RoHS TEST REPORT

Applicant:	SHENZHEN ITOONER TECHNOLOGY CO.,LTD
Address:	Building 2&Building 3(The 3rd and 4th Floor) Gangzai Road, Shangxing Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong, China

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

Product name:	Network Cable
Trade name：	N/A
Model:	GNT-5023, GNT-5005Y, GNT-5005YIP, GNT-5023Y, GNT-5023YIP, GNT-5023T, GNT-5023TIP, GNT-5023IP, GNT-5027GY, GNT-5027GYIP, GNT-5027, GNT-5027IP, GNT-5027F, GNT-5027FIP, GNT-50XXX
Manufacturer：	SHENZHEN ITOONER TECHNOLOGY CO.,LTD
Address:	Building 2&Building 3(The 3rd and 4th Floor) Gangzai Road, Shangxing Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong, China
Testing Laboratory：	Shenzhen Huapin Testing Technology Co., Ltd.
Address:	Room 302, Comprehensive Building, Songbai Industrial Park, No 4, Yangyong Industrial Road, Tangxiayong Community, YanluoStreet, Bao'an District , Shenzhen.
Sample Received Date:	July 06, 2023
Testing Period:	July 06, 2023 - July 13, 2023

Test Requirement:

Conclusion：

Pass

EU RoHS Directive 2011/65/EU and its amendment directives 2015/863/EU (RoHS 2.0) on Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs, PBDEs, DEHP, BBP, DBP & DIBP content

IEC 62321-3-1:2013 IEC 62321-4:2013+A1:2017
IEC 62321-5:2013 IEC 62321-6:2015
IEC 62321-7-1:2015 IEC 62321-7-2:2017
IEC 62321-8:2017

Wrote by: Joe Zhang Reviewed by: Meiko.Ma

Approved by: Thirty Li Date: July 13, 2023

Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test (mg/kg)	Conclusion
1	Blue insulating sleeve	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(Ⅵ))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DIBP	/	N.D	
		DEHP	/	N.D	
		BBP	/	N.D	
		DBP	/	N.D	
2	Transparent Plastic	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(Ⅵ))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DIBP	/	N.D	
		DEHP	/	N.D	
		BBP	/	N.D	
		DBP	/	N.D	
3	Metal	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(Ⅵ))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DIBP	/	/	
		DEHP	/	/	
		BBP	/	/	
		DBP	/	/	
4	Red Wire	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(Ⅵ))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DIBP	/	N.D	
		DEHP	/	N.D	
		BBP	/	N.D	
		DBP	/	N.D	

Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test (mg/kg)	Conclusion
5	White Wire	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(Ⅵ))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DIBP	/	N.D	
		DEHP	/	N.D	
		BBP	/	N.D	
		DBP	/	N.D	
6	Blue Wire	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(Ⅵ))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DIBP	/	N.D	
		DEHP	/	N.D	
		BBP	/	N.D	
		DBP	/	N.D	
7	Green Wire	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(Ⅵ))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DIBP	/	N.D	
		DEHP	/	N.D	
		BBP	/	N.D	
		DBP	/	N.D	
8	Orange wire	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(Ⅵ))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DIBP	/	N.D	
		DEHP	/	N.D	
		BBP	/	N.D	
		DBP	/	N.D	

Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test (mg/kg)	Conclusion
9	Brown Wire	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(Ⅵ))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DIBP	/	N.D	
		DEHP	/	N.D	
		BBP	/	N.D	
		DBP	/	N.D	

Remark:

(1) (a) It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr(VI).

(b)Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-Vis (for Cr (VI)) and GC/MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC62321-3- 1:2013 (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	BL≤(70-3σ)<X<(130+3σ) ≤OL	BL≤(70-3σ)<X<(130+3σ) ≤OL	LOD<X<(150+3σ) ≤OL
Pb	BL≤(700-3σ)<X<(1300+3σ) ≤OL	BL≤(700-3σ)<X<(1300+3σ) ≤OL	BL≤(500-3σ)<X<(1500+3σ) ≤OL
Hg	BL≤(700-3σ)<X<(1300+3σ) ≤OL	BL≤(700-3σ)<X<(1300+3σ) ≤OL	BL≤(500-3σ)<X<(1500+3σ) ≤OL
Br	BL≤(300-3σ)<X	--	BL≤(250-3σ)<X
Cr	BL≤(700-3σ)<X	BL≤(700-3σ)<X	BL≤(500-3σ)<X

(c) BL = Below warning value, OL = Over Limit, IN = Inconclusive, LOD = Limit of Detection, -- = Not Regulated, NA = Not Applicable.

(d) The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.

(2) (a) 1mg/kg = 1ppm = 0.0001%, N.D.= Not Detected (<MDL), --- = Not Conducted.

(b) Unit and Method Detection Limit (MDL) in wet chemical test

Test Items	Pb	Cd	Hg
Units	mg/kg	mg/kg	mg/kg
MDL	2	2	2

The MDL for single compound of PBBs & PBDEs is 5 mg/kg, MDL of Cr(VI) for polymer & composite sample is 2 mg/kg and MDL of DBP, BBP, DEHP and DIBP is 30mg/kg.

(c) When Cr(VI) for metal sample is testing according to IEC 62321-7-1:2015, the unit is

pg/cm^2 , and the MDL is 0,10 pg/cm^2 . When the Cr (VI) concentration is > the 0,13 pg/cm^2 , the sample is positive for Cr(VI) and considered to contain Cr(VI); when the Cr (VI) concentration is N.D.(< the 0,10 pg/cm^2), the sample is negative for Cr(VI) and considered a non-Cr(VI) based coating; when the Cr (VI) concentration is ≥ the 0,10 pg/cm^2 and ≤ the 0,13 pg/cm^2 , the result is considered to be inconclusive

- Unavoidable coating variations may influence the determination.

(3) The maximum permissible limit is quoted from the Directive (EU) 2015/863 - Amendment of EU RoHS Directive 2011/65/EU (RoHS 2.0) Annex II.

RoHS Restricted Substances	**Maximum Concentration Value (by weight in homogenous materials)**
Lead (Pb)	0.1%
Cadmium (Cd)	0.01%
Mercury (Hg)	0.1%
Hexavalent Chromium (Cr VI)	0.1%
Polybrominated biphenyls (PBBs)	0.1%
Polybrominated diphenylethers (PBDEs)	0.1%
Dibutyl Phthalate (DBP)	0.1%
Benzylbutyl Phthalate (BBP)	0.1%
Bis-(2-ethylhexyl) Phthalate (DEHP)	0.1%
Diisobutyl Phthalate (DIBP)	0.1%

RoHS Exemptions	
RoHS Directive 2011/65/EU ANNEX III and (EU)2017/2102	
Exemption Items	**Expires Date**
1, Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):	
1(a), For general lighting purposes < 30 W:3,5 mg	2,5 mg shall be used per burner after 31 December 2012
1(b), For general lighting purposes≥ 30 W and < 50W:3,5mg	
1(c), For general lighting purposes ≥ 50 W and < 150 W: 5 mg	
1(d), For general lighting purposes ≥ 150 W: 15 mg	
1(e), For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm: 7 mg	
1(f), For special purposes: 5 mg	
2(a), Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp):	
2(a)(1), Tri-band phosphor with normal lifetime and a tube diameter < 9 mm (e.g. T2): 4 mg	
2(a)(2), Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5): 3 mg	
2(a)(3), Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm (e .g . T8):3 .5mg	
2(a)(4), Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12): 5 mg	Expires on 31 December 2012; 3,5 mg may be used per lamp after 31 December 2012
2(a)(5), Tri-band phosphor with long lifetime (≥ 25 000 h): 5 mg	
2(b), Mercury in other fluorescent lamps not exceeding (per lamp):	
2(b)(2), Non-linear halophosphate lamps (all diameters): 15 mg	Expires on 13 April 2016
2(b)(3), Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9):15mg	
2(b)(4), Lamps for other general lighting and special purposes (e.g. induction lamps):15mg	
3, Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp):	
3(a), Short length (≤500 mm):3.5mg	
3(b), Medium length (> 500 mm and ≤ 1 500 mm):5mg	
3(c), Long length (> 1 500 mm):13mg	
4(a), Mercury in other low pressure discharge lamps (per lamp):15mg	
4(b), Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra>60:	

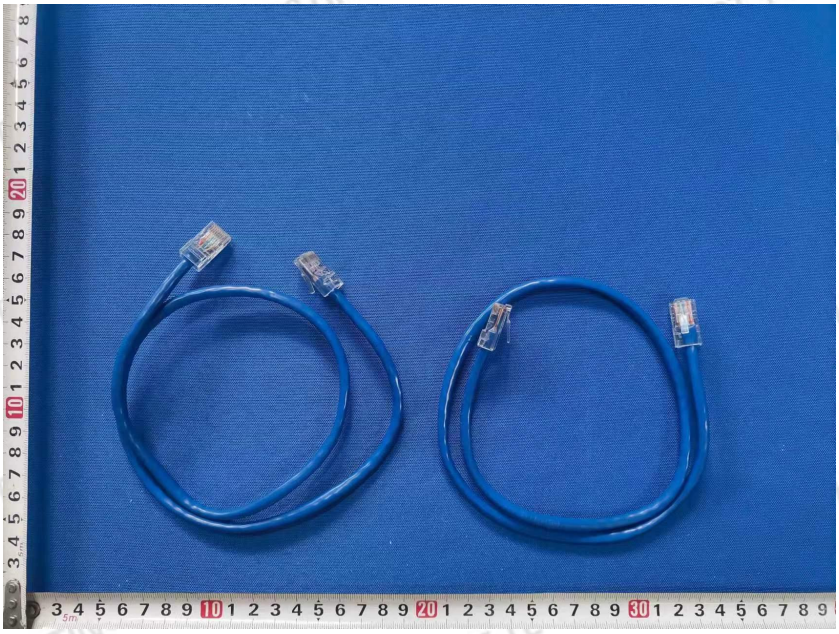
Exemptions	
RoHS Directive 2011/65/EU ANNEX III and (EU)2017/2102	
Exemption Items	**Expires Date**
4(b) -I, P ≤ 155 W:30mg	
4(b) -II, 155 W < P ≤ 405 W:40mg	
4(b) -III, P > 405 W:40mg	
4(c), Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner):	
4(c)-I, P ≤ 155 W:25mg	
4(c)-II, 155 W < P ≤ 405 W:30mg	
4(c)-III, P > 405 W:40mg	
4(d), Mercury in High Pressure Mercury (vapour) lamps (HPMV)	Expires on 13 April 2015
4(e), Mercury in metal halide lamps (MH)	
4(f), Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex	
5(a), Lead in glass of cathode ray tubes	
5(b), Lead in glass of fluorescent tubes not exceeding 0,2 % by weight	
6(a), Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0,35 % lead by weight	Expires on 21 July 2026
6(b)-I, Lead as an alloying element in aluminium containing up to 0,4 % lead by weight	Expires on 21 July 2026(0.3%)
6(b)-II, Lead as an alloying element in aluminium containing up to 0,4 % lead by weight	Expires on 21 July 2026 and after that date may be used in spare parts for EEE placed on the market before 31 December 2024
6(c), Copper alloy containing up to 4 % lead by weight	Expires on 21 July 2026
7(a), Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)	Expires on 21 July 2026
7(b), Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications	
7(c)-I, Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	Expires on 21 July 2026
7(c)-II, Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	Expires on 21 July 2026
7(c)-III, Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC	Expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013
7(c)- Ⅳ, Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors	Expires on 21 July 2016

Exemptions	
RoHS Directive 2011/65/EU ANNEX III and (EU)2017/2102	
Exemption Items	**Expires Date**
8(a), Cadmium and its compounds in one shot pellet type thermal cut-offs	Expires on 1 January 2012 and after that date may be used in spare parts for EEE placed on the market before 1 January 2012
8(b), Cadmium and its compounds in electrical contacts	
9, Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution	
9(b), Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	
11(a), Lead used in C-press compliant pin connector systems	May be used in spare parts for EEE placed on the market before 24 September 2010
11(b), Lead used in other than C-press compliant pin connector systems	Expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013
12, Lead as a coating material for the thermal conduction module C-ring	May be used in spare parts for EEE placed on the market before 24 September 2010
13(a), Lead in white glasses used for optical applications	
13(b), Cadmium and lead in filter glasses and glasses used for reflectance standards	
14, Lead in solders consisting of more than two elements for the connection between the pins and the package of micropro-cessors with a lead content of more than 80 % and less than 85 % by weight	Expires on 21 July 2026
15, Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	
16, Lead in linear incandescent lamps with silicate coated tubes	Expires on 1 September 2013
17, Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications	
18(b), Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP ($BaSi_2O_5$:Pb)	
21, Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	

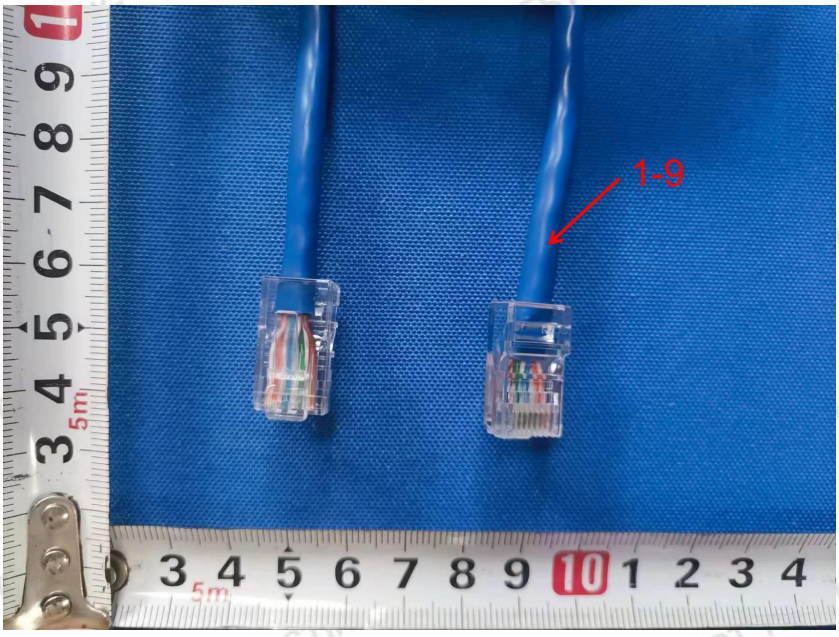
Exemptions	
RoHS Directive 2011/65/EU ANNEX III and (EU)2017/2102	
Exemption Items	**Expires Date**
23, Lead in finishes of fine pitch components other than connectors with a pitch of 0,65 mm and less	May be used in spare parts for EEE placed on the market before 24 September 2010
24, Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	
25, Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring	
29, Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC ([1])	
30, Cadmium alloys as electrical/mechanical solder joints to elec-trical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more	
31, Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)	
32, Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes	
33, Lead in solders for the soldering of thin copper wires of 100 pm diameter and less in power transformers	
34, Lead in cermet-based trimmer potentiometer elements	
37, Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	
38, Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide	
39, Cadmium in colour converting II-VI LEDs (< 10 pg Cd per mm^2 of light-emitting area) for use in solid state illumination or display systems	Expires on 1 July 2014
40, Cadmium in photoresistors for analogue optocouplers applied in professional audio equipment	Expires on 31 December 2013
Note: 1. ([1]) OJ L 326, 29. 12. 1969, p.36. 2. For the purposes of Directive 2011/65/EU, a maximum concentration value of 0,1 % by weight in homogeneous materials for lead, mercury, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE) and of 0,01 % by weight in homogeneous materials for cadmium shall be tolerated.	

Sample photo

EUT Photo 1



EUT Photo 2



****End of Report****