肤接触　如皮肤接触到聚合物，用大量清水冲洗皮肤或淋浴。
不能强行去除聚合物，如果皮肤灼伤，就医。
眼睛接触　轻轻用大量流动清水冲洗眼睛，至少冲洗15分钟，尽快送往最近的医疗机构就医，如患者戴隐形眼镜并可方便取出，取出隐形眼镜并继续冲洗，不要揉眼睛。
食　　入　用水漱口，患者饮用一两杯水，将手指放在喉咙催吐，呕吐后仍感觉不适，马上就医。
不能强行去除聚合物，如果发生事故，感觉不适，马上就医。
主要征兆及症状　无资料
急救者的保护　当转移熔融聚合物或高温聚合物时，戴防护手套。
医疗注意事项　无资料

5．消防措施

灭火剂　使用雾状水、水枪、二氧化碳、干粉、泡沫。

不合适的灭火剂	无资料
火灾时的特别危险性	火灾或爆炸时，不要吸入烟雾。 燃烧可能释放有毒气体：一氧化碳。 包含本物质的火灾会产生大量乌黑的浓烟。 发生火灾时，高温分解或燃烧可能会产生刺激和高毒气体。
特别灭火方法	在安全距离处喷水冷却和保护周边地区。 如果没有风险，从火场区域移出容器。 从火场撤离人员到上风处。 无关人员撤离到安全区域。
消防人员的保护	消防人员应佩戴合适的防护装备。

6．泄漏应急处理

人员注意事项、保护器具及紧急措施	清扫泄漏在地面或地板上的颗粒，以防绊倒。
环境注意事项	不要冲洗入下水道或排水沟。 如果颗粒释放到环境中，应采取适当措施防止水生动物和鸟类因食用颗粒而死亡。
收容、清除方法及所使用的处置材料	清扫，放在袋子中以便日后处理。
防止发生次生危害的预防措施	切断所有点火源，禁止火花、吸烟、明火。

7．操作处置与储存

操作处置

技术措施	操作人员接触控制： 操作时不要进食、饮水。 操作时不要吸烟。 不要吸入粉尘。 不要吸入气体、烟雾。 只能在通风良好处使用。
局部通风・全部通风	成型过程中不要吸入生成的气体或烟雾。
注意事项	火灾或爆炸防范措施： 附近不要随意用火。 如果在次级过程中产生粉尘，需采取预防措施防止粉尘爆炸。
安全处置注意事项	防止粉尘沉积。 大部分情况下应有充分良好的通风。 没有防护的情况下请勿接触高温树脂。 不要长时间让本品处于高温条件下。 塑料颗粒容易产生静电，如有必要应采取措施消除静电。 不要倒入下水道。 防止物理损坏。 不要跌落到，或划过尖锐物体。 避免粗暴操作和跌落。 如果产生粉尘，查看每个成分的信息。

存储

技术措施	无资料

安全存储的条件	推荐储存条件： 本品易燃。 储存和操作遵循消防法和地方法规。 不相容储存条件： 远离热源。 远离点火源-禁止吸烟。 远离热源、蒸气管道，避免阳光直射，存放在阴凉处。
安全的包装材料	无资料
禁配物	无资料
注意事项	无资料

8．接触控制/个体防护

工程控制	操作时，采用局部通风消除产生的气体和粉末-粉尘。
监测浓度	未规定
容许浓度	日本产业卫生学会和ACGIH没有规定容许的粉末-粉尘浓度。 以下显示的数据是粉尘的数据：
中国GBZ2.1-2007	未规定
美国ACGIH TLV(s)	第三类粉尘：每小时加权平均值：吸入粉尘 3mg/m^3 总粉尘 10mg/m^3
日本产业卫生学会	第三类粉尘：每小时加权平均值：吸入粉尘 2mg/m^3 总粉尘 8mg/m^3
防护器具	
呼吸系统防护	通风不足的情况下，配戴适当的呼吸设备。 对粉末-粉尘：粉末-粉尘防护面罩。 对来自熔融聚合物的气体：有机气体防护面罩。
手防护	戴合适的手套。 处理熔融聚合物时，戴耐热的防护手套。
眼睛防护	戴防护眼镜或化学安全护目镜。
皮肤和身体防护	穿戴合适的防护服。 应穿上长袖衣服，防止与皮肤直接接触。 处理熔融聚合物时，穿耐热的防护服。
适宜的卫生要求	休息前和工作完毕后要洗手。 工作时禁止进食、饮水和吸烟。

9．理化特性

外观（物理状态、性状、颜色）	白色固体颗粒
气味	无嗅
ｐＨ值	不适用
融点/凝固点	265℃
沸点、初沸点和沸程	无资料
闪点	无资料
引燃温度（自燃温度）	＞400℃
燃烧性（固体，气体）	无资料
燃烧及爆炸范围(上限、下限)	无资料

饱和蒸气压	无资料
相对蒸气密度（空气=1）	无资料
蒸发速度	无资料
密度	1110-1210 kg/m^3
溶解性	无资料
辛醇/水分配系数	无资料
分解温度	无资料
其他理化性质	无资料

１０．稳定性和反应性

稳定性	在通常和预期储存及操作条件下，本品具有稳定性。
危险反应可能性	在通常和预期储存及操作条件下，本品具有稳定性。
避免接触的条件	阳光直射、火、热源等。
禁配物	无资料
分解产物	燃烧时，可能生成黑烟、一氧化碳、二氧化碳、氮氧化物。
其他	无资料

１１．毒理学资料

急性毒性（经口/经皮/吸入）

经口	非此类 根据混合物判断理论分类为“非此类”。
经皮	非此类 根据混合物判断理论分类为“非此类”。
吸入	非此类 根据混合物判断理论分类为“非此类”。
皮肤腐蚀性/刺激性	非此类 根据混合物判断理论分类为“非此类”。
严重眼损伤/刺激性	非此类 根据混合物判断理论分类为“非此类”。
呼吸或皮肤致敏性	不能分类
生殖细胞致突变性 (致突变性)	不能分类
致癌性	非此类 根据混合物判断理论分类为“非此类”。
生殖毒性	不能分类
特异性靶器官系统毒性（一次接触）	非此类 根据混合物判断理论分类为“非此类”。
特异性靶器官系统毒性（反复接触）	非此类 根据混合物判断理论分类为“非此类”。
吸入危险	不能分类
其他	“不能分类”是指根据最新的资料，没有对健康和环境有害影响的实例报道。

１２．生态学资料

生态毒性	不能分类
危害水生环境—急性	非此类 根据混合物判断理论分类为“非此类”。
危害水生环境—慢性	非此类 根据混合物判断理论分类为“非此类”。
生物降解性	不能分类
生物积累性	不能分类
土壤中的迁移性	不能分类

１３．废弃处置

废弃物性质	危险废物□　　一般工业固体废物■
废弃处置方法	
残余废弃物	将内容物及容器分批少量依次进行烧毁废弃。
受污染的包装和容器	如果使用后废弃包装（纸包装、柔韧包装等），需检查是否有树脂残留，根据当地废弃物处理的法律法规进行处理，不要将包装用于其他目的。
废弃注意事项	委托经国家或地方政府许可的专业废弃物处理方承担废弃处理业务，在授权的废弃物收集站进行处理。避免对公众造成滋扰，禁止将含有本品的废弃物（废液，固体废物、清洗排水等）直接丢弃入河流或掩埋于地下。

１４．运输信息

国际规定	
UN分类	无
UN编号	无
品名（UN运输品名）	无
包装类别	无
海洋污染物（是/否）	否
运输注意事项	为阻隔阳光和雨水，有必要进行遮盖。 小心操作，避免包装破损。 注意防止因为分散的颗粒而滑倒。 **塑料**颗**粒容易**产**生静**电，**如有必要采取措施消除静**电。

１５．法规信息

《危险化学品安全管理条例》(2002年国务院344号令),《工作场所安全使用化学品规定》([1996]劳部发423号)等法规，针对化学危险品的安全使用、生产、储存、运输、装卸等方面均作了相应规定。《中华人民共和国职业病防治法》（2001年第60号主席令）：作业现场应加强个人防护，预防职业病。《劳动防护用品选用规则》（GB11651）：根据作业场所的危害类别，选用合适的个体防护措施。《职业病危害因素分类目录》（卫法监发[2002]63号）：本品长期直接接触作业人员有导致职业性皮肤病和眼病的潜在风险。

根据《化学品分类和危险性公示 通则》（GB13690-2009）、《化学品安全技术说明书 内容和项目顺序》（GB/T 16483-2008）、《化学品安全标签编写规定》（GB15258-2009）对本品进行

分类和辨识。

本品已经收录在《中国现有化学物质名录IECSC》中。

本品未列入中国的《危险货物品名表》（GB12268-2005）、《危险化学品名录》（2002版）、《易制毒化学品目录》（2005年国务院445号令）、《高毒物品目录》（2003版）、《剧毒化学品目录》（2002版）、《中国严格限制进出口有毒化学品目录》（2011年）、《禁止进口货物目录》。

１６．其他信息

免责声明：

以上信息仅对应此种特定物质，如果和其它物质结合或在任何过程中使用可能无效，用户有责任根据自己的实际使用情况对此信息的合理性和完整性进行判定，以满足自己的要求。

此信息仅供作为指南使用，不做任何保证，如需更多信息，请咨询我们。

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通常树脂本身是安全的，按比例计算，急性毒性（经口）LD_{50}的计算值为大于 10000。

参考文献：

JIS Z7250(2010)；物质安全数据说明书-第一部分；内容与该项目的顺序。

Test Report

No. CANEC2302185617 Date: 28 Feb 2023 Page 1 of 6

Client Name : TORAY PLASTICS (SZ) LIMITED

Client Address : 450,NANHUAN RD. WEST,SHAJING,BAOAN,SHENZHEN,GUANGDONG PROVINCE CHINA

Sample Name : CM3004V0

Material No. : PA

Lot No. : Z32E2

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

SGS Job No. : CP23-006106 - SZ

Date of Sample Received : 21 Feb 2023

Testing Period : 21 Feb 2023 - 28 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

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

scan to see the report

CA85BA8C

Coral Qiu

Coral Qiu
Approved Signatory

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Testing Center Technical Laboratory.

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Test Result(s) :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN23-021856.014	White plastic grains

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 62321-7-2:2017 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

Test Item(s)	Limit	Unit	MDL	014
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1000	mg/kg	8	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

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Technical Laboratory
检验检测专用章 Inspection & Testing Services

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Test Item(s)	Limit	Unit	MDL	*014*
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) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

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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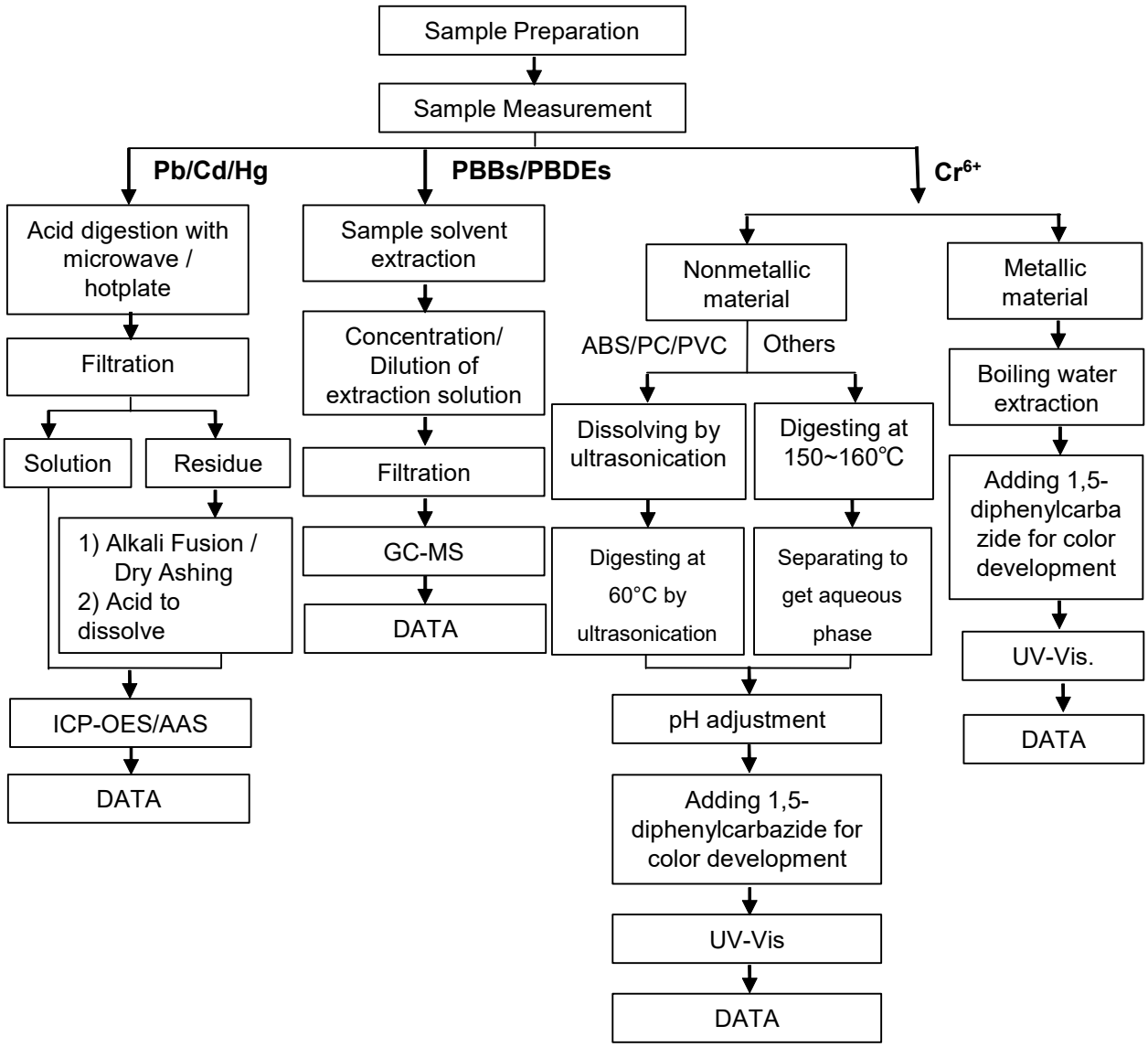
ATTACHMENTS

Pb/Cd/Hg/Cr^{6+}/PBBs/PBDEs Testing Flow Chart

1) 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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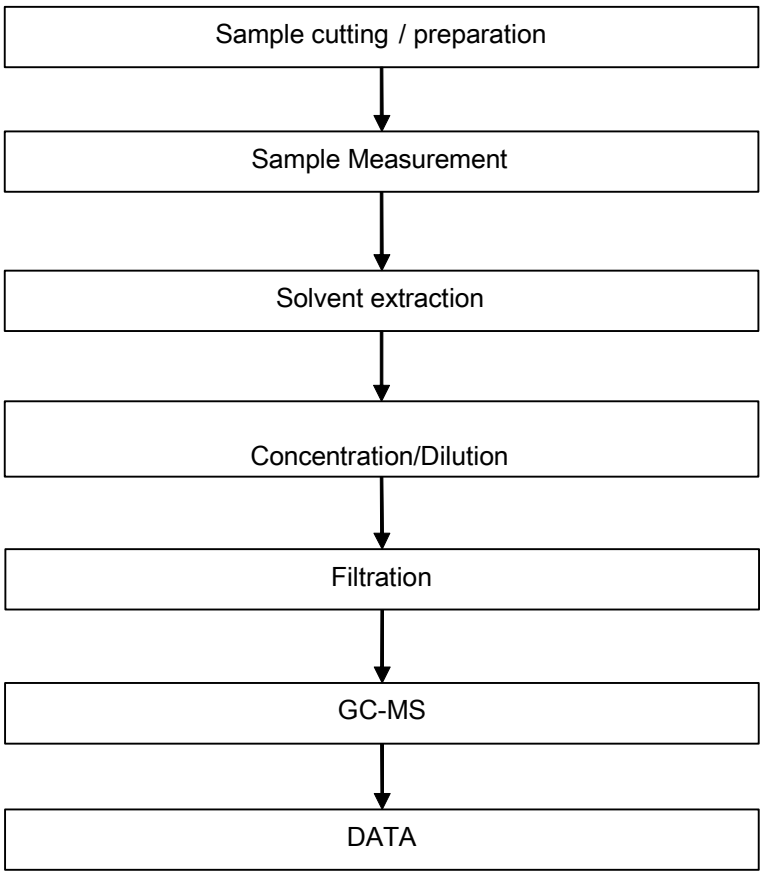
ATTACHMENTS

Phthalates Testing Flow Chart



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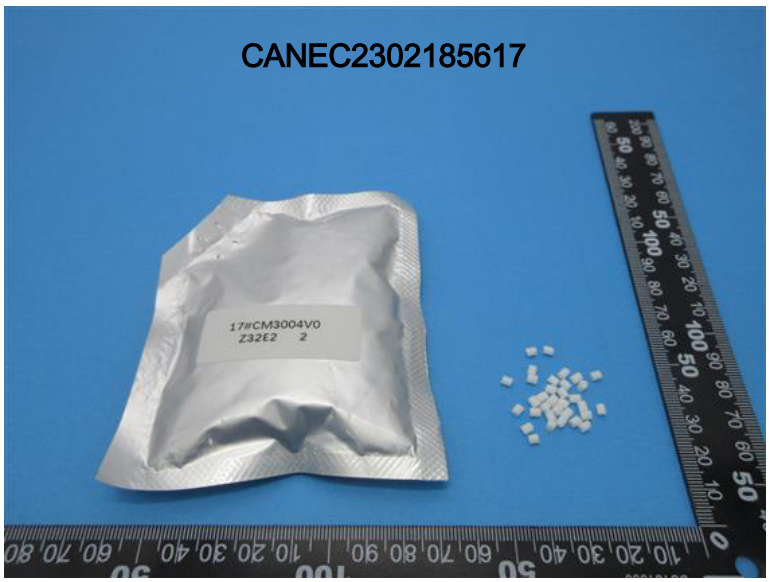
Sample photo:



CAN23-021856.014

SGS authenticate the photo on original report only

*** End of Report ***

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SDS Report

No. SHAEC1900451901 Date: Jan. 16, 2019 Page 1 of 1

Kunshan City win Metal Products Co.,Ltd
369 Xingpu Middle Road, Shipu, Qiandeng Town, Kunshan City, Jiangsu Province

SGS Ref. No.	:	SP19-000706-SH
Sample Name	:	Brass PIN needle
End Uses	:	Electronic Connector
Composition/Ingredient of sample (as per client submission)	:	See *Section 3 Composition/information on ingredients* on the SDS report
Job Receiving Date	:	Jan 08, 2019
Last Information Date	:	Jan 09, 2019
SDS Preparation Period	:	Jan 08 – Jan 15, 2019

Service Requested : Preparation of Safety Data Sheet (SDS) for the sample with submitted information.

Summary : As per request, the contents and formats of the SDS are prepared in accordance with European Commission Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008 and Regulation (EU) No 2015/830, and is provided per attached.

Remark:
This sample is likely to be classified as article with substances not intended to be released and is out of scope of a SDS as set out in Regulation (EC) No 1907/2006. This SDS is generated for client's reference only.

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Wei WANG, Terry
Approved Signatory

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Safety data sheet
Regulation (EC) No.1907/2006 and 1272/2008

Printing date 15.01.2019 **Version number 1** **Revision: 11.01.2019**

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**
· **Trade name:** Brass PIN needle

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Application of the substance / the mixture:** Electronic Connector

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Kunshan City win Metal Products Co.,Ltd
369 Xingpu Middle Road, Shipu, Qiandeng Town, Kunshan City, Jiangsu Province
Tel: 0512-57753999
E-mail: ksdianquan@126.com
· **Only Representative/ other EU contact point:** Not available
· **Further information obtainable from:** Kunshan City win Metal Products Co.,Ltd

· **1.4 Emergency telephone number:**
Yenayan
Tel: 13773158087

· **1.5 Reference Number:** SP19-000706-SH; SHAEC1900451901

· **1.6 Remark:**
This sample is likely to be classified as article with substances not intended to be released and is out of scope of a SDS as set out in Regulation (EC) No 1907/2006. This SDS is generated for client's reference only.

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of Regulation (EC) No. 1272/2008.
· **Classification system:**
The classification is according to the latest edition of EU Regulation (EC) No. 1272/2008, and extended by company and literature data.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms**



GHS09

· **Signal word** Warning

· **Hazard-determining components of labelling:** Not applicable.
· **Hazard statements**
H410 Very toxic to aquatic life with long lasting effects.
· **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P273 Avoid release to the environment.
P391 Collect spillage.

(Contd. on page 2)

Safety data sheet
Regulation (EC) No.1907/2006 and 1272/2008

Printing date 15.01.2019 **Version number 1** **Revision: 11.01.2019**

Trade name: Brass PIN needle

(Contd. of page 1)

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:**
Mixture of the substances listed below with nonhazardous additions.
For the wording of the listed hazard statements refer to Section 16.

· **Composition:**

CAS: 7440-50-8 EINECS: 231-159-6	copper	substance with a Community workplace exposure limit	63.5-68%
CAS: 7440-66-6 EINECS: 231-175-3	Zinc	Aquatic Acute 1, H400; Aquatic Chronic 1, H410	32.5-35%
CAS: 7439-89-6 EINECS: 231-096-4	iron		≤0.03%
CAS: 7439-92-1 EINECS: 231-100-4 Index number: 082-014-00-7	lead	Repr. 1A, H360FD-H362	≤0.009%

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:**
Drink plenty of water and vomit it to a well-ventilated and cool place for rest. Keep warm with a towel. If it is serious, it will be sent to the hospital for examination and diagnosis.
· **After skin contact:**
Clean with clean water. Clothing must be thoroughly cleaned before it can be worn again. If skin irritation, rash or persistent recurrence still occurs, the patient should go to the hospital for diagnosis and treatment.
· **After eye contact:**
Rinse the upper and lower eyelids with plenty of water (at least 15 minutes). If the eyes are irritated and uncomfortable, send them to the doctor immediately for examination.
· **After swallowing:**
Rinse out mouth with water.
Never give anything by mouth to an unconscious person.
Seek medical treatment.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

· **5.3 Advice for firefighters**
· **Protective equipment:**
Mouth respiratory protective device.

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Wear fully protective suit.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Avoid formation of dust.

· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Dispose contaminated material as waste according to item 13.

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
For the general occupational hygienic measures refer to Section 8.
· **Information about fire - and explosion protection:** Normal measures for preventive fire protection.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with oxidising and acidic materials.
· **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
7440-50-8 copper (63.5-68%)	
MAK (Germany)	Long-term value: 0.01 A mg/m³ als Cu
VME (France)	Short-term value: 2** mg/m³ Long-term value: 0.2* 1** mg/m³ *fumées **poussières, en Cu
WEL (Great Britain)	Short-term value: 2** mg/m³ Long-term value: 0.2* 1** mg/m³ *fume **dusts and mists (as Cu)
7440-66-6 Zinc (32.5-35%)	
MAK (Germany)	Long-term value: 0.1A* 2E** mg/m³ *alveolengängig; **einatembar

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7439-92-1 lead (≤0.009%)	
BOELV (EU)	Long-term value: 0.15 mg/m³ as Pb
MAK (Germany)	vgl.Abschn.XII
VME (France)	Long-term value: 0.15 mg/m³

· **Regulatory information**
MAK (Germany): MAK- und BAT-Liste
VME (France): ED 984, 10.2016
WEL (Great Britain): EH40/2018
BOELV (EU): 98/24/EG
· **DNELs:** Data not available.
· **PNECs:** Data not available.

· **Ingredients with biological limit values:**	
7439-92-1 lead	
BGW (Germany)	300 µg/l Untersuchungsmaterial: Vollblut Probennahmezeitpunkt: keine Beschränkung Parameter: Blei Frauen < 45 J. 400 µg/l Untersuchungsmaterial: Vollblut Probennahmezeitpunkt: keine Beschränkung Parameter: Blei

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Based on the composition shown in Section 3, the following measures are suggested for occupational safety measure**
· **Appropriate engineering controls**
Wash hands before breaks and at the end of work.
See Section 7 for information about design of technical facilities.

· **Personal protective equipment**
· **Respiratory protection:** Suitable respiratory protective device recommended.
· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
· **Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material:**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**



Tightly sealed goggles

· **Environmental exposure controls:**
Control measures must be made in accordance with Community environmental protection legislation.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Solid
Colour:	Yellow
· **Odour:**	Odourless
· **Odour threshold:**	Data not available.
· **pH-value:**	Data not available.
· **Change in condition:**	
Melting point/freezing point:	904-954 °C
Initial boiling point and boiling range:	Data not available.
· **Flash point:**	Data not available.
· **Flammability (solid, gas):**	Data not available.
· **Auto-ignition temperature:**	Data not available.
· **Decomposition temperature:**	Data not available.
· **Self-igniting:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits**	
Lower:	Data not available.
Upper:	Data not available.
· **Oxidizing properties:**	Data not available.
· **Vapour pressure:**	Data not available.
· **Density:**	Data not available.
· **Relative density:**	Data not available.
· **Vapour density:**	Data not available.
· **Evaporation rate:**	Data not available.
· **Solubility in / Miscibility with**	
water:	Data not available.
· **Partition coefficient: n-octanol/water:**	Data not available.
· **Viscosity:**	
Dynamic:	Data not available.
Kinematic:	Data not available.
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No decomposition if used according to specifications.

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· **10.2 Chemical stability**
At normal room temperature and atmospheric pressure, it is a stable substance and an inactive substance.

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.

· **10.4 Conditions to avoid** No further relevant information available.

· **10.5 Incompatible materials:** No further relevant information available.

· **10.6 Hazardous decomposition products:**
When heated to the decomposition temperature, metal oxides and metal fumigation occur. Metal fumigation may cause flu-like symptoms.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
7439-89-6 iron		
Oral	LD50	30,000 mg/kg (rat)

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

· **12.7 Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms

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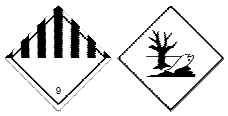
SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation:**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR/RID/ADN, IMDG, IATA**	UN3077
· **14.2 UN proper shipping name**	
· **ADR/RID/ADN, IATA**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc)
· **IMDG**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc), MARINE POLLUTANT
· **14.3 Transport hazard class(es)**	
· **ADR/RID/ADN, IMDG, IATA**	
· **Class**	9 Miscellaneous dangerous substances and articles.
· **Label**	9
· **14.4 Packing group**	
· **ADR/RID/ADN, IMDG, IATA**	III
· **14.5 Environmental hazards**	
· **Marine pollutant:**	Symbol (fish and tree)
· **Special marking (ADR/RID/ADN):**	Symbol (fish and tree)
· **Special marking (IATA):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Miscellaneous dangerous substances and articles.
· **Danger code (Kemler):**	90
· **EMS Number:**	F-A,S-F
· **Stowage Category**	A
· **Stowage Code**	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **14.8 Transport/Additional information:**	
· **ADR/RID/ADN**	
· **Limited quantities (LQ):**	5 kg
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· **Transport category:**	3
· **Tunnel restriction code:**	-

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· **IMDG**	
· **Limited quantities (LQ)**	5 kg
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· **UN "Model Regulation":**	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC), 9, III
· **Remark**	When transporting, the product should not be in direct contact with water, and should pay attention to the danger of slipping and falling.

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **MAK(German Maximum Workplace Concentration)**

7439-92-1	lead	2

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** E1 Hazardous to the Aquatic Environment
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
· **National regulations:**
· **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
· **Other regulations, limitations and prohibitive regulations**

· **SVHC Candidate List of REACH Regulation Annex XIV Authorisation (27/6/2018)**

None of the ingredients is listed.

· **REACH Regulation Annex XVII Restriction (10/10/2018)**
See Section 16 for information about restriction of use.

None of the ingredients is listed.

· **REACH Regulation Annex XIV Authorisation List (13/6/2017)**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

· **Relevant hazard statements**
H360FD May damage fertility. May damage the unborn child.
H362 May cause harm to breast-fed children.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Classification according to Regulation (EC) No 1272/2008**

Hazardous to the aquatic environment - short-term (acute) aquatic hazard Hazardous to the aquatic environment - long-term (chronic) aquatic hazard	The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

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The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006, 1272/2008 and Regulation (EU) No 2015/830.

DISCLAIMER OF LIABILITY :
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or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

· **Remark**
This sample is likely to be classified as article with substances not intended to be released and is out of scope of a SDS as set out in Regulation (EC) No 1907/2006. This SDS is generated for client's reference only.

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Repr. 1A: Reproductive toxicity – Category 1A
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
. **********

End of document

Test Report

No.: SHAEC23012555401 **Date:** Aug 18, 2023

Client Name: Kunshan City win Metal Products Co.,Ltd

Client Address: No. 369, Xingpu Middle Road, Shipu, Qiandeng Town, Kunshan City, Jiangsu Province

Sample Name: H65 Brass wire

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

SGS Job No.: SHP23-010405

Sample Receiving Date: Aug 15, 2023

Testing Period: Aug 15, 2023 ~ Aug 18, 2023

Test Requested: Select 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).

Test Requirement	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
Tetrabromobisphenol A (TBBP-A)	See Results
Alkanes C14-C17, chloro (medium- chain chlorinated paraffins) (MCCPs)	See Results

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Carol Luo
Approved Signatory

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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A1	SHA23-0125554-0001.C001	Golden metal wire

Remarks:

(1) 1 mg/kg = 1 ppm = 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+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 and IEC62321-8:2017, analysis was performed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A1
Cadmium(Cd)	100	mg/kg	2	ND
Lead(Pb)	1000	mg/kg	2	21
Mercury(Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI)) ▼	-	µg/cm²	0.10	ND
Polybromobiphenyl (PBBs)	1000	mg/kg	-	ND
Monobromobiphenyl (MonoBB)	-	mg/kg	5	ND
Dibromobiphenyl (DiBB)	-	mg/kg	5	ND
Tribromobiphenyl (TriBB)	-	mg/kg	5	ND
Tetrabromobiphenyl (TetraBB)	-	mg/kg	5	ND
Pentabromobiphenyl (PentaBB)	-	mg/kg	5	ND
Hexabromobiphenyl (HexaBB)	-	mg/kg	5	ND
Heptabromobiphenyl (HeptaBB)	-	mg/kg	5	ND
Octabromobiphenyl (OctaBB)	-	mg/kg	5	ND
Nonabromobiphenyl (NonaBB)	-	mg/kg	5	ND
Decabromobiphenyl (DecaBB)	-	mg/kg	5	ND
Polybromodiphenyl ether(PBDEs)	1000	mg/kg	-	ND
Monobromodiphenylether (MonoBDE)	-	mg/kg	5	ND
Dibromodiphenylether (DiBDE)	-	mg/kg	5	ND
Tribromodiphenylether (TriBDE)	-	mg/kg	5	ND
Tetrabromodiphenylether (TetraBDE)	-	mg/kg	5	ND
Pentabromodiphenylether (PentaBDE)	-	mg/kg	5	ND
Hexabromodiphenylether (HexaBDE)	-	mg/kg	5	ND
Heptabromodiphenylether (HeptaBDE)	-	mg/kg	5	ND
Octabromodiphenylether (OctaBDE)	-	mg/kg	5	ND
Nonabromodiphenylether (NonaBDE)	-	mg/kg	5	ND
Decabromodiphenylether (DecaBDE)	-	mg/kg	5	ND
Dibutyl Phthalate(DBP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate(BBP)	1000	mg/kg	50	ND

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Test Item(s)	Limit	Unit(s)	MDL	A1
Bis-(2-ethylhexyl) Phthalate(DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalate(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 Cr(VI) if the Cr(VI)concentration is greater than 0.13 μg/cm². The sample coating is considered to contain Cr(VI)
b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 μg/cm²). The coating is considered a non-Cr(VI) 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.

Tetrabromobisphenol A (TBBP-A)

Test Method: With reference to SGS in house method, analysis was performed by GC-MS or LC-MS.

Test Item(s)	CAS No.	Unit(s)	MDL	A1
Tetrabromobisphenol A (TBBP-A)	79-94-7	mg/kg	5	ND

Alkanes C14-C17, chloro (medium- chain chlorinated paraffins) (MCCPs)

Test Method: With reference to ISO 22818:2021,analysis was performed by GC-NCI-MS.

Test Item(s)	CAS No.	Unit(s)	MDL	A1
Alkanes C_{14}-C_{17}, chloro (medium- chain chlorinated paraffins) (MCCPs)	85535-85-9 and others	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.

SGS-CSTC Standards Technical Services (Shanghai) Co.,Ltd. Testing Center-Chemical Laboratory

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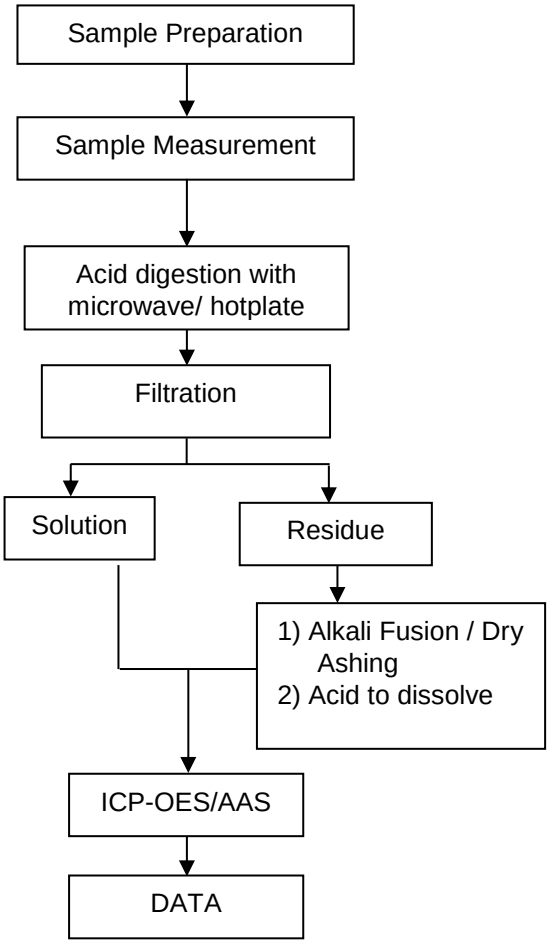
Elements Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.



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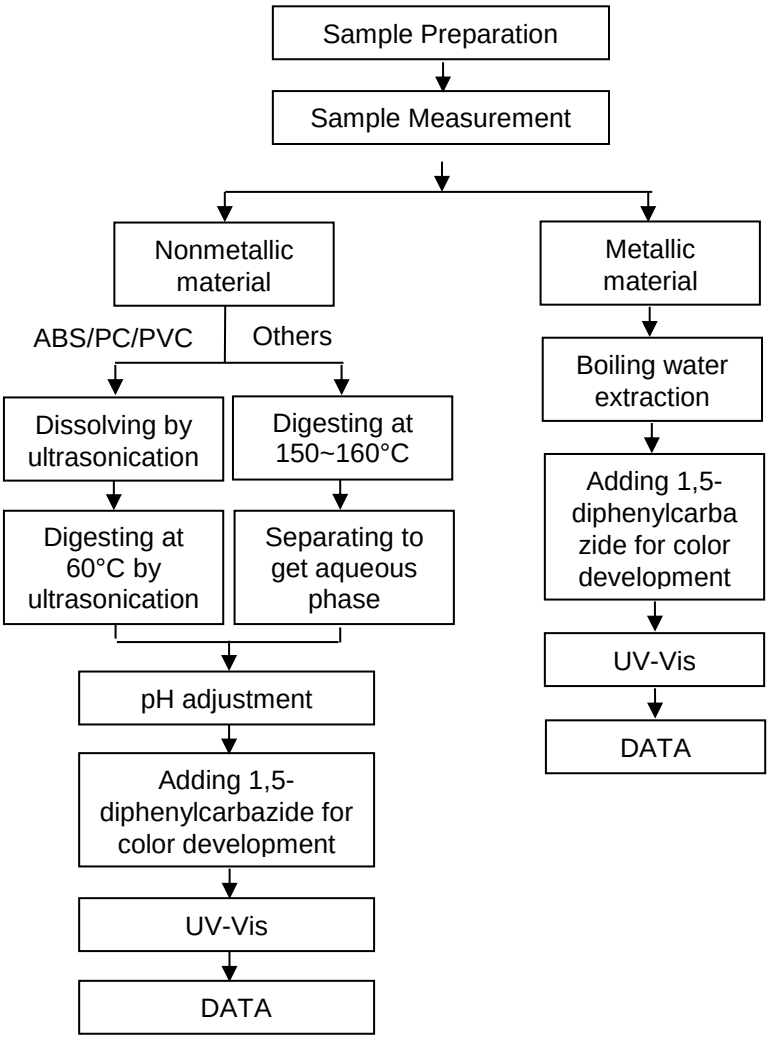
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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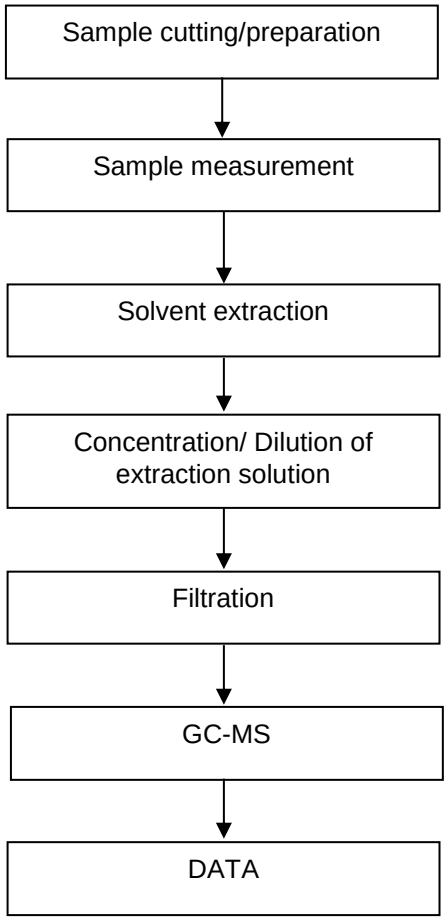
PBBs/PBDEs Testing Flow Chart



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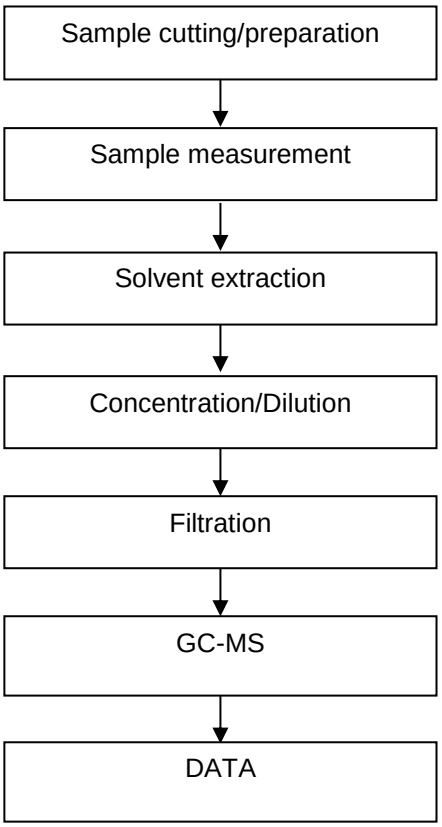
Phthalates Testing Flow Chart



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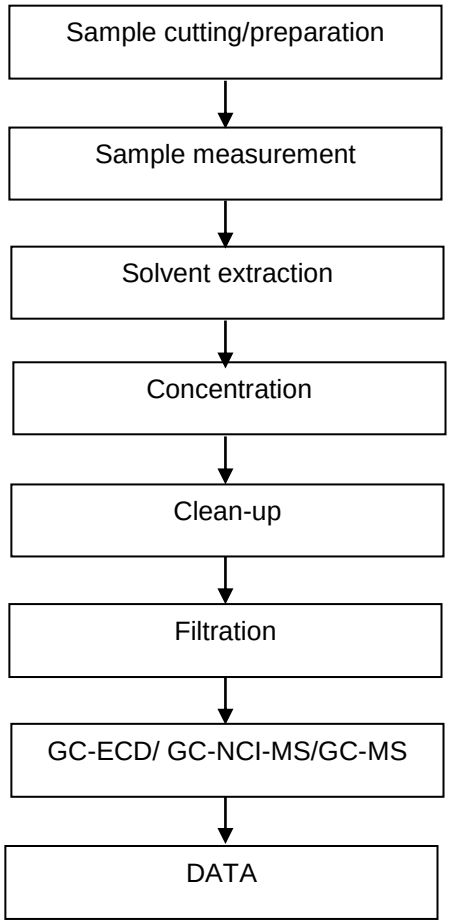
Chlorinated Paraffin Testing Flow Chart



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Sample Photo:



SHA23-0125554-0001.C001

SGS authenticate the photo on original report only

*** End of Report ***

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昆山市点赢金属制品有限公司	生效日期：	2016年5月20日
	版本号：	A0
标题：镍镀层物质安资料表	页码编号：	1/4

MSDS

1：产品及制造商信息

产品信息

中文名称：镍　　英文名称：Ni

公司信息

注册名称：昆山市点赢金属制品有限公司

地　址：江苏省昆山市千灯镇石浦兴浦中路369号

电　话：0512-57753999　传　真：0512-57739555

2：相关组分信息

物质成分：

镍金属：100%　　CAS:7440-02-0

其他毒害物质：不清楚

3：危害信息

本品不可燃。建议参考现场的其他物质；

吸入、接触或咽下会产生剧烈的、致使的中毒症状；

4：急救措施

因吸入接触时

将病人转移到新鲜空气中，保持病人体温和安静；

如果呼吸不规则或已停止，进行口对口的人工呼吸或求医。不得给病人吃任何药物；

如果病人没有意识，将病人安置好后叫救护车。

眼睛接触

眼睛张开，用大量水冲洗十分钟以上，如眼眼发红、灼痛或视力减退，应向眼科医生

皮肤接触

立即脱掉所有受污染的衣服，清除污染后才能重新使用。用大量的水冲洗接触皮肤。

吞咽

立即就医并告之吞咽物名称。

5：灭火措施

适用灭火器：水、泡沫、干粉及二氧化碳灭火器；

灭火时可能遇到之特殊危害：无相关资料可看

特殊灭火程序：不适用

6：防护措施

安全预防措施：

避免皮肤接触、眼睛接触。绝对避免吸入产品粉尘。

环境安全预防措施：

防止任何物料流入下水道；

根据相关规定对回收的废物进行处理；

如果产品对下水道、江河造成污染，应根据法律程序向相关政府部门示警。

清除措施：

可被氯水破除；

收集产品，达到一定的量后用氯水处理。

7：装卸和储存

装卸：

在通风良好的区域进行。

推荐设备和程序：

关于个人安全，参见第8项；

遵守产品标签陈述的防范规定和工业安全规章；

任何情况下，必须回收散落的作业区内产品。

禁用设备和禁止程序：

禁止在预备用于装卸的作业区内吸烟和饮食。

储存：

存放在干燥、通风良好的区域，储存容器密闭良好；

远离食物及饮水（包括提供给动物的）；

必须在下列条件下储存：储存间只有授权人才能进入，无酸存在。

8：暴露控制和个人防护

技术措施：

保证足够的通风，如果可能，在工作地点安装风扇进行适当的换风；

定期检查空气情况。

安全呼吸器具：

戴呼吸面罩。

手的防护：

戴手套操作。

眼睛和面部防护：

戴护目镜。

皮肤防护：

更多信息请参圪第11项--毒物学信息。

9：物理化学性质

物质状态：固体

颜色：灰白色

密度：8.9g/cm³(25°C)

分子量：不适用

沸点：不适用

气味：无气味

水中溶解度：不深解于水

10：稳定性和反应活性

与酸反过氧化氢等强酸性及强氧化性物质接触，应产生大量的氢气可形成爆炸性混合物在中。

有害分解产物：无

11：毒物学信息

吸入时：

人类吸入：在浓度为200 to 400mg/m³(ppm)的空气中呼吸几分导致死亡。

吞咽时：

无相关数据。

皮肤接触时：

Draize实验数据不详，但由于产品的腐蚀性，后果可能很严重。

眼睛接触时：

Draize实验数据不详，但由于产品的腐蚀性，后果可能很严重。

12:生态学信息

本产品不允许排入下水道。

迁移性：

土壤中极易扩散。

降解充：

本品可生物降解。

聚积性：

不可聚积。

水中毒性：

无毒害。

13：废品处置

能被氧化氢等强酸性及强氧化性物质破除（使用前请参考它们的物料安全资料）。

14：运输信息

本品运输须遵守的相关规定：公路运输遵守ADR;

铁路运输遵守RID;

海运遵守IMDG;

航空运输遵守ICAO/IATA。

15：法规信息

毒性化学物质管理法

危险物及有害物通识规则

特殊规定：

符合欧盟ROHS标准。

16：其他信息

由于我们不知道使用者的工作条件，故本资料是根据我们目前所涉及的国家相关法规而制的。本产品不可在项止1规定以外的场合使用，不可在未取得安全资料时使用。

任何时候，使用者在使用中应彩取必要的措施遵守当地法规。

本资料只作为一种描述性的信息而不作为产品性质的声明。

昆山市点赢金属制品有限公司	生效日期：	2015年12月20日
	版本号：	A0
标题：物质安全资料表	页码编号：	1/3

MSDS

1：产品及制造商信息

产品信息

中文名称：PIN针镀层：锡

公司信息

注册名称：昆山市点赢金属制品有限公司

地　　址：江苏省昆山市千灯镇石浦兴浦中路369号

电　　话：0512-57753999　　传　　真：0512-57739555

2：相关组分信息

物质成分：

锡金属：99.99%　　CAS:7440-31-5

其他毒害物质：不清楚

3：危害信息

纯锡是一种银白色固体，不可燃，不可爆，对口腔和皮肤无毒；

对健康的影响

本品通常不会从呼吸道进入人体，从皮肤接触进入人体也并不常见，因为完好的皮肤很难吸收纯锡；

吸入:纯锡镀层没有粉尘，不会造成鼻子和喉咙有刺激感；

眼睛接触：纯锡对眼睛无刺激；

皮肤接触:纯锡对完好的皮肤无刺激；

摄入：含有纯锡的产品是不宜食用的，无水硼砂有低毒，误食少量（如：一茶匙）不会有影影响。大量吞食会引起肠胃不适。

癌症:纯锡不是致癌物；

生殖、发育：动物实验表明：当纯锡的摄入量较高时不会影响动物的生殖和发育；
对长期接触纯锡的职业工人的实验表明：对人体的生殖系统无副作用。

4：急救措施

吸入

一般不会吸入；

眼睛接触

对眼睛无影响；

皮肤接触

无任何伤害；

吞食

立即就医并告之吞咽物名称。

5：灭火措施

纯锡不可燃，不可爆，因此在通常情况下不会燃烧，一旦附近燃烧着火，任何灭火剂都可用来灭火；

6：防护措施

纯锡是一种银白色的固体，树木、植树的根部吸收后不会受到损害（见第12部分）

散落在地面： 用吸尘器、铁锹或把散落的纯锡球/板拾起然后回收利用，在清扫过程中无需任何防护措施；

7：装卸和储存

装卸无特殊要求，储存要在室内并保持干燥的环境条件以减少破损，先入库的货物要先出库，良好的储存环境可以避免灰尘的产生；

8：操作控制和个人保护

个人保护：

当粉尘含量超标时应戴口罩，当粉尘含量严重超标时，会提供护目镜和手套等用品；

职业接触极限： 在ACGIH中纯锡的TLV(极限值)是10mg/m³

9：物理化学性能

外观：银白色固体

比重：7.3

熔点：232°C

分子量：118.7

Physical and chemical properties

Physical form	silvered Solid
S.G.	7.3
Melting point	232°C
Molecular weight	118.7

10：稳定性和活性

纯锡是一种稳定的产品，抗腐蚀，耐变色、无毒；

危险的分解：无

11：毒物学资料

食入：对口腔无毒性

皮肤接触：

对表皮的毒性较低，兔子的致死量是2,000mg/kg体重，破损的皮肤对纯锡球/板的吸收无；

吸入:无毒

皮肤刺激性:无

眼睛刺激性:纯锡对人类的眼睛无副作用；

敏感作用：纯锡不是皮肤敏感剂；

致癌试验：老鼠试验未发现癌变，在短期诱变试验中未观察到纯锡球/板有致癌的因素；

人类数据：人类传染病学研究表明：长期接触纯锡球/板没有使得肺病的人数增加。最近的传染病学研究表明：在正常的职业环境里接触纯锡球/板粉尘不会影响人类的生育能力；

12:生态学信息

生态毒性数据

植物毒性学：无

对海藻的毒性：无

13：锡垃圾的处理

少量的锡一般可回收利用,无特殊处理要求,建议先堆放起来备用；

14：运输信息

国际运输:纯锡没有联合国编码,因此,铁路、公路、水路和空运都是可通行的。

公路运输遵守ADR；

铁路运输遵守RID；

海运遵守IMDG；

航空运输遵守ICAO/IATA。

15：规章、条例

化学品目录：（10043-35-3）纯锡球/板出现在许多化学品目录中（包括BRA TSCA 目录，加拿大DSL,欧洲的EINECS，日本的MITI，澳大利亚和韩国的目录）并且经常用CAS NO代表脱水的无机物。

U.S EPA TSCA Inventory	10043-35-3
加拿大DSL	10043-35-3
EINECS	（1）-63
韩国	（1）-63
日本MITI	1-439

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结论 Conclusion

测试样品 **Tested Sample**	**依据标准/指令** **According to standard/directive**	**结果** **Result**
提交样品 Submitted Sample	欧盟RoHS指令2011/65/EU及其修订指令(EU) 2015/863 RoHS Directive 2011/65/EU with amendment (EU) 2015/863	符合 PASS

****

符合表示检测结果满足欧盟RoHS指令2011/65/EU及其修订指令(EU) 2015/863要求的限值。
PASS means that the results shown on the report comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.

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检测依据 Test Method

测试项目 Test Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
铅 Lead (Pb)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
镉 Cadmium (Cd)	参考IEC 62321-5:2013 Refer to IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	参考IEC 62321-4:2013+AMD1:2017 CSV Refer to IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
多溴联苯 Polybrominated Biphenyls (PBBs)*	IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*	IEC 62321-6:2015	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*	IEC 62321-8:2017	GC-MS

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检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	001		
铅 Lead (Pb)	76 mg/kg	2 mg/kg	1000 mg/kg
镉 Cadmium (Cd)	N.D.	2 mg/kg	100 mg/kg
汞 Mercury (Hg)	N.D.	2 mg/kg	1000 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	N.D. ▼	0.10 μg/cm² (LOQ)	1000 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	001		
多溴联苯 Polybrominated Biphenyls (PBBs)*			
一溴联苯 Monobromobiphenyl	N.D.	5 mg/kg	1000 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	5 mg/kg	
三溴联苯 Tribromobiphenyl	N.D.	5 mg/kg	
四溴联苯 Tetrabromobiphenyl	N.D.	5 mg/kg	
五溴联苯 Pentabromobiphenyl	N.D.	5 mg/kg	
六溴联苯 Hexabromobiphenyl	N.D.	5 mg/kg	
七溴联苯 Heptabromobiphenyl	N.D.	5 mg/kg	
八溴联苯 Octabromobiphenyl	N.D.	5 mg/kg	
九溴联苯 Nonabromobiphenyl	N.D.	5 mg/kg	
十溴联苯 Decabromobiphenyl	N.D.	5 mg/kg	

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	001		
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*			
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg	1000 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg	
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg	
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg	
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg	
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg	
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg	
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg	
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg	
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg	

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检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result 001	方法检出限 MDL	限值 Limit
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*			
邻苯二甲酸二丁酯 Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸二(2-乙基)己酯 Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸二异丁酯 Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg

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样品/部位描述Sample/Part Description

序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	001	银白色镀层 Silver-white plating

备注: **对于检测铅，镉，汞之样品已消解完全。**
-N.D. = 未检出 (小于方法检出限或定量限)
-mg/kg = ppm = 百万分之一
-1000 mg/kg = 0.1%
-LOQ = 定量限，六价铬的定量限为0.10 μg/cm²
-▼六价铬浓度小于0.10 μg/cm²，样品未检出六价铬。

Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL or LOQ)
-mg/kg = ppm = parts per million
-1000 mg/kg = 0.1%
-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm²
-▼The sample is negative for Cr(VI) − The Cr(VI) concentration is below 0.10 μg/cm². The coating is considered a non-Cr(VI) based coating.

注释:
-“*”表示该项目/方法不在CNAS认可范围内。
-本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。
-本报告于原报告(报告编号A2230173873101001E)基础上增加了“结论/限值”。本报告替换原报告A2230173873101001E，自本报告签发之日起，原报告A2230173873101001E作废。

Note:
-“*”indicates the Item/method(s) is not in CNAS accreditation scope.
-The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.
-This testing report added “Conclusion/ Limit” based on the original report of No. A2230173873101001E. This testing report displaces the original one which was invalid since the date of this testing report released.

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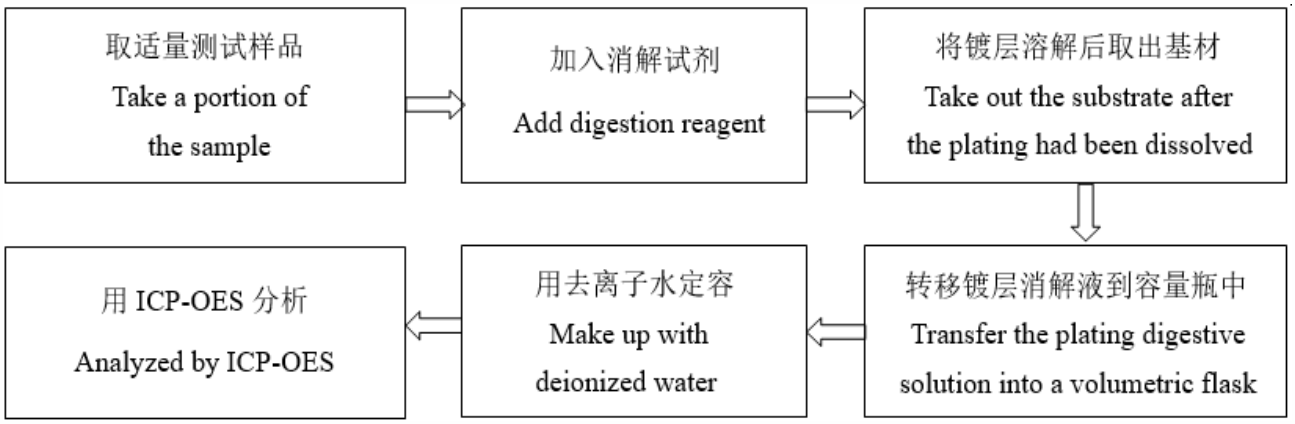
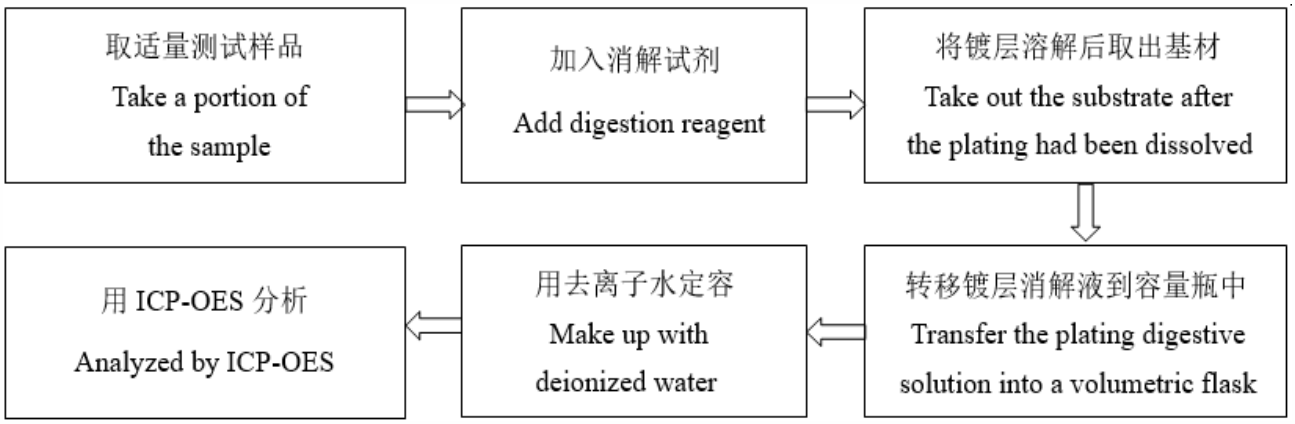
检测流程 Test Process

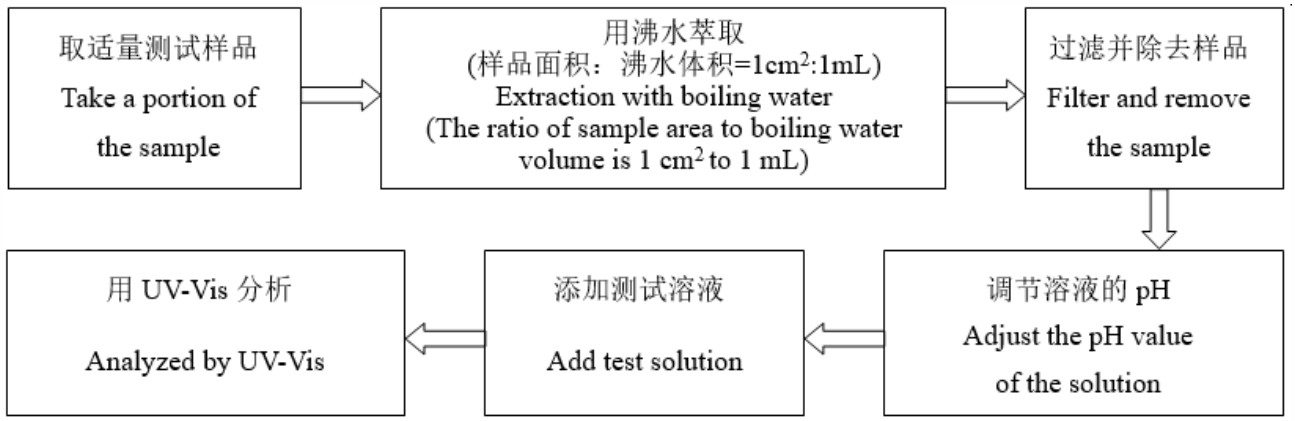
1. 铅(Pb)， 镉(Cd)
   Lead (Pb), Cadmium (Cd)



2. 汞(Hg)
   Mercury (Hg)

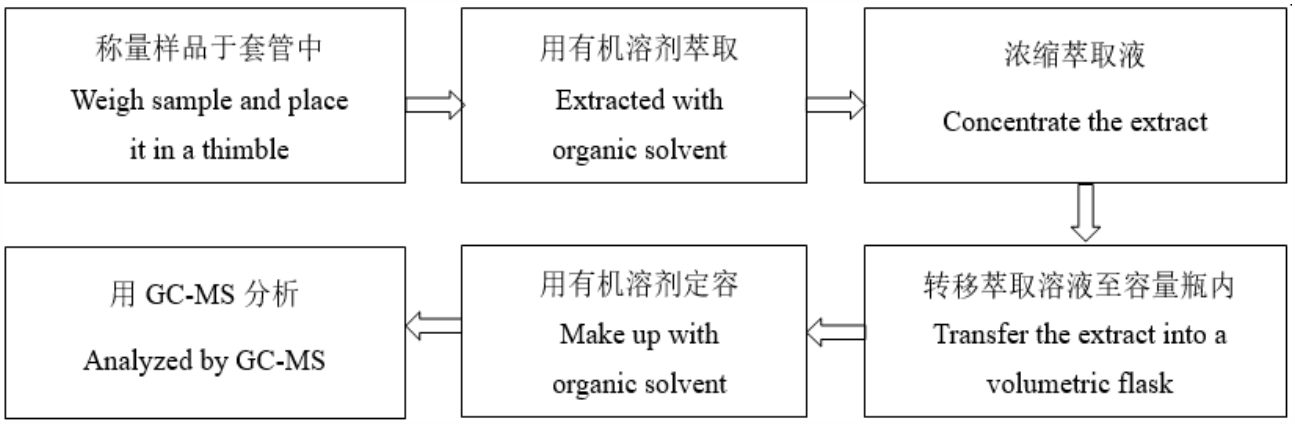


3. 六价铬(Cr(VI))
   Hexavalent Chromium (Cr(VI))



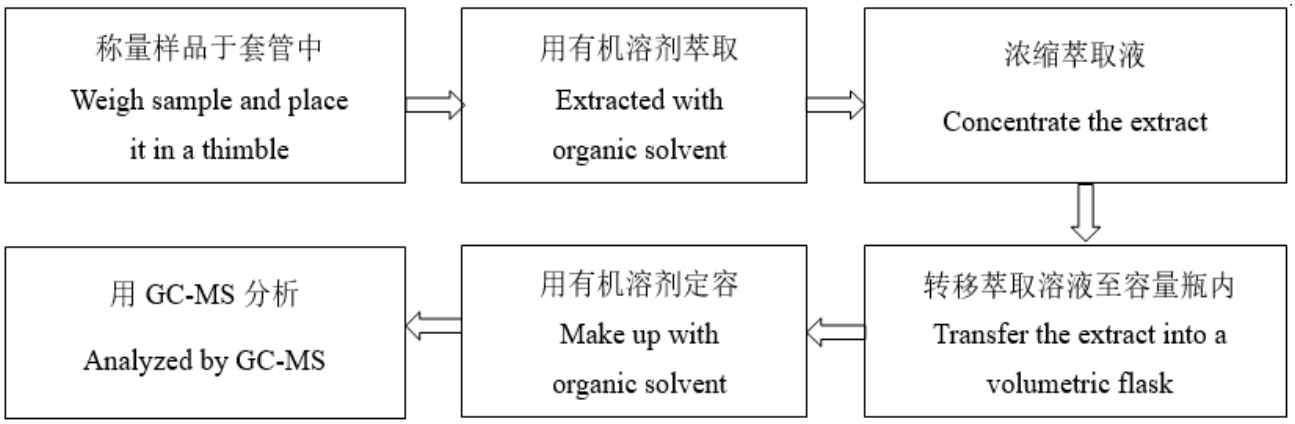
4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)

Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)

Phthalates (DBP, BBP, DEHP, DIBP)



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样品图片
Photo(s) of the sample(s)



声明Statement：

1. 检测报告无批准人签字、“专用章”及报告骑缝章无效；
   This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. 报告抬头公司名称及地址、样品及样品信息由申请者提供，申请者应对其真实性负责，CTI未核实其真实性；
   The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn’t verified;
3. 本报告检测结果仅对受测样品负责；
   The result(s) shown in this report refer(s) only to the sample(s) tested;
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   In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

报告结束
*** End of report ***