

APPROVAL SHEET

Customer: ALL

Customer P/N: _____

Connfly P/N: DS1033

Description: D-SUB SOLDER TYPE

File Number: CXAS-220214002

Customer Signature:

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

CONNFLY

Made By	Checked By	Approved By
JLZ	HZW	LJC
Date: 2022/2/14	Date: 2022/2/14	Date: 2022/2/14



CONNFLY ELECTRONIC CO., LTD

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

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

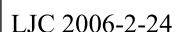
Fax: +86-574-63510817


E-mail:sale@connfly.com


<http://www.connfly.com>


Materials Information


Item	Part Name	Materials	Finished
1	Contact	Brass	Tin or Gold
2	Male Front Shell	Steel	Full Nickel
3	Female Front Shell	Steel	Full Nickel
4	Back Shell	Steel	Full Tin
5	Rivet	Copper Alloy	Full Nickel
6	Male Housing	PBT	UL94 V-2
7	Female Housing	PBT	UL94 V-2
8	Female Cover	PBT	UL94 V-2


[illegible]


	D-SUB Series connector Product Specification	DOC. No.:ZQ-IPS-DS1033		Rev.:A	Page:2/8
		Approved/Date		Checked/Date	Written/Date
		LJC 2006-2-24		LJC 2006-2-24	LJC 2006-2-24
<p>1.0 Scope : This specification covers the requirements for product performance and test methods of Connfly's D-SUB 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.</p> <p>2.0 Rating :</p> <p>2.1 Voltage Rating : 250 Vac (rms)</p> <p>2.2 Temperature Range: operating : -40°C to +105°C :</p> <p>3.0 Test Condition:</p> <p>All tests shall be performed as bellow conditions unless otherwise specified.</p> <p>3.1 Temperature range : +15°C to +35°C</p> <p>3.2 Humidity range: 25% to 85%</p> <p>3.3 Atmospheric Pressure : 86KPa to 106KPa</p> <p>4.0 Test Methods and Requirements:</p> <p>4.1 Examination of product:</p>					
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.	

<div></div>		D-SUB Series connector Product Specification	DOC. No.:ZQ-IPS-DS1033		Rev.:A	Page:3/8
			Approved/Date		Checked/Date	Written/Date
			LJC 2006-2-24		LJC 2006-2-24	LJC 2006-2-24
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 D-SUB 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		

		D-SUB Series connector Product Specification	DOC. No.:ZQ-IPS-DS1033		Rev.:A	Page:4/8
			Approved/Date		Checked/Date	Written/Date
			LJC 2006-2-24		LJC 2006-2-24	LJC 2006-2-24
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 D-SUB 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		

		D-SUB Series connector Product Specification	DOC. No.:ZQ-IPS-DS1033		Rev.:A	Page:5/8
			Approved/Date		Checked/Date	Written/Date
			LJC 2006-2-24		LJC 2006-2-24	LJC 2006-2-24
4.3 Mechanical Performance:						
Item	Test Description	Test Methods		Requirement		
4.3.1	Durability	EIA 364-09 Mate and unmate Connector assemblies for 500 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 D-SUB 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).Shall meet visual requirement and electrical performances.		
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 D-SUB connector.		0.5*pos. Kgf maximum		

<div></div>		D-SUB Series connector Product Specification	DOC. No.:ZQ-IPS-DS1033		Rev.:A	Page:6/8
			Approved/Date		Checked/Date	Written/Date
			LJC 2006-2-24		LJC 2006-2-24	LJC 2006-2-24
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 D-SUB connector.		0.1*posKgf minimum		

<div></div>		D-SUB Series connector Product Specification	DOC. No.:ZQ-IPS-DS1033		Rev.:A	Page:7/8
			Approved/Date		Checked/Date	Written/Date
			LJC 2006-2-24		LJC 2006-2-24	LJC 2006-2-24

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°C 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 D-SUB 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°C, 60 Seconds Temperature : 260±5 °C Immersion duration : 5 ± 1 sec.	1). No mechanical defect on housing or other parts.

宁波长振铜业有限公司

NINGBO CITY CHANGZHEN COPPER CO., LTD

产品质量证明书

PRODUCTS QUALITY GUARANTEE

2008. 年 (YEAR) / 月 (MONTH) 3 日 (DAY)

证明书号 GUARANTEE NO: 880803-1

TOY: 黄浦区绿岛

订货合同 编号 CONTRACT NO.	产品名称及规格 ITEM NO. & SPECIFICATION						重量 REAL DELIVERY	
	牌号 CODE	状态 CONDITION	名称 NAME	规格 (mm) SPECIFICATION	长度 (mm) LENGTH	重量 (千克) WEIGHT (Kg)		
	1400001	Y2	H0000	50.7		14500.00	重量 WEIGHT	数量 QUANTITY
化学成分 CHEMICAL COMPOSITION	元素 ELEMENT	铜 Cu	铁 Fe	铝 Al	硅 Si	砷 As	磷 P	其他杂质 IMPURITY SUM
	含量 (%) Concentration	2.93	0.0004	0.0002	—	—	—	—
机械性能 MECHANICAL PROPERTY	抗拉强度 (σb) MPa	抗拉强度 TENSILE STRENGTH				屈服强度 YIELD STRENGTH	伸长率 ELONGATION	断面收缩率 REDUCTION OF AREA

产品技术标准
ARTICLE TECHNICAL CONDITION
GB/T 1527-2001 标准
GB/T 1527-2001 STANDARD MADE

本证明书由本厂签发，其效力仅限于本厂生产的产品。如有冒用，本厂概不负责。
This certificate is issued by our factory, its validity is limited to the products produced by our factory. If there is any misuse, our factory is not responsible.

材 质 证 明

MATERIAL FORMULATION CONFIDENTIAL REPORT

SUPPLIER:
TYPE OF MATRIAL: PBT(Poly Butylene Terephthalate)聚丁烯对苯二甲酸酯
Specification: PBT

Description: PBT 复合材料包含 PBT 树脂、玻璃纤维、阻燃剂、其它。
The raw material of PBT compound contains PBT pure resin, glass fiber, flame retardant, and additives.

PBT 复合材料成分表
Chemical Composition of PBT Compound

规格 Grade		PBT FR NGF		
组成 Chemical Composition		Molecular Formula	CAS Number	含量 (%) Content(%)
1	PBT 树脂 PBT Resin	$(CH_2-CH_2-CH_2-CH_2-O-C-O-C-O)_N$	26062-94-2	52~63
2	玻璃纤维 Glass Fiber	$SiO_2 \cdot CaO \cdot Al_2O_3$	65997-17-3	15~30
3	阻燃剂 Flame Retardant	$C_{21}H_6Br_9N_3O_3$	25713-60-4	12~15
4	色母/色粉 Few of Additives	_____	_____	0.5

ATTN: THE CONTENT OF CHEMICAL MATRIALS ARE IN LINE WITH INTERNATIONAL
HALOGEN-FREE STANDARD

(3)

中国材料科学出版社

中国材料科学出版社
地址：北京市海淀区中关村大街100号
电话：010-62511111

中国材料科学出版社

2014年10月10日

姓名	性别	年龄	职业	学历	专业	单位	备注
张三	男	35	工程师	本科	材料科学	中国材料科学出版社	
李四	女	28	助理工程师	大专	材料科学	中国材料科学出版社	
王五	男	42	高级工程师	硕士	材料科学	中国材料科学出版社	
赵六	男	30	工程师	本科	材料科学	中国材料科学出版社	
孙七	女	25	助理工程师	大专	材料科学	中国材料科学出版社	

中国材料科学出版社

姓名	性别	年龄	职业	学历	专业	单位	备注
张三	男	35	工程师	本科	材料科学	中国材料科学出版社	
李四	女	28	助理工程师	大专	材料科学	中国材料科学出版社	
王五	男	42	高级工程师	硕士	材料科学	中国材料科学出版社	
赵六	男	30	工程师	本科	材料科学	中国材料科学出版社	
孙七	女	25	助理工程师	大专	材料科学	中国材料科学出版社	

中国材料科学出版社

姓名	性别	年龄	职业	学历	专业	单位	备注
张三	男	35	工程师	本科	材料科学	中国材料科学出版社	
李四	女	28	助理工程师	大专	材料科学	中国材料科学出版社	
王五	男	42	高级工程师	硕士	材料科学	中国材料科学出版社	
赵六	男	30	工程师	本科	材料科学	中国材料科学出版社	
孙七	女	25	助理工程师	大专	材料科学	中国材料科学出版社	

中国材料科学出版社
地址：北京市海淀区中关村大街100号
电话：010-62511111



PLENTY POLYMERIC TECHNOLOGY CO LTD

物质安全资料表 Material Safety Data Sheet

一、物品与厂商资料(Item And Manufacture Information)

物品名称 Item Name:	PBT塑胶料
物品编号 Item No.:	N/A
制造商名称 Company Name:	CONNFLY ELECTRONIC CO., LTD
地址 Address:	East Industry Zone KuangYan Town Cixi Ningbo China
紧急联络电话 Emergency Tel:	0574-63509600/63508787 传真 Fax:0574-63507299

二、危害物质分类(Hazardous Ingredients)

危害物质成分 Hazardous Components			化学文摘社登记号码
名称 Name	化学式 Chemical Formula	比率 Weight%	CAS. No.
树 脂	(CH ₂ -CH ₂ -CH ₂ -CH ₂ -O-C-O-C-O)n	52~63	26062-94-2
阻燃剂①	C ₂₁ H ₆ Br ₉ N ₃ O ₃	12~15	21713-60-4
阻燃剂②	Sb ₂ O ₃	4~5	1309-64-4
玻璃纤维	SiO ₂ • CaO • Al ₂ O ₃	15~30	65997-17-3
色母/色粉	C	1~2	1333-86-4
抗氧化剂	C ₇₃ H ₁₀₈ O ₁₂	0.3	6683-19-8
润滑剂	(CH ₂ -CH ₂)n	0.3	9002-88-4
其 它	Confidential		

三、危害物质定义 (Hazards Identification)

物质状况及外观 Physical State And Appearance	: 固体颗粒
紧急情况概要 Emergency Overview	
潜入人体的途经 Route of Entry: 吸入 吞食 吸入 Inhalation: 喉咙疼痛, 咳嗽 吞食 Ingestion: 腹痛	
潜在的慢性健康影响 Potential Chronic Health Effects: 无	
暴露过度所造成的重大医学疾病 Medical Conditions Aggravated by overexposure: 无	
暴露过度/症候/微状 Overexposure/Signs/Symptoms: 无	

四、急救措施 (First Aid Measure)

不同暴露途径之急救方法: 若吸入熔融树脂逸出之气体, 将患者移到通风处, 若有不适立即送医
吞食 Ingestion: 催吐, 以清水漱口, 若有不适立即送医
有害物质的吸入 Hazardous Inhalation: CO NO
有害物质的吞食 Hazardous Ingestion: 无
对医师之提示 Notes to Physcian: 带好个人防护用品

五、灭火措施 (Fighting Measure)

产品的自然性 Flammability of the product:	无
自然温度 Natural Temperature:	460℃
闪火点 Flash Points:	400℃

易燃的极限 Flammable Limits:
产品的燃烧 Combustion Of Products:
呈现于各种物质下火灾危害 Fire Hazards in Presence of Various Substances:移除可燃物
呈现于各种物质下爆炸危害 Explosion Hazards in Presence of Various Substances: 无
静态物质排出的爆炸现象 Risk of explosion of the product in presence of static discharge: 无
火警的媒介与指示 Fire Fighting Media and Instructions:
小火 Small Fire
大火 Large Fire
防火衣 Fire Clothing :
火灾危害的特殊注解 Special Remark On Fire Hazards:
爆炸危害的特殊注解 Special Remark on Explosion Hazards:

六、泄露处理方法(Release Treatment)

溢出和泄露 Spill and Leak: 回收或废失
环保措施 Anti-Pollution Measures :

七、操作与储存(Handling and Storage)

操作 Handling: 采用一般预防措施
储存 Storage: 常温储存防水防潮防火

八、暴露的控制、个人的保护措施(Exposure Control,Personal Protection Measures)

工程控制 Engineering Protection: 通风设备: 排除粉尘、烟及气体
个人安全保护 Personal Protection: <ul style="list-style-type: none"> 眼睛防护 Eye Protection: 工作时戴好安全眼镜 身体防护 Body Protection: 工作时穿好防护服 呼吸防护 Respiratory Protection: 工作时戴好口罩 手防护 Hands Protection: 工作时戴好皮手套 脚防护 Feet protection: 工作时穿好工作鞋
注解 Note:

九、物理及化学性质(Physical and Chemical Properties)

物质状态与外观 Physical State and Appearance:固体颗粒	
分子量 Molecular Weight:	化学式 Chemical Formula:
颜色 Color:黑色、本色 彩色	气味 Odor: 刺激性气味
酸碱值 PH value:6.8	沸点/凝结点 Boiling/Condensation point:
酸价 Acid Value:	熔点/冰点 Melting/Freezing Point:
临界温度 Critical Temperature:400℃	挥发度 Volatility: 无
自然温度 Natural Temperature:460℃	爆炸界限 Explosion Limits:4.0g/m ³
蒸气压 Vapor pressure:	蒸气密度 Vapor Density:
比重 Specific Gravity:1.58—1.50	溶解度 Solubility: 无

十、安定性及反应性(Stability and Reactivity)

安定性与反应性 Stability and Reactivity:常温下为固体颗粒
不安定的状态 Conditions of Instability:高温下为液态

各种物质的不相容性 Incompatibility with Various Substances: CO NO
危害分解物 Hazardous Decomposition Product:
危害的聚合作用 Hazardous Poly: 无

十一、毒性资料(Toxicological Information)

急毒性 Acute toxicity:眼睛及皮肤有轻微刺激
局部效应 Local effects:: LD50(皮肤、鼠) >2000mg/kg
致敏感性 Sensitization: LD50 (口服) > 5000mg/kg
对人类的毒物及慢性影响 Toxic and Chronic Effects on Humans:无
诱导突变的影响 Mutagenic Effects: 无
畸形的影响 Teratogenic Effects: 无
毒性的发展 Developmental Toxicity: 无
对人类的毒物特殊注解 Special Remarks on Chronic Effects on Humans: 无
其它毒性对人类的影响特殊注#9-

十二、生态资料

环境毒性 Ecotoxicity:无
生化需氧量 BOD5 and COD:无
生物分解性 Biodegradable/OECD:无
流动性 Mobility:无
产品的生物分解毒性 Toxicity of the Products of Biodegradation:无
对产品生物分解的特殊注解 Special Remarks on the products of Biodegradation:无

十三、废弃处理方法

废弃物资讯Waste Information:为防止鸟类或鱼类由排水系统摄食，严禁丢失到海洋或其它水域
废弃物流向Waste Stream:适当之焚化燃烧，或掩埋法，不适当之焚化可能会产生有毒氧体，CO NO等
咨询当地或地区性专家 Consult your local or regional authorities.

十四、运送资料

运输部分类DOT Classification:
国际民航组织/国际空运协会分类ICAO/IATA Classification:无
海运的污染Marine Pollution:无
特殊运送条款Special Provisions for Transportation:无

十五、法规资料

适用法规: None

十六、其它资料

参考文献:	
制表单位:	CONNFLY ELECTRONIC CO., LTD
	Address: East Industry Zone KuangYan Town Cixi Ningbo China
制表人:LJC	职称:
制表日期:2020年3月24日	姓名: LJC

物质安全资料表

Material Safety Data Sheet

1. 物品与厂商资料(Product and Company Identification)

物料中(英)文名称(Product Name)	黄铜合金
物料编号(Product Code)	C2600~C2801
化学分类(Chemical Classification)	铜(Copper) 锌(Zinc)
公司介绍(Manufacture)	
1. 制造商 / 供应商名称(Name)	宁波晨翔电子有限公司
2. 制造商 / 供应商地址(Address)	浙江省慈溪市匡堰镇东工业区
3. 电话(Phone Number)	+86-574-63508787
4. 传真(Phone Number)	+86-574-63510817
5. 紧急联络电话(Emergency Phone No.)	+86-574-63509600
6. 联络人(Emergency Phone No.)	LJC

2. 成份辨识资料(Composition, Information on Ingredients)

成份名称 (Component-Chemical Name & Common Names)	化学文摘社登记号码 (CAS No.)	浓度与浓度范围 (成分百分比)Percentage(%)
Cu	7440-50-8	59-71. 5
Zn	7440-66-6	28.5-41
Pb	7439-91-1	<0. 1
Fe	7439-89-6	<0.07

3. 危害辨识资料(Hazard Identification)

最重要危害效应(Most Important Health Hazards and Reactions)	
1. 紧急概要(Emergency Overview)	None
2. 健康危害效应 (Health Hazards and Reactions)	None
3. 环境影响(Environmental Impact)	None
4. 物理性及化学性危害 (Physical and Chemical Hazards)	No Physical and Chemical Hazards
5. 特殊危害(Specific Hazards)	None
主要症状(Cardinal Symptoms)	None
危害物质分类(Hazard Classification)	None

4. 急救措施(First Aid Measures)

不同暴露途径之急救方法(First Aid Measures for Different Kinds of Exposures)	
1 眼睛接触(Eye Contact)	大量冲水接触部位至少 15 分钟后，立即送医
2. 皮肤接触(Skin Contact)	以肥皂及清水冲洗干净。
3. 吸入 (Inhalation)	将患者移至通风处、注意保暖并送医
4. 食入(Ingestion)	None
最重要症状及危害概要 (Most Important Symptoms and Hazard Reactions)	None
对急救人员之防护 (Protection to First-Aid attendants)	None
对医师之提示 (Suggestions to Doctors)	None

5. 灭火措施(Fire fighting Measures)

适用灭火剂 ， (Suitable Extinguishing Media)	不可燃物、不适用
灭火时可能遭遇之特殊危害 (Special Hazards in Fire)	不可燃物、不适用
特殊灭火程序 (Special Fire-Fighting Procedures)	不可燃物、不适用
消防人员之特殊防护设备 — (Required Special Protective Equipment for Fire-Fighting)	不可燃物、不适用

6. 溢漏处理方法(Accidental Release Measures)

个人注意事项((Personal Precautions)	固体物质、不适用
环境注意事项(Environmental Precautions)	固体物质、不适用
清理方法(Methods for Cleaning)	固体物质、不适用

7. 安全处置方法(Handling and storage)

处置(Handling)	1. 板材制品之边缘及断面易割伤应小心处置 2. 单位体之重量大，易造成操作不当之压伤吊挂搬运须注意，避免造成危险
储存(Storage)	1. 储存于干燥通风良好室内处所或具有湿度控制之空间 2. 严禁暴露于室外或温湿度高之密闭空间

8. 暴露预防措施(Exposure Controls, Personal Protection)

工程控制(Engineering Measures)	机械加工场所中，会产生烟雾及粉层，须要有通风设备装置。
控制参数(Control Parameters)	None
个人防护设备(Personal Protection Equipment)	长时间暴露于粉层及烟雾的工作环境下，应防护
卫生措施(Hygiene Measures)	None

9. 物理及化学特性(Physical and Chemical Properties)

成分(Component)	
1. 物质型态(State of substance)	依制成品形状
2. 颜色(color)	金色光泽金属
3. 外观(Appearance)	Solid
4. 气味(Odor)	None
5. PH 值(PH Value)	None
6 沸点(Boiling Point)	Cu2567-2595 Zn 907
7. 闪火点(Flashpoint)	None applicable
8. 分解温度(Decomposing Temperature)	904-954
9. 自段鸿昆度(Self-Igniting Temperature)	None
10. 蒸气捧(Vapor Pressure)	
	1.0mmHg@1628 度

10安全性及反应性

安定性(Stability)	一般情况下相当安定，活性小
特殊状况下可能之危害反应(Possible Hazard Reaction Under Special Conditions)	None
应避免之状况(Conditions to Avoid)	None
应避免之物质(Materials to Avoid)	酸类
危害分解物 (Hazardous Decomposition Products)	None

11. 毒性资料(Toxicological Information)

急毒性(Acute Toxicity)	铜粉末超过 3500ug / kg，急性中毒症状为呕吐、无力感及胃疼。
局部效应(Local Effects)	None
致敏感性(Sensitivity)	None
慢毒性及长期毒性 (Chronic or Long Term Toxicity)	铜金属之慢性中毒对肝及肾有危害
特殊效应(Special Reactions)	铜金属之慢性中毒对眼睛接触有危害

12. 生态资料(Ecological Information)

可能之环境影响 (Possible Environmental Impact/Environments Run-offs)	水中的铜浓度，在 0. 015-3. 0mg / l，尤其是在软水中，会有报告对许多类鱼、甲壳类的动物及软体动物、浮游生物具中毒性
--	---

13. 废弃处理方式(Disposal Considerations)

产品废弃处置方式 (Product Discard Disposal Method)	本产品不属于危害性废弃物，须丢时可以委托回收商予以回收再生处理
包装废弃处理 (Packing Disposal Method)	None

14. 运送资料(Transport Information)

国际运送规定(International Transportation Regulations)	
1. 美国交通部、49CFR 分级	None
2. 运, IM 分级	None
3. 航运, TATA 分级	None
联合国编号(UN Reference No.)	None
国内运送规定 (Domestic Transportation Regulation)	None
特殊运送方法及注意事项 (Special Transportation Methods and Precaution)	运送时本产品不要直接与水接触, 并且要注意会有滑 落、翻落的危险发生

15. 法规资料(Regulatory Information)

适用法规(Applicable Regulation)	通常无特定法令规定, 但是在会产生粉层的场所必须遵 守劳工安全卫生法劳工作业环境空气中有害物质容许 浓度标准
-----------------------------	--

16. 其它资料(Other Information)

参考文献(Reference Document)	工业技术研究院环境与安全卫生技术发展中心
制表单位(Department)	宁波晨翔电子有限公司
制造商及供应商地址	浙江省慈溪市匡堰镇东工业区
电话	+86-574-63508787
制表者(Made By)	JLZ
制表日期(Data Prepared)	2016-12-20

Test Report

No.: NGBMR22000317502

Date: Feb 18, 2022

Page 1 of 8

Client name : NINGBO CONNFLY ELECTRONIC CO., LTD

Client address : NO.125 ZHANTENG ROAD EAST INDUSTRY ZONE KUANGYAN TOWN CIXI NINGBO
CHINA

Sample Name : PBT PLASTIC(BLACK)

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

SGS Job No. : NBIN2202001300PC

Sample Receiving Date : Feb 14, 2022

Testing Period : Feb 14, 2022 to Feb 18, 2022

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

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

Conclusion : Based on the performed tests on submitted sample(s), the results of Cadmium, Lead, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of

SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch

Ashley Zhang

Ashley Zhang

Approved Signatory



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CSTC Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040

tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

Test Report

No.: NGBMR22000317502

Date: Feb 18, 2022

Page 2 of 8

Test Results:

Test Part Description:

SN ID.	Sample No.	SGS Sample ID	Description
SN1	2	NGB22-0003175-0001.C002	BLACK SOLID GRAINS

Remarks:

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 and IEC 62321-8:2017, analysis was performed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Units	MDL	2
Cadmium(Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS (Shanghai) Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

www.sgsgroup.com.cn

Test Report

No.: NGBMR22000317502

Date: Feb 18, 2022

Page 3 of 8

Test Item(s)	Limit	Units	MDL	2
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	94
Monobromodiphenyl ether	-	mg/kg	5	ND
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	ND
Decabromodiphenyl ether	-	mg/kg	5	94
Dibutyl Phthalate(DBP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate(BBP)	1000	mg/kg	50	ND
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.

IEC 62321 series is equivalent to EN 62321 series

https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

(2) 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 agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

www.sgsgroup.com.cn

Test Report

No.: NGBMR22000317502

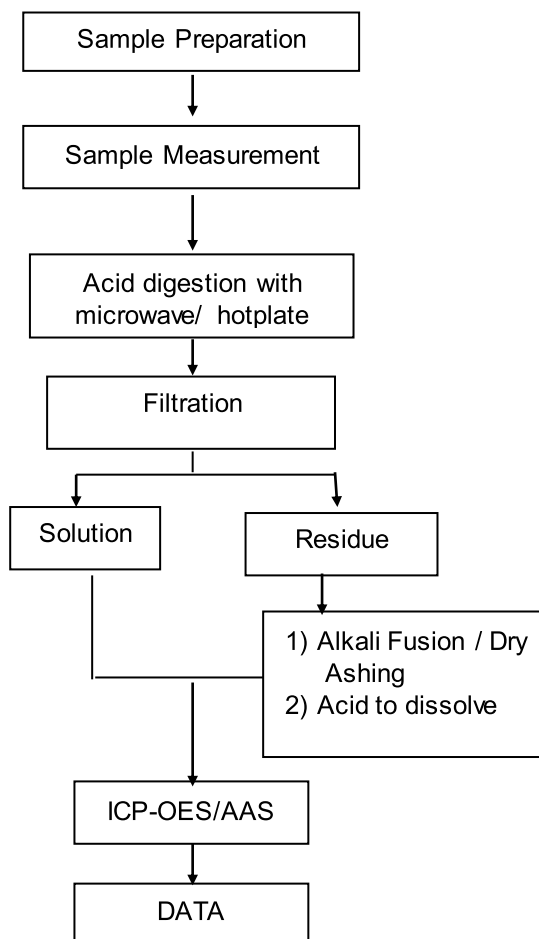
Date: Feb 18, 2022

Page 4 of 8

ATTACHMENTS

Elements (IEC62321) Testing Flow Chart

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



SGS-CS Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

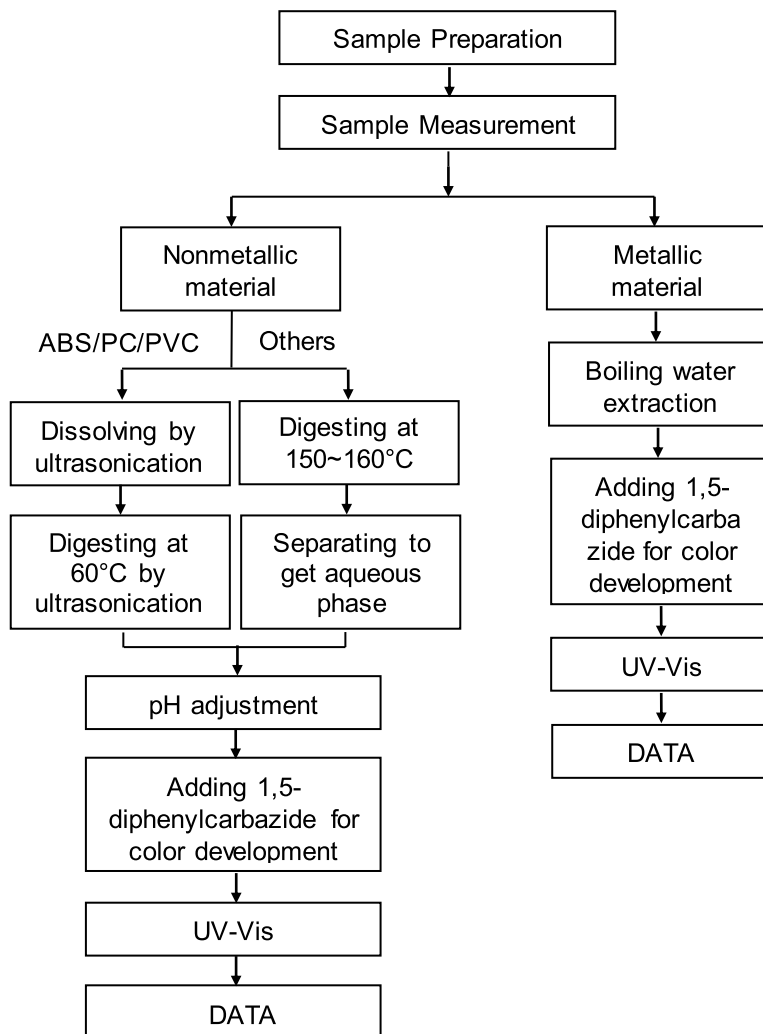
No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

ATTACHMENTS

Hexavalent Chromium (Cr(VI)) Testing Flow Chart



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS (Shanghai) Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

www.sgsgroup.com.cn

Test Report

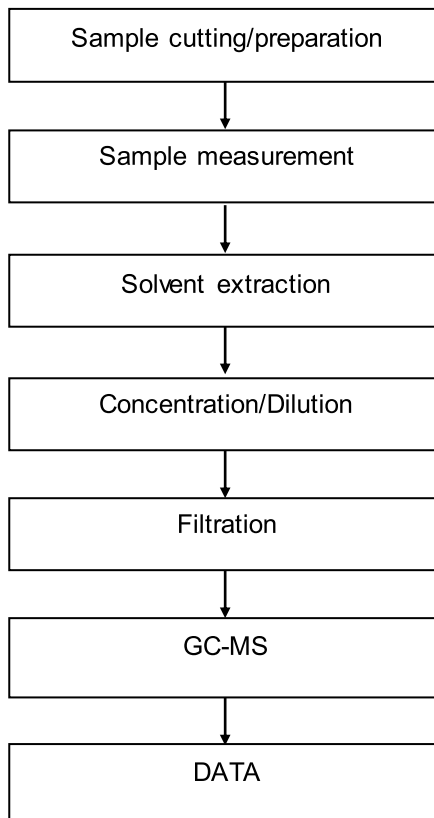
No.: NGBMR22000317502

Date: Feb 18, 2022

Page 6 of 8

ATTACHMENTS

Phthalates Testing Flow Chart



SGS-CSST (Shanghai) Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

Test Report

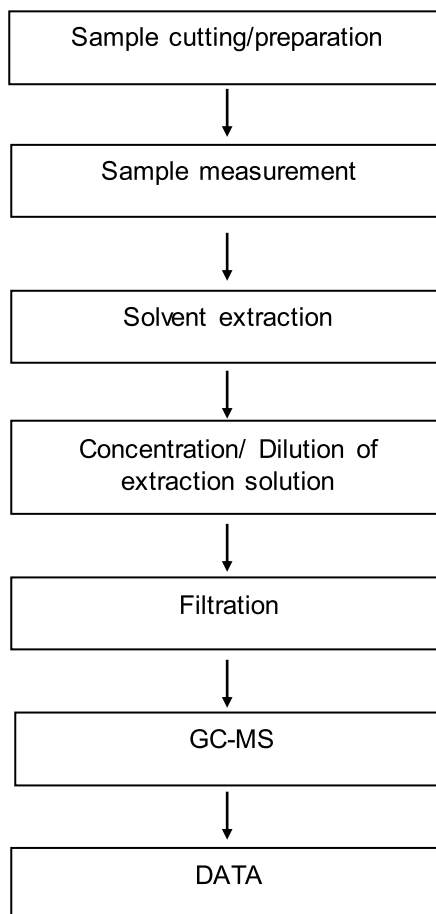
No.: NGBMR22000317502

Date: Feb 18, 2022

Page 7 of 8

ATTACHMENTS

PBBs/PBDEs Testing Flow Chart



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

www.sgsgroup.com.cn

Test Report

No.: NGBMR22000317502

Date: Feb 18, 2022

Page 8 of 8

Sample Photo:



SGS authenticate the photo on original report only

*** End of Report ***



SGS-CS Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

Test Report

No.: NGBEC22000082711

Date: Jan 19, 2022

Page 1 of 6

NINGBO CONNFLY ELECTRONIC CO., LTD

NO.125 ZHANTENG ROAD EAST INDUSTRY ZONE KUANGYAN TOWN CIXI NINGBO CHINA

The following sample(s) was/were submitted and identified by/on behalf of the client as: Brass

SGS Job No. : NP22-000068
 Sample Receiving Date : Jan 10, 2022
 Testing Period : Jan 10, 2022 to Jan 19, 2022
 Test Method : Please refer to next page(s).
 Test Results : Please refer to next page(s).
 Conclusion : Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of

SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch

Ashley Zhang

Ashley Zhang

Approved Signatory



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CSTC Standards Technical Services Co., Ltd.
 Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040

tHL (86-574)89070271

tML (86-574)89070242 sgs.china@sgs.com

Test Report

No.: NGBEC22000082711

Date: Jan 19, 2022

Page 2 of 6

Test Results:

Test Part Description:

SN ID.	Sample No.	SGS Sample ID	Description
SN1	A11	NGB22-0000827-0001.C011	Cooper metal

Remarks:

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013 and IEC 62321-7-1:2015, analysis was performed by ICP-OES and UV-Vis .

Test Item(s)	Limit	Units	MDL	A11
Cadmium(Cd)	100	mg/kg	2	ND
Lead(Pb)	1000	mg/kg	2	158
Mercury(Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	ND

Notes:

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

IEC 62321 series is equivalent to EN 62321 series

https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

(2) ▼ = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI.

b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating.

c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive -



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS (China) Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

www.sgsgroup.com.cn

Test Report

No.: NGBEC22000082711

Date: Jan 19, 2022

Page 3 of 6

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.



SGS-CSG Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

Test Report

No.: NGBEC22000082711

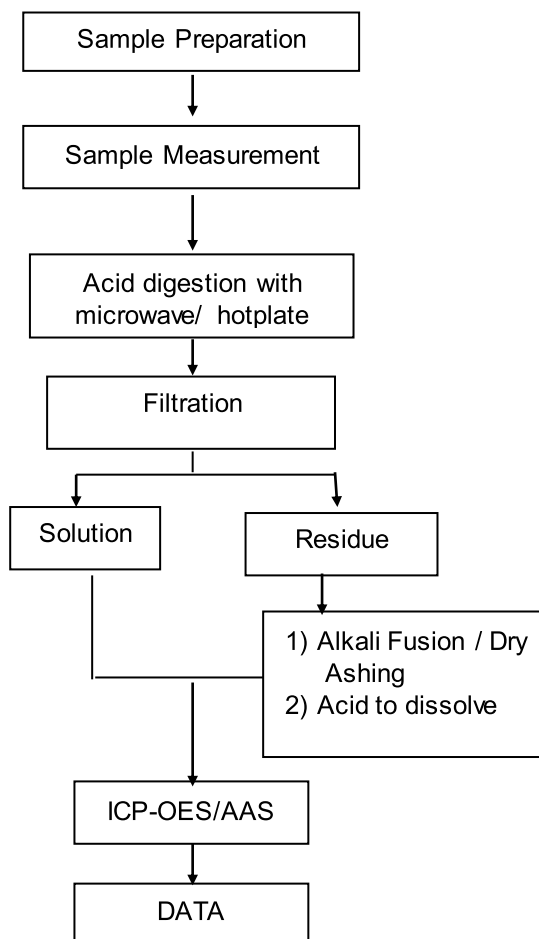
Date: Jan 19, 2022

Page 4 of 6

ATTACHMENTS

Elements (IEC62321) Testing Flow Chart

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

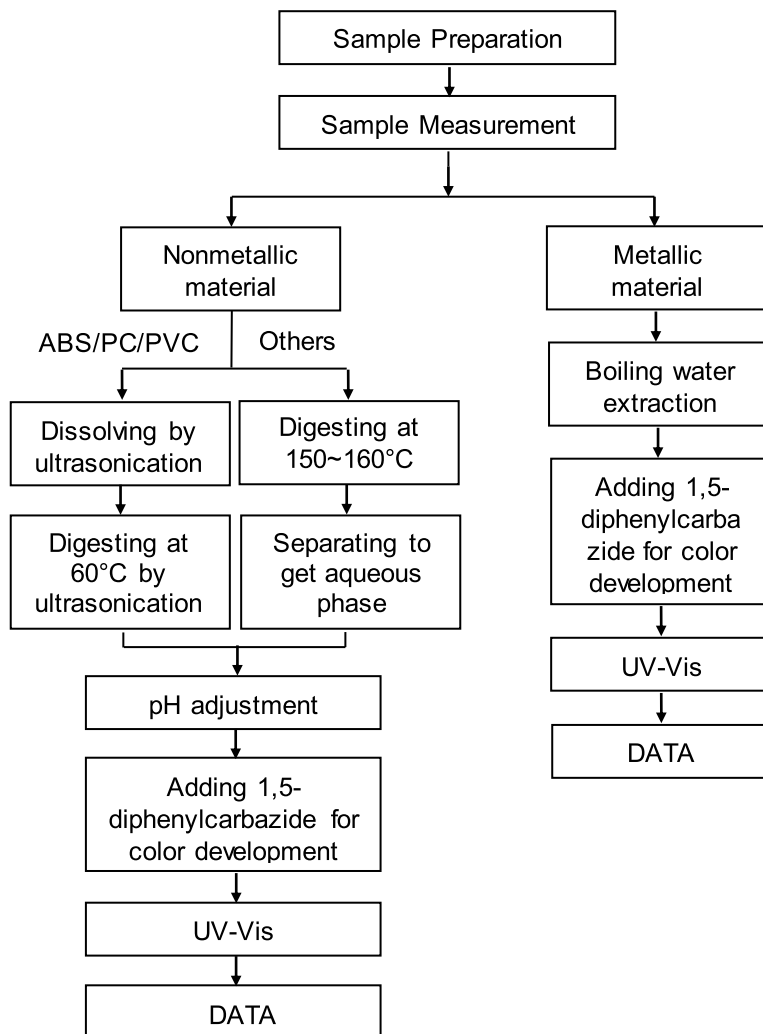
www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

ATTACHMENTS

Hexavalent Chromium (Cr(VI)) Testing Flow Chart



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

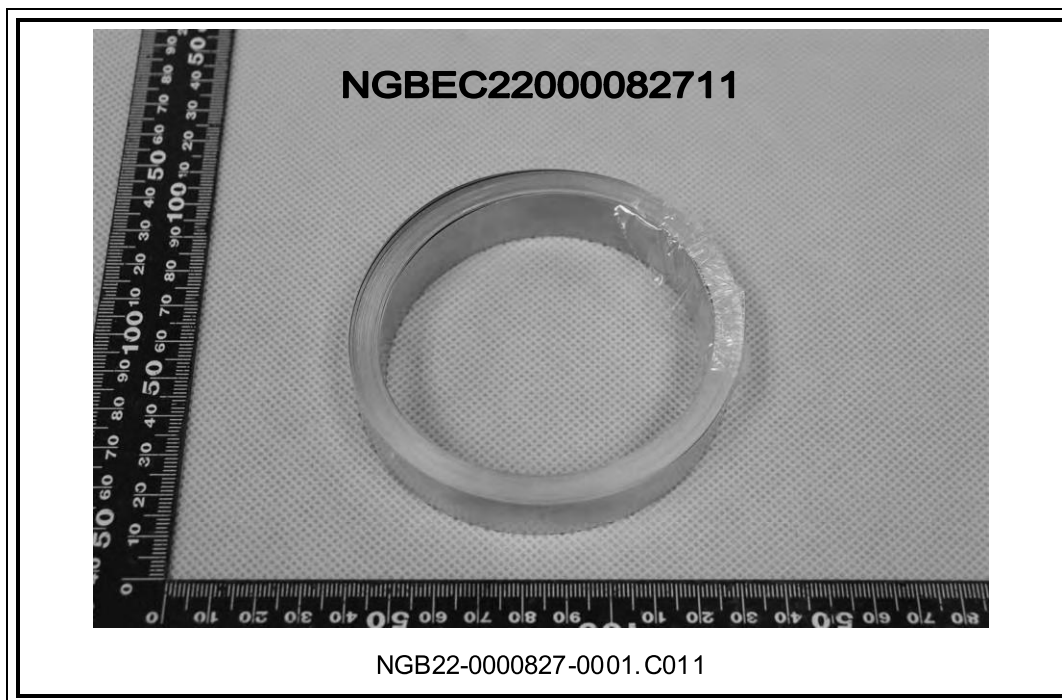
Test Report

No.: NGBEC22000082711

Date: Jan 19, 2022

Page 6 of 6

Sample Photo:



SGS authenticate the photo on original report only

*** End of Report ***



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS (Shanghai) Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

Test Report

No.: NGBEC22000082712

Date: Jan 19, 2022

Page 1 of 6

NINGBO CONNFLY ELECTRONIC CO., LTD

NO.125 ZHANTENG ROAD EAST INDUSTRY ZONE KUANGYAN TOWN CIXI NINGBO CHINA

The following sample(s) was/were submitted and identified by/on behalf of the client as: Steel

SGS Job No. : NP22-000068
 Sample Receiving Date : Jan 10, 2022
 Testing Period : Jan 10, 2022 to Jan 19, 2022
 Test Method : Please refer to next page(s).
 Test Results : Please refer to next page(s).
 Conclusion : Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of

SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch

Ashley Zhang

Ashley Zhang

Approved Signatory



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CSTC Standards Technical Services Co., Ltd.
 Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249
 中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242

www.sgsgroup.com.cn
sgs.china@sgs.com

Test Report

No.: NGBEC22000082712

Date: Jan 19, 2022

Page 2 of 6

Test Results:

Test Part Description:

SN ID.	Sample No.	SGS Sample ID	Description
SN1	A12	NGB22-0000827-0001.C012	Silvery metal

Remarks:

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013 and IEC 62321-7-1:2015, analysis was performed by ICP-OES and UV-Vis .

Test Item(s)	Limit	Units	MDL	A12
Cadmium(Cd)	100	mg/kg	2	ND
Lead(Pb)	1000	mg/kg	2	ND
Mercury(Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	ND

Notes:

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

IEC 62321 series is equivalent to EN 62321 series

https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

(2) ▼ = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI.

b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating.

c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive -



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-TESTING SERVICES CO., LTD.
Ningbo Branch Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

Test Report

No.: NGBEC22000082712

Date: Jan 19, 2022

Page 3 of 6

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.



SGS-CSG Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

Test Report

No.: NGBEC22000082712

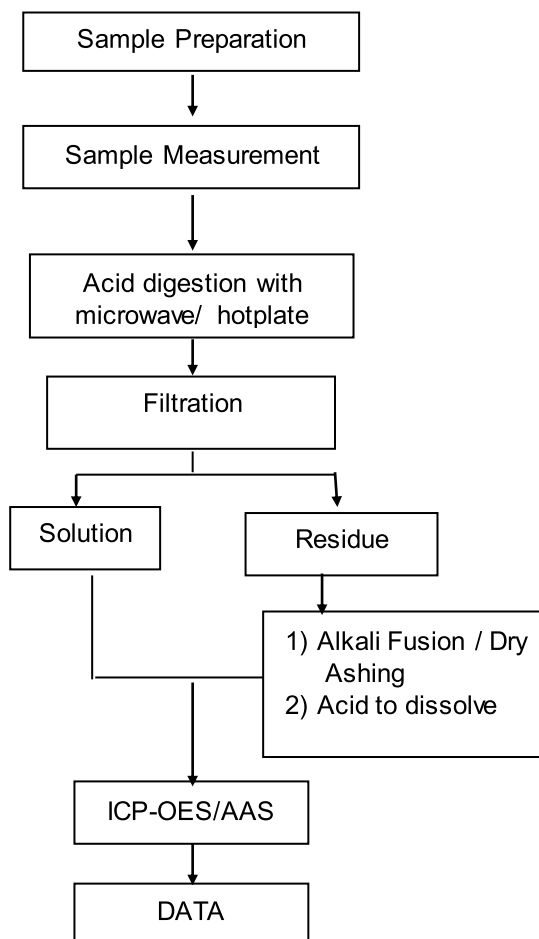
Date: Jan 19, 2022

Page 4 of 6

ATTACHMENTS

Elements (IEC62321) Testing Flow Chart

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

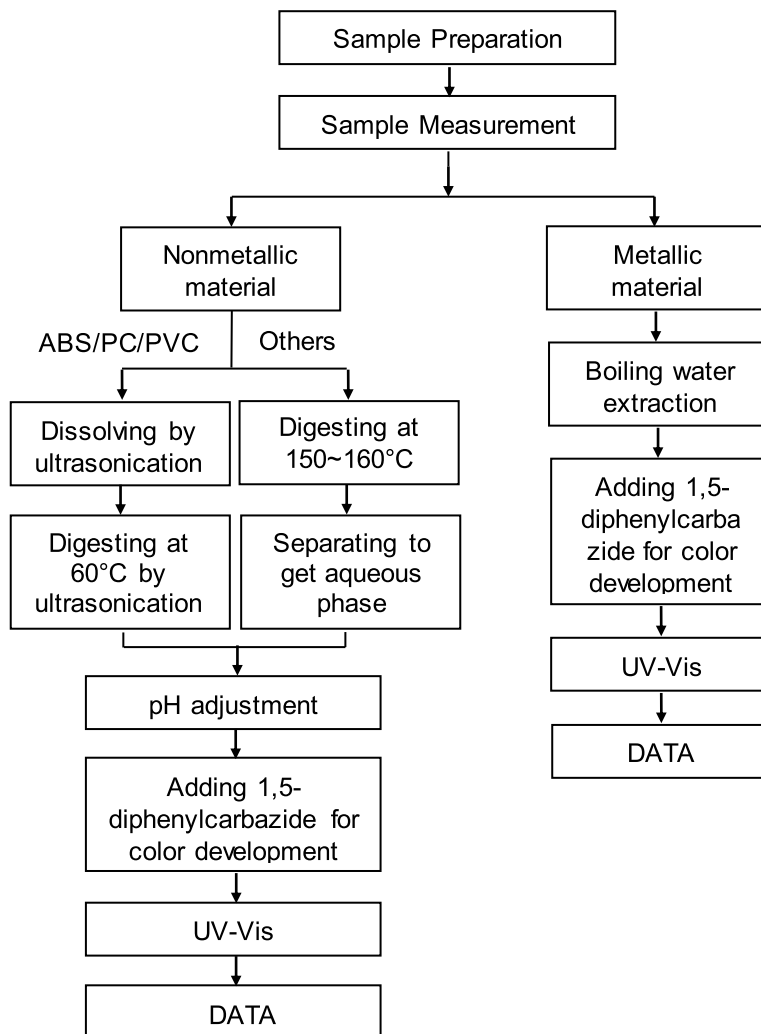
No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

ATTACHMENTS

Hexavalent Chromium (Cr(VI)) Testing Flow Chart



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS (Shanghai) Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

www.sgsgroup.com.cn
sgs.china@sgs.com

Test Report

No.: NGBEC22000082712

Date: Jan 19, 2022

Page 6 of 6

Sample Photo:



SGS authenticate the photo on original report only

*** End of Report ***



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CHINA Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

Test Report

No.: NGBEC22000082701

Date: Jan 19, 2022

Page 1 of 6

NINGBO CONNFLY ELECTRONIC CO., LTD

NO.125 ZHANTENG ROAD EAST INDUSTRY ZONE KUANGYAN TOWN CIXI NINGBO CHINA

The following sample(s) was/were submitted and identified by/on behalf of the client as: Bolt

SGS Job No. : NP22-000068
 Sample Receiving Date : Jan 10, 2022
 Testing Period : Jan 10, 2022 to Jan 19, 2022
 Test Method : Please refer to next page(s).
 Test Results : Please refer to next page(s).
 Conclusion : Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of

SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch

Ashley Zhang

Ashley Zhang

Approved Signatory



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CSTC Standards Technical Services Co., Ltd.
 Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249
 中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242

www.sgsgroup.com.cn
sgs.china@sgs.com

Test Report

No.: NGBEC22000082701

Date: Jan 19, 2022

Page 2 of 6

Test Results:

Test Part Description:

SN ID.	Sample No.	SGS Sample ID	Description
SN1	A1	NGB22-0000827-0001.C001	Silvery metal

Remarks:

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013 and IEC 62321-7-1:2015, analysis was performed by ICP-OES and UV-Vis .

Test Item(s)	Limit	Units	MDL	A1
Cadmium(Cd)	100	mg/kg	2	25
Lead(Pb)	1000	mg/kg	2	31534*
Mercury(Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	ND

Notes:

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863. IEC 62321 series is equivalent to EN 62321 series
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (2) ▼ = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI.
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating.
 c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CSL Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

www.sgsgroup.com.cn
sgs.china@sgs.com

Test Report

No.: NGBEC22000082701

Date: Jan 19, 2022

Page 3 of 6

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 sample is exempted by EU RoHS directive 2011/65/EU based on |ANNEX III 6(c)|: Copper alloy containing up to 4 % lead by weight.



SGS-CSH Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

Test Report

No.: NGBEC22000082701

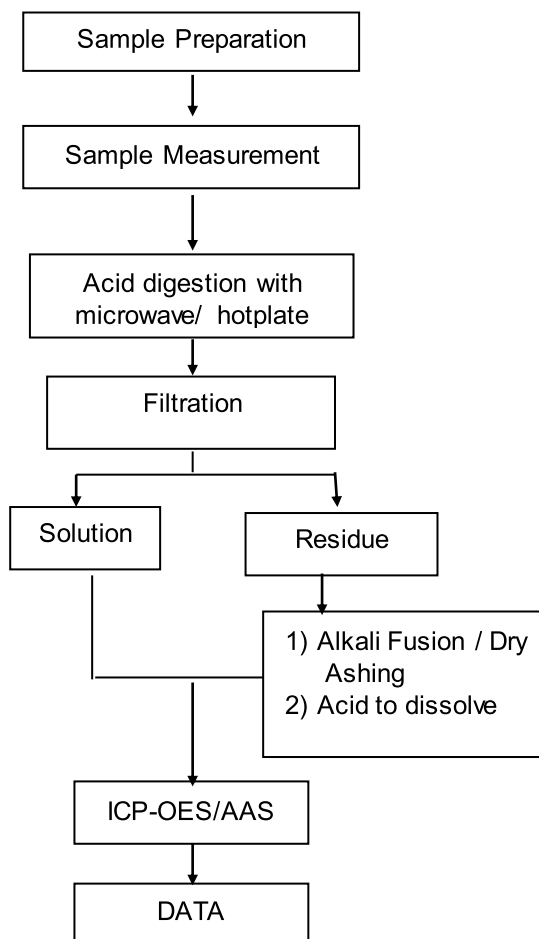
Date: Jan 19, 2022

Page 4 of 6

ATTACHMENTS

Elements (IEC62321) Testing Flow Chart

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

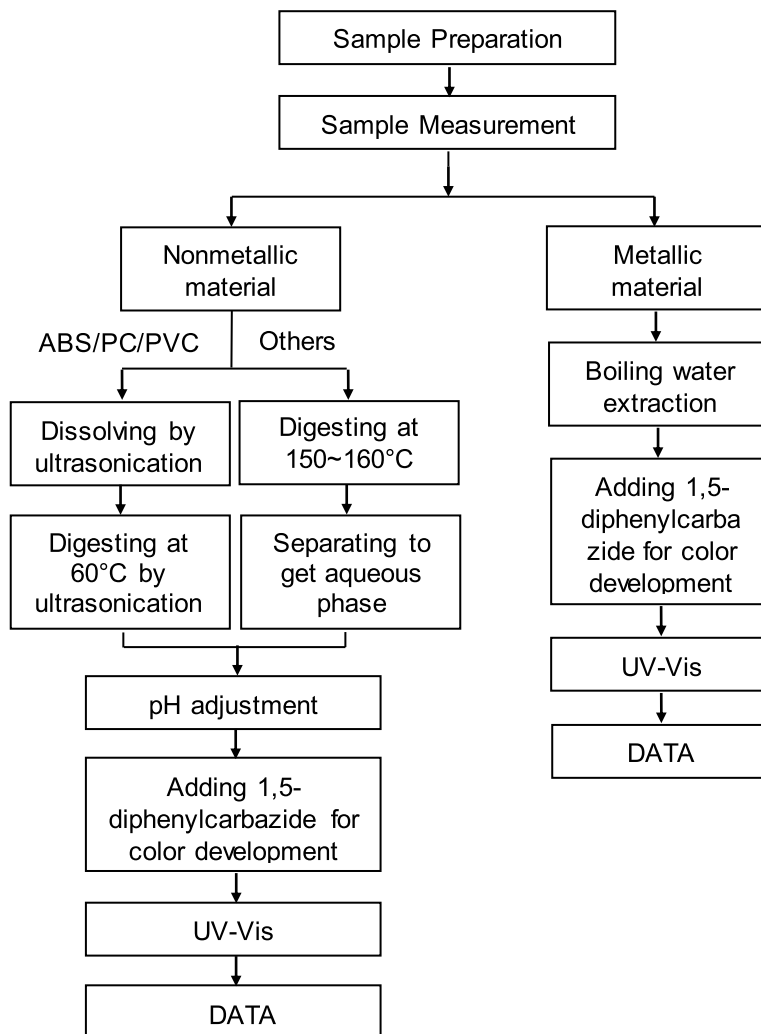
SGS-CSL Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

www.sgsgroup.com.cn
sgs.china@sgs.com

ATTACHMENTS

Hexavalent Chromium (Cr(VI)) Testing Flow Chart



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

www.sgsgroup.com.cn
sgs.china@sgs.com

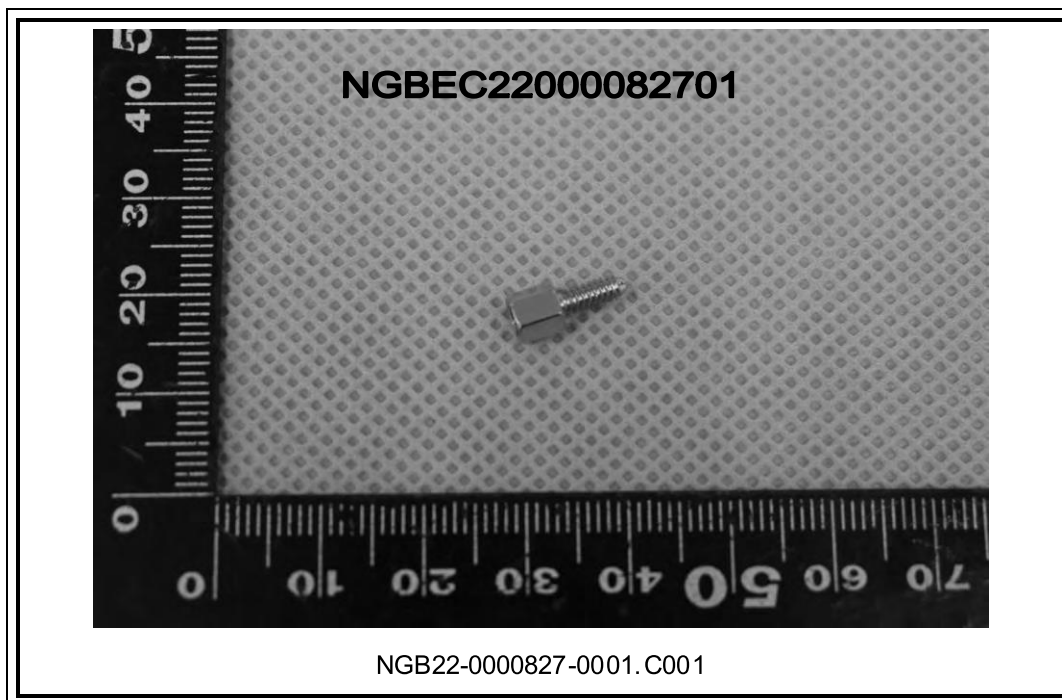
Test Report

No.: NGBEC22000082701

Date: Jan 19, 2022

Page 6 of 6

Sample Photo:



SGS authenticate the photo on original report only

*** End of Report ***



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-CS Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 tE&E (86-574)89070249

www.sgsgroup.com.cn

中国·浙江·宁波高新区凌云路1177号 邮编: 315040 tHL (86-574)89070271 tML (86-574)89070242 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

Test Report

No. NGBEC2102417205

Date: 31 May 2021

Page 1 of 5

The following sample(s) was/were submitted and identified on behalf of the clients as : Sample of gold plating

SGS Job No. : NP21-002432 - NB
 Date of Sample Received : 25 May 2021
 Testing Period : 25 May 2021 - 31 May 2021
 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 sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

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

Kell Li

Kell Li

Approved Signatory



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 TEL (86-574)89070249
 中国·浙江·宁波高新区凌云路1177号 邮编: 315040 TEL (86-574)89070271 TML (86-574)89070242 sgs.china@sgs.com

www.sgsgroup.com.cn

Test Report

No. NGBEC2102417205

Date: 31 May 2021

Page 2 of 5

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	NGB21-024172.003	Golden metal

Remarks :

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+AMD1:2017, IEC62321-5:2013 and IEC 62321-7-1:2015, analyzed by ICP-OES and UV-Vis.

Test Item(s)	Limit	Unit	MDL	003
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))▼	-	µg/cm ²	0.10	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
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101::FSP_ORG_ID,FSP_LANG_ID:1258637,25.
- (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.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
 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

SGS-CSI Standards Technical Services Co., Ltd.
Ningbo Branch Limited Laboratory

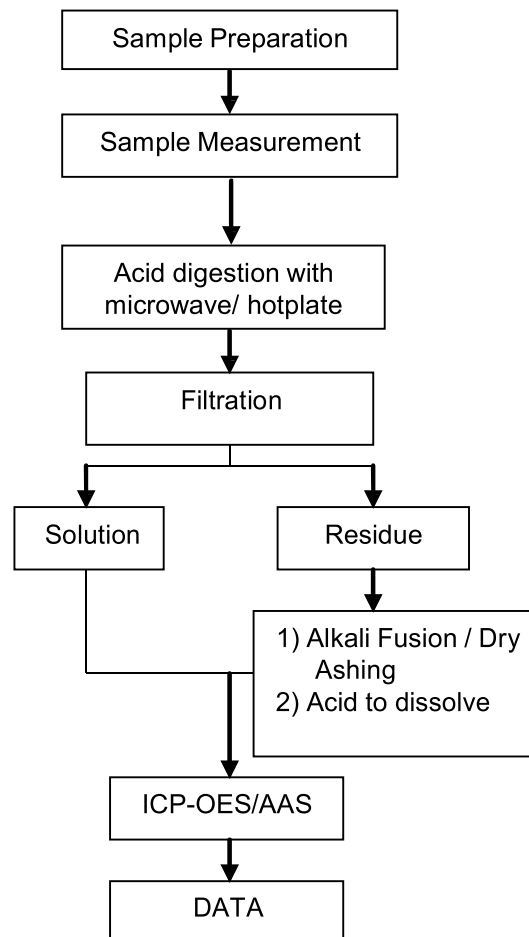
No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 TEL (86-574)89070249
 中国·浙江·宁波高新区凌云路1177号 邮编: 315040 TEL (86-574)89070271

www.sgsgroup.com.cn
sgs.china@sgs.com

ATTACHMENTS

Elements (IEC62321) Testing Flow Chart

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

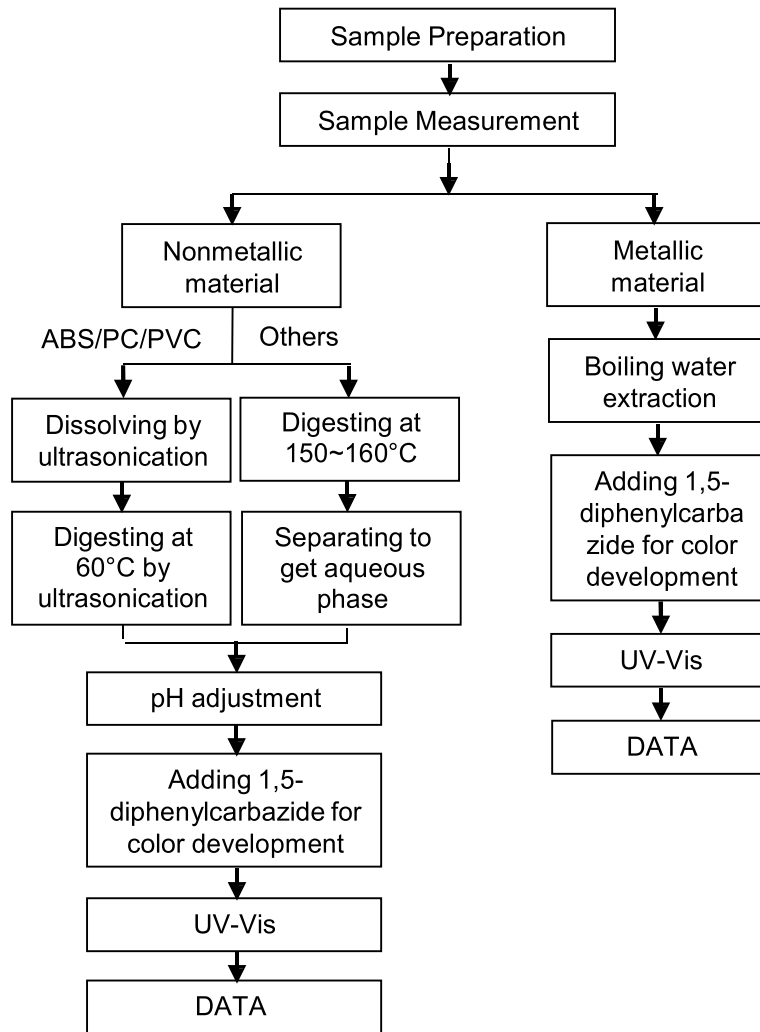
SGS-CSI Standards Technical Services Co., Ltd.
Ningbo Branch Laboratory

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 TEL (86-574)89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 IHL (86-574)89070271 IML (86-574)89070242

www.sgsgroup.com.cn
sgs.china@sgs.com

ATTACHMENTS

Hexavalent Chromium (Cr(VI)) Testing Flow Chart



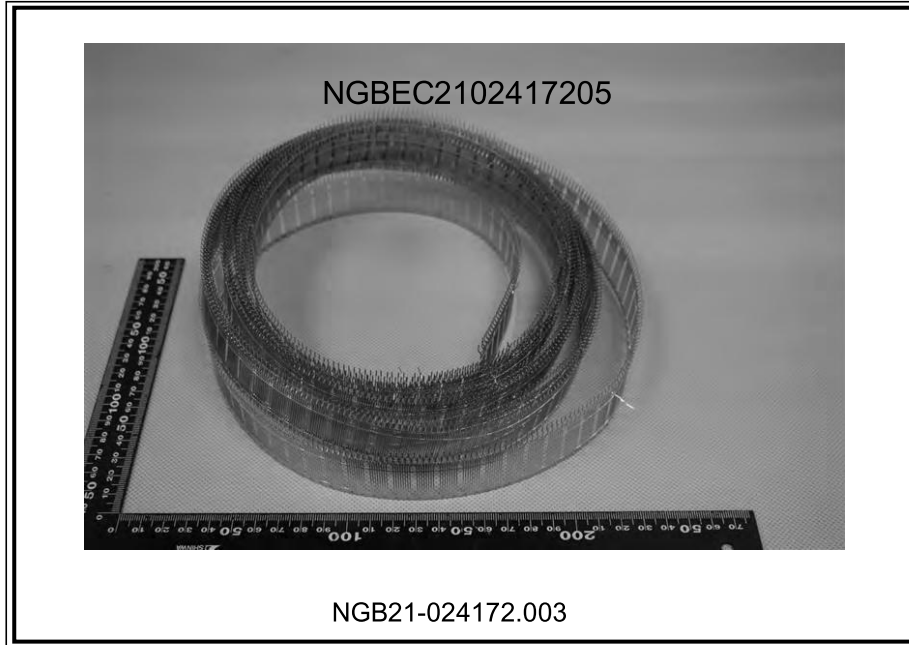
Test Report

No. NGBEC2102417205

Date: 31 May 2021

Page 5 of 5

Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



SGS-4S Inspection & Testing Services Co., Ltd.
Ningbo Branch China Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

No. 1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 TEL (86-574) 89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 IHL (86-574) 89070271 IML (86-574) 89070242

www.sgsgroup.com.cn
sgs.china@sgs.com

Test Report

No. NGBEC2102417201

Date: 31 May 2021

Page 1 of 5

The following sample(s) was/were submitted and identified on behalf of the clients as : Sample of nickel plating

SGS Job No. : NP21-002432 - NB
 Date of Sample Received : 25 May 2021
 Testing Period : 25 May 2021 - 31 May 2021
 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 sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

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

Kell Li

Kell Li

Approved Signatory



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
 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

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 TEL (86-574)89070249 www.sgsgroup.com.cn
 中国·浙江·宁波高新区凌云路1177号 邮编: 315040 THL (86-574)89070271 TML (86-574)89070242 sgs.china@sgs.com

Test Report

No. NGBEC2102417201

Date: 31 May 2021

Page 2 of 5

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	NGB21-024172.001	Silvery metal

Remarks :

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+AMD1:2017, IEC62321-5:2013 and IEC 62321-7-1:2015, analyzed by ICP-OES and UV-Vis.

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	10
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	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
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101::FSP_ORG_ID,FSP_LANG_ID:1258637,25.
- (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.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
 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

SGS-CSI (Shanghai) Technical Services Co., Ltd.
 Ningbo Branch Laboratory

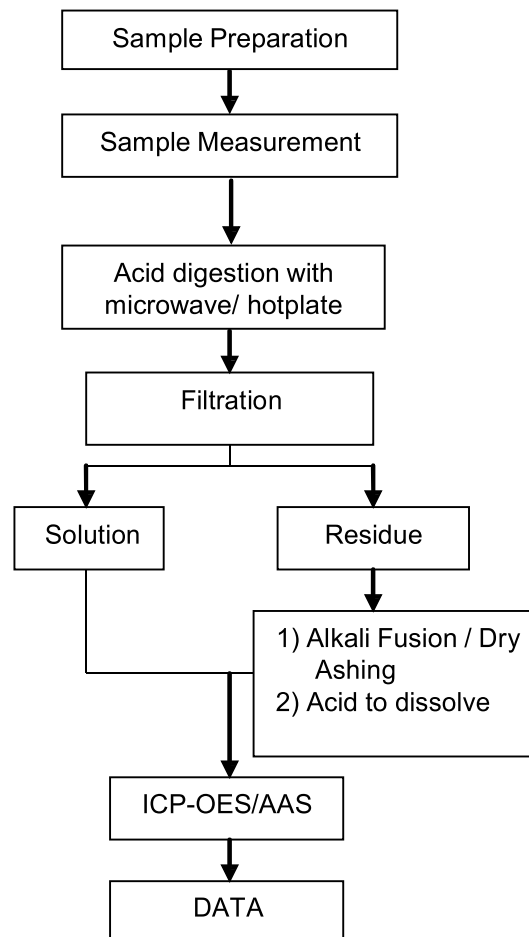
No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 TEL (86-574)89070249
 中国·浙江·宁波高新区凌云路1177号 邮编: 315040 TEL (86-574)89070271

www.sgsgroup.com.cn
sgs.china@sgs.com

ATTACHMENTS

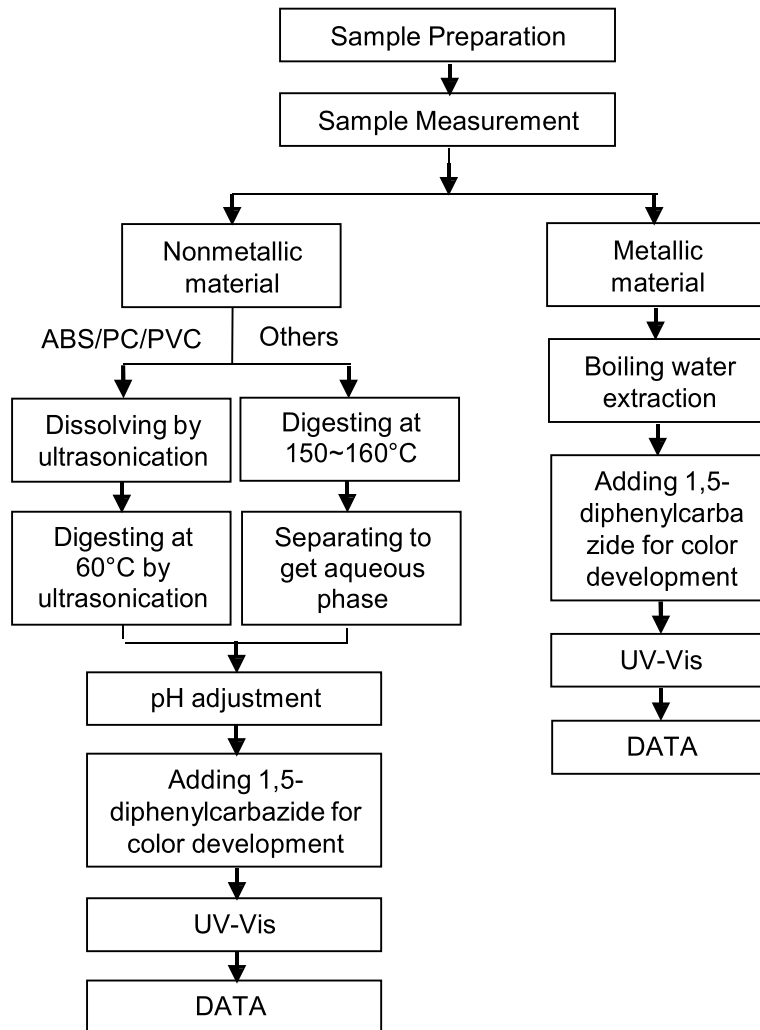
Elements (IEC62321) Testing Flow Chart

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



ATTACHMENTS

Hexavalent Chromium (Cr(VI)) Testing Flow Chart



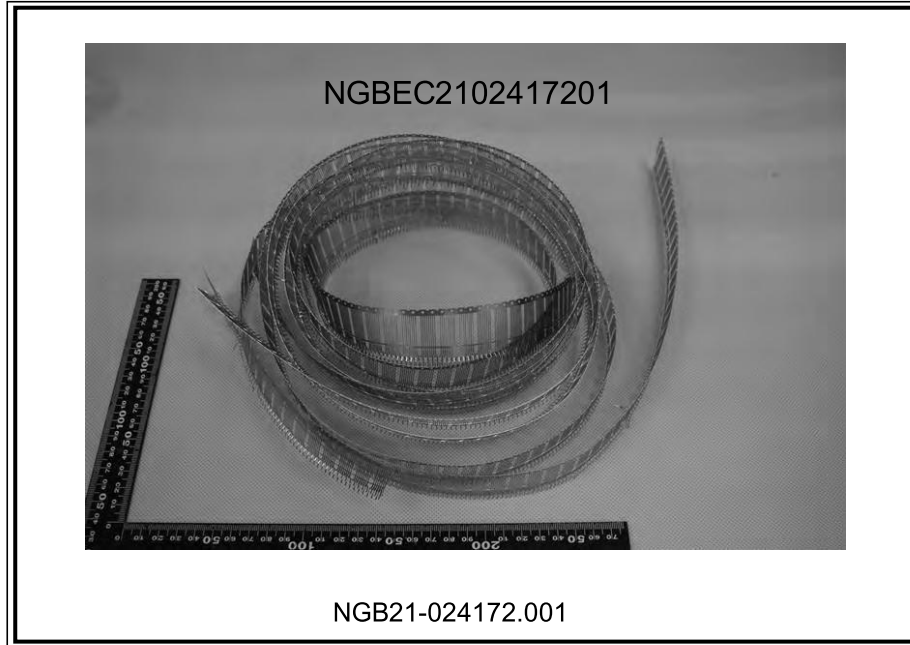
Test Report

No. NGBEC2102417201

Date: 31 May 2021

Page 5 of 5

Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

SGS-4S Standards Technical Services Co., Ltd.
Ningbo Branch Laboratory

No. 1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 TEL (86-574) 89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 IHL (86-574) 89070271 IML (86-574) 89070242

www.sgsgroup.com.cn
sgs.china@sgs.com

Test Report

No. NGBEC2102417203

Date: 31 May 2021

Page 1 of 5

The following sample(s) was/were submitted and identified on behalf of the clients as : Sample of Tin plating

SGS Job No. : NP21-002432 - NB
 Date of Sample Received : 25 May 2021
 Testing Period : 25 May 2021 - 31 May 2021
 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 sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

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

Kell Li

Kell Li

Approved Signatory



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
 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

SGS-CSTC Standards Technical Services Co., Ltd.
 Ningbo Branch China

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 TEL (86-574)89070249 www.sgsgroup.com.cn
 中国·浙江·宁波高新区凌云路1177号 邮编: 315040 TEL (86-574)89070271 TML (86-574)89070242 sgs.china@sgs.com

Test Report

No. NGBEC2102417203

Date: 31 May 2021

Page 2 of 5

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	NGB21-024172.002	Silvery metal

Remarks :

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

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+AMD1:2017, IEC62321-5:2013 and IEC 62321-7-1:2015, analyzed by ICP-OES and UV-Vis.

Test Item(s)	Limit	Unit	MDL	002
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	10
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	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
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101::FSP_ORG_ID,FSP_LANG_ID:1258637,25.
- (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.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
 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

SGS-CSI (Shanghai) Technical Services Co., Ltd.
 Ningbo Branch Laboratory

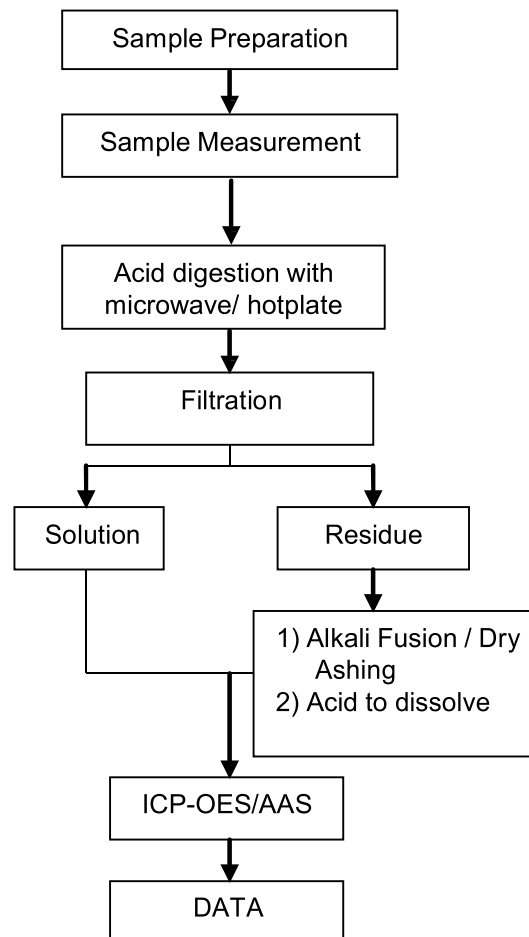
No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 TEL (86-574)89070249
 中国·浙江·宁波高新区凌云路1177号 邮编: 315040 TEL (86-574)89070271

www.sgsgroup.com.cn
sgs.china@sgs.com

ATTACHMENTS

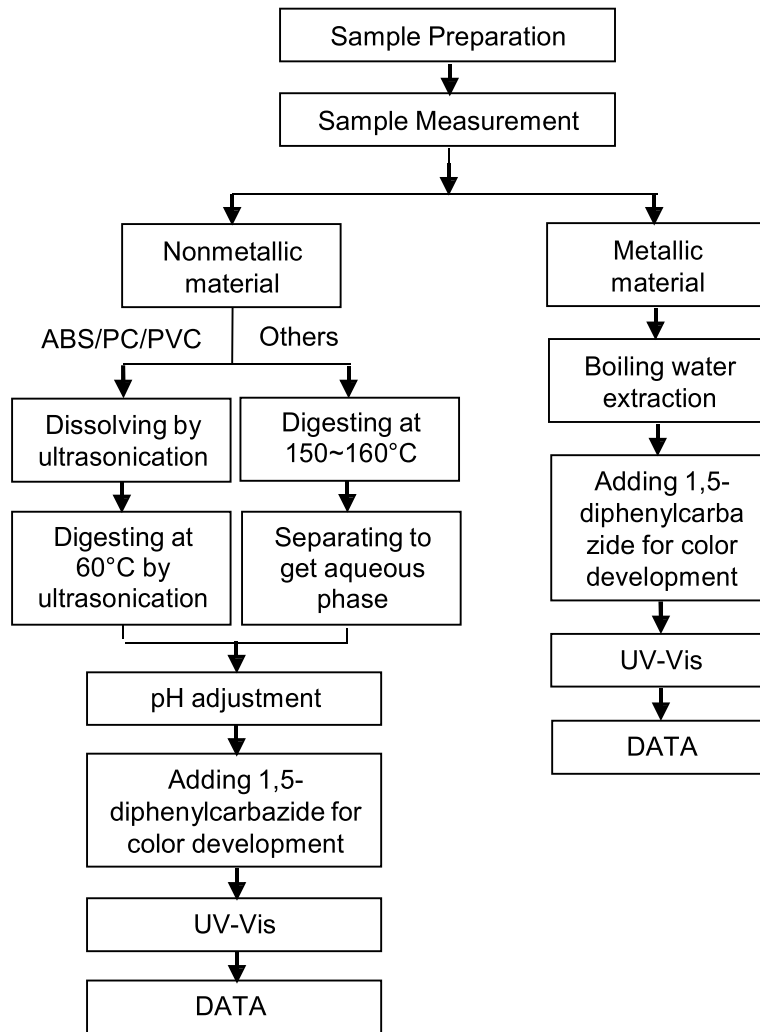
Elements (IEC62321) Testing Flow Chart

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



ATTACHMENTS

Hexavalent Chromium (Cr(VI)) Testing Flow Chart



Test Report

No. NGBEC2102417203

Date: 31 May 2021

Page 5 of 5

Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



SGS-4S Standards Technical Services Co., Ltd.
Ningbo Branch China Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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

No.1177, Lingyun Road, Hi-Tech Zone, Ningbo, Zhejiang, China 315040 TEL (86-574)89070249
中国·浙江·宁波高新区凌云路1177号 邮编: 315040 IHL (86-574)89070271 IML (86-574)89070242

www.sgsgroup.com.cn
sgs.china@sgs.com