

# MSDS (Material Safety Data Sheet)

## 物質安全資料表

### Section 01 Chemical Product and Company Identification 品名及廠商資料

Product Name 品名	LEAD FRAME 導線架
Product Code 物品編號	LEAD FRAME 導線架(C7025+R970)
Product Name 製造商或供應商	Fusheng Electronics Corporation 復盛精密工業股份有限公司
Address 地址	NO.17.INDUSTRYE.RD.IX.SCIENCE PARK HSIN-CHU TAIWAN. R . O . C . 新竹科學工業園區工業東九路17號
Telephone 電話	886 - 3 - 5774981
Fax Number 傳真	886 - 3 - 5772583
Emergency Telephone 緊急聯絡電話	

### Section 02 Composition and Information on Ingredients 成分辨識資料

組件名稱	組件百分比(%)	化學成分	CAS Number	Percent Weight (%)
Base Material 底材(C7025)	95.1	Copper (Cu)	7440-50-8	95.3
		Nickle ( Ni )	7440-02-0	3.2
		Silicon ( Si )	7440-21-3	1.2
		Magnesium ( Mg )	7439-95-4	0.3
Coating 鍍層(Ag)	3.5	Silver (Ag)	7440-22-4	100
Tape 貼帶(R970)	1.4	Polyimide	Trade Secret	40
		Poly - ethylene - terephthalate	25038-59-9	30
		NBR	9003-18-3	10
		Bismaleimide	79922-55-7	10
		Phenol resin	28453-20-5	10

### Section 03 Hazard Identification 危害辨識資料

Emergency Overview 緊急綜述	<p>The leadframe products, Ag Plating are <b>non hazardous</b> in their as-shipped form.</p> <p>However, incorrect handling of the leadframe, the products made thereof, or production scrap generated may lead to injuries. Operations generating dust or fumes, such as grinding, polishing, welding or melting, may create health hazards by inhalation or b</p> <p>A reaction of a few chemical substances with this product, or its production scrap as well as dust or fumes generated during production, may produce poisonous substances or explosive gases.</p>
Potential Health Effects 健康危害效應	<p>Eye 眼睛 : Classification not possible .</p> <p>Skin 皮膚 : Classification not possible .</p> <p>Ingestion 吞食 : Classification not possible .</p> <p>Inhalation 吸入 : Metallic taste, dryness of the throat, sneezing, respiratory tract irritation, mixed pneumoconiosis, chills, metal fume fever, short-ness of breath, chest pain, weakness, fatigue, cough, muscle and joint pain.</p>
HMIS CODE 危害物質資訊代碼	<p>Health 健康 : N / A</p> <p>Flammability 易燃性 : N / A</p> <p>Physical Hazard 物理危害 : N / A</p> <p>Personal Protection 個人防護 : N / A</p>

Environmental Effects 環境影響	Hazardous to The Aquatic Environment (Acute) : Classification not possible Hazardous to The Aquatic Environment (Chronic) : CATEGORY 4
Physical and Chemical Hazards 物理及化學的危害	Copper : Irritation of upper airway (single exposure) Liver disease (long term or repeated exposure in a high aerial density) Metal hume fever (fume's inhalation) . Nickel : Possibility of causing allergy, asthma or respiratory difficulty when inhaling Possibility of causing allergic skin reaction Suspicion of possibility of carcinogenesis Damage of organs (respiratory, kidney) Organ disease (long term or repeated exposure in a hogh aerail density) Possibility of harmful in the aquatic (long-term influence)
Specific Hazards 特殊危害	N / A

#### Section 04 First Aid Information 急救措施

irst Aid Information in Different Exposed Way 不同暴露途徑之急救措施	Eye CONTACT 眼睛接觸 : Wash the eye for 15 minutes or more by a stream of clean water, and see a doctor. Skin Contact 皮膚接觸 : Wash the adhesion part by soapy water, and flush it with bags of water. Ingestion 吞食 : Wash the mouth well with water and, if possible, induce vomiting, then immediately arrange for medicat treatment. Inhalation 吸入 : When inhaling voluminously, transfer the patient to a fresh place or air at once. The patient should be kept warm and at rest while a doctor is sent for. Hazards Effects 危害效應 : In the situation handled with the product machined Skin Contac : If heated chips, ect., adhere to your skin to cause a minor burn, immediately allow the affected part to cool under plenty of funning water. In the situation handled with the product melted Inhaled : Transfer the patient to a fresh place of air once, Practice artificial respiration at once when respiratory difficulty or asphyxia is perceived. Notes to Physicians 對醫師之指示 : N / A
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<b>Section 05 Fire Fighting Measures 滅火措施</b>	
Flash point 發火點	N / A
Flammability Classification 易燃性分類	N / A
Extinguishing Media 適用滅火劑	N/A (stable, nonflammable substance)
Unusual Fire and Explosion Hazards 特殊火災及爆炸危害	Metal products do not present fire or explosion hazards under normal conditions.
Fire-Fighting Methods 滅火方法	Not specified
Hazardous Combustion Products 危險的燃燒產物	N / A

<b>Section 06 Accidental Release Measures 洩漏處理方法</b>	
Precautions and Equipment 預防措施及設備	Not applicable for the solid.
Methods For Clean-up 清潔方法	Not applicable for the solid.
Personal Precaution 個人防護措施	Not applicable for the solid.

<b>Section 07 Handling And Storage 處置及儲存</b>	
Handling 處置	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
Storage 儲存	The environment of stocking area should be free from acid, alkali, chloride, sulfide and other corrosive chemicals to prevent from rusting or corrosion.

<b>Section 08 Exposure Controls And Personal Protection 暴露控制及個人防護</b>			
Eye 眼睛	Protective goggles are recommended, depending upon how the semis are further processed.		
Skin 皮膚	Use rubber glove to prevent mechanical injury		
Ingestion 吞食	Wearing a mask be recommended in the work such as abrasion and buffing, which generates metal powders or chips		
Inhalation 吸入	None normally needed. If exposure exceeds the PEL/TLV, use NIOSH approved respiratory protection equipment.		
Engineering Control 工程控制	Put safety shoes on when handling heavy coils.		
Exposure Limits 暴露限度	Exposure Guidelines 暴露指標 (mg/m3)		
	Components	ACGIH (TLV-TWA)	OSHA (PEL)

<b>Section 09 Physical And Chemical Properties 物理及化學特性</b>	
Appearance 外觀	Solid
Odor 氣味	Odorless
PH 酸鹼值	Data none
Boiling Point 沸點	Data none
Decomposition 分解	Data none
Melting Point 熔點	塑料402 /金屬1080
Flash Point 發火點	Data none
Auto-ignition Temperature 自燃溫度	Data none
Explosion Properties 爆炸特性	Data none
Vapor Pressure 蒸氣壓	Data none
Vapor Density (Air=1) 蒸氣密度	Data none
Specific Gravity (H2O=1) 比重	Data none
Solubility In H2O 水中溶解度	Insoluble

<b>Section 10 Stability And Reactivity 安定性及反應性</b>	
Chemical Stability 化學安定性	Stable
Conditions To Avoid 應避免狀況	Nothing
Materials To Avoid 應避免物質	Nothing
Hazardous Decomposition Products危害分解物	Nothing ; Will not occur

<b>Section 11 Toxicological Information 毒性資料</b>	
Acute Toxicity 急毒性	<p>Copper powders LD50 orally administered-mouse &gt;4000mg/kg <sup>2)</sup></p> <p>The symptom of the acute toxicity when swallowing is nausea, vomiting, weakness.</p> <p>The symptom when inhaling the dust and Hume is the cough, breast pain, and the fever.</p>
Carcinogenicity 致癌性	<p>Copper is classified into D (material that cannot be classified into human carcinogenicity) by EPA(1991).</p> <p>Nickel is classified into R (as metallic nickel) by NTP(2005)<sup>13)</sup>, and classified into 2B (material that have potential of carcinogenesis) (as metallic nickel) by IARC(1990)<sup>14)</sup>.</p>

Sensitization 過敏性	<p>Respiratory : Nickel is classified into the second crowd of airway sensitization by Recommendation of permissible level etc.(2005) of Japan Society for Occupational Health, and classified into the airway sensitization by Japanese Society of Occupational all</p> <p>Nickel have a possibility of causing allergy, asthma or respiratory difficulty when inhaling.</p> <p>Skin Sensitization : Copper is classified into the second crowd of skin sensitization (Material which might have sensitization to person) by the Japan Society for Occupational Health (Recommendation; 2004).</p> <p>Nickel is classified into the first crowd of skin sensitization by Recommendation of permissible level etc.(2005) of Japan Society for Occupational Health, and classified into the skin sensitization by Japanese Society of Occupational allergy and DFG.</p>
Chronic Toxicity 慢毒性	Data none

<b>Section 12 Ecological Informatin 生態資料</b>	
Mobility 移動性	N / A
Eco Toxicity 生態毒性	No data is available on this product. Individual constituents are as follows: Copper: The toxicity of copper to aquatic organisms varies significantly not only with the species, but also with physical and chemical characteristics of the water, such as its

<b>Section 13 Disposal Information 處理資料</b>	
Waste From Residues 廢棄處置方法	Collect as a metal because th substance that composes the product is recyclable, and consign it to the disposal contractor.

<b>Section 14 Transport Informatin 運送資料</b>	
Shipping Basic Description 運送基本描述	N / A
UN No. 聯合國編號	N / A
Internal Transport 國內運輸規定	N / A
Notes 注意事項	N / A

## Section 15 Regulatory Information 法規資料

Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management

: Class I Designated Chemical Substances. <Nickel>

《Article 2-2(Law) Attached Table 1, Article 1 (Enforcement Order of Law)》

Industrial Safety and Health Law : Hazardous substance to be notified. <Copper, Nickel>

《Article 57-2(Law) Attached Table 9, Article 18-2 (Enforcement Order of Law)》

Water Pollution Control Law : Substance to which effluent standard is provided. <Copper>

《Article 3(Law) Attached Table 2, Article 1 (Ministerial ordinance that provides effluent standard)》

Sewage Law : Substance to which effluent standard is provided. <Copper>

《Article 12-2(Law) Article 9-4 (Enforcement Order of Law)》

Situation in which dust is generated

: Industrial Safety and Health Law 《Paragraph 1, Article 2(Ordinance on Prevention of Hazards Due to Dust)》. Act of the Occupational Safety and Health Administration (OSHA).

## Section 16 Other Informatin 其他資料

References 參考文獻	
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Issued 發行日期	2015.1.25
Version 版次	B