국제통신부품貴中 2007年 1月 18日

環境關理 物質 不使用 證明書

會社名 : 히로세코리아(주)
部 署 : 품질보증팀
責任者 : 차 재환 차장

貴社에 販賣하는 製品 및 製品의 使用材料, 包裝材, 製造工程에 含有되는 添加劑 等에 對하여 貴社가 要求하는 管理水準(使用禁止對象)의 物質을 使用하고 있지 않음을 證明합니다.

當社의 製品 및 製品의 使用材料, 包裝材, 製造工程에 含有되는 添加劑 等에 對하여 以下의 成分으로 構成되어 있음을 報告 합니다.

(1) 製品 使用素材

NO	제품명	부품명	원자재명	원자재 MAKER	비 고
1	HIF3-2226SCFA	단자	C5210R	NIKKO METAL	

(2) 測定可能物質의 ICP Data는 別紙 參照 要望

(3) 測定可能物質의 成分 分析 Data는 別紙 參照 要望

以 上

총 047 A4 모 (030120) 히로세코리아주식회사

SGS

Test Report No. F690501/LF-CTSGP06-18593

Date: July 24, 2006

To: **HIROSE KOREA**
1261-10
Jeoungwhang-dong
Shihung-city
GYEONGGI-DO
Korea

The following merchandise was submitted and identified by the client as :

Commodity	: C5210R-H
SGS File No.	.: GP06-18593
Received Date	: July 14, 2006
Test Performing Date	: July 17, 2006
Test Performed	: SGS Testing Korea tested the sample(s) selected by applicant with following results
Test Results	: For further details, please refer to following page(s)
Buyer(s)	: SAMSUNG,LG

SGS Testing Korea Co. Ltd.

Jade Jang
Patrick An
Monet Jeong
Jinee Song
/Testing Person

Jeff Jang / Chemical Lab Mgr

The above certificate is the accredited test items by Korea Laboratory Accreditation Scheme (KOLAS), which signed the ILAC-MRA.

SGS

Test Report No. F690501/LF-CTSGP06-18593

Sample No. : GP06-18593.001

Sample Description : C5210R-H

Style/Item No. : 7668200-85-24-07

Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium(Cd)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996), ICP	0.5	N.D.
Lead (Pb)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996), ICP	5	19.5
Mercury (Hg)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A(1996), US EPA 7196A(1992), UV	1	N.D.

Picture of Sample as Received:

*** End ***

NOTE: (1) N.D. = Not detected.(<MDL)
(2) ppm = mg/kg
(3) MDL = Method Detection Limit
(4) Estimated expanded uncertainty U with a coverage factor k =2, corresponding to a level of confidence of about 95%

The above certificate is the accredited test items by Korea Laboratory Accreditation Scheme (KOLAS), which signed the ILAC-MRA.

(1)

To. HIROSE ELECTRIC CO., LTD.

MATERIAL SAFETY DATA SHEET

MSDS FILE No. (KURAMI WORKS) : 05-1114 (based on Form OSHA-174)

IDENTITY (AS Used on Label and List)

Product Class : Phosphor Bronze Strip
Trade Name : JIS H3130 C5210R (Equivalent to ASTM B103 C52100)
CAS No. : Copper: 7440-50-8, Tin: 7440-31-5, Phosphor: 7723-14-0

Chemical Composition

	Content(wt-%)	CAS No.
Tin(Sn)	7.0~9.0	7440-31-5
Phosphor(P)	0.03~0.35	7723-14-0
Copper(Cu)	Balance	7440-50-8
Sn+P+Cu	99.7≦	-

Section I

Manufacturer's Name
NIKKO METAL MANUFACTURING CO., LTD.
KURAMI WORKS

Address
3 Kurami Samukawa-cho
Kouza-gun Kanagawa prefecture
253-0101 JAPAN

Telephone Number for Information (Quality Assurance)
+81-467-75-7285

Facsimile Number for Information (Quality Assurance)
+81-467-74-6971

Date Prepared
January 27th, 2005

Signature of Person in Charge
Tetsuo Maki
MAKI, Tetsuo
Senior Technical Supervisor, Quality Assurance

Signature of Person Responsible
Hiroaki Watanabe
WATANABE, Hiroaki
Manager, Quality Assurance Section

Section II Hazardous Ingredients / Identity Information

Hazardous Components (Specific Chemical Identity : Names OSHA Pel ACGIH TLV

Nothing for ordinary service condition

Section III Physical / Chemical Characteristics

Boiling Point: 2630 °C for Copper, 2275 °C for Tin	Specific Gravity (H20 = 1): 8.80
Vapor Pressure (mmHg): N/A	Melting Point: 1025 deg. centi. for C5210 Phosphor Bronze
Vapor Density (Air = 1): N/A	Evaporation Rate (Butyl Acetate = 1): N/A

Solubility in Water: N/A

Appearance and Odor: Brown - Red (solid) : Odor - None

Section IV Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
N/A	N/A	N/A	N/A

Extinguishing Media: N/A (stable , nonflammable substance)

Special Fire Fighting Procedures: Not specified

Unusual Fire and Explosion Hazards: Metal products do not present fire or explosion hazards under normal conditions.

Section V Reactivity Data

Stability			Conditions to Avoid
	Unstable		
	Stable	X	

Incompatibility (Materials to Avoid)

Nothing

Hazardous Decomposition or Byproducts

Nothing

Hazardous Polymerization			Conditions to Avoid
	May Occur		
	Will Not Occur	X	

Section VI Health Hazard Data

Route(s) of Entry :	Inhalation ?	Skin ?	Ingestion ?
	N/A	N/A	N/A

Health Hazardous (Acute and Chronic)

N/A

Carcinogenicitry :	NTP ?	IARC Monographs ?	OSHA Regulated ?
	N/A	N/A	N/A

Signs and Symptoms of Exposure

N/A

Medical Conditions
Generally Aggravated by Exposure N/A

Emergency and First Aid Procedures

N/A

Section VII Precautions for State Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled

N/A

Waste Disposal Method

Collect scrap for remelting.

Precautions to Be Taken in Handling and storing

For Handling

- Put safety gloves on to protect your hands from edges of coils which might cut your hands.
- Wear safety glasses when metal powders or chips are expected to be generated in the work.
- Put safety shoes on when handling heavy coils.

For Storing

- The environment of stocking area should be free from acid, alkali, chloride, sulfide and other corrosive chemicals to prevent from rusting or corrosion.

Other Precautions

No special requirements

Section VIII Control Measures

Respiratory Protection (Specify Type)

Wearing a mask be recommended in the work such as abrasion and buffing which generates metal powders or chips.

Ventilation	Local Exhaust	Special
	None	None
	Mechanical (General)	Other
	None	None

Protective Gloves

Put safety gloves on to protect your hands from edges of coils which might cut your hands.

Eye Protection

Wear safety glasses when metal powder is expected to be generated in the work.

Other Protective Clothing or Equipment

Put safety shoes on when handling heavy coils.

Work / Hygienic Practices

None

Influence to environments

Fish on toxicity : TLm 48 hr. on CuSO4
Salmogairdeneri : 0.038 ~ 0.8 ppm
Oryzias Latipes : 2.1 ~ 24ppm