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**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION 化学品及企业标识****PRODUCT NAME: Copper Clad Laminate(FR-4 Q160)**

产品名称: 覆铜箔层压板 (FR-4 Q160)

**PRODUCT USE:** Substrate for printed circuitry.

用途: 用于制作印制电路板。

**NAME of COMPANY and ADDRESS:** SHENGYI TECHNOLOGY(SHAANXI) CO.,LTD.

No.8,Yongchang Road, Xianyang City; ShaanXI Province, China

公司名称及地址: 陕西生益科技有限公司;

中国陕西省咸阳市永昌路8号

**FOR MORE INFORMATION CALL:**

电话: (Monday-Friday, 8:00am-5:00pm)

86-029-38011808

FAX/传真: 86-029-38011808

**IN CASE OF EMERGENCY CALL:**

紧急联络电话: (24 Hours/Day, 7 Days/Week)

86-029-38011808

Email/电子邮件: email@syst.com.cn

**2. HAZARDS IDENTIFICATION 危险性概述****EMERGENCY OVERVIEW:****紧急情况概述:**

A nonflammable, sheet material. Dust, when machined or punched may cause skin or eye irritation. Fumes, if decomposed may irritate eyes, nose, and throat.

是一种难燃的层压板。当使用或打孔时可能产生粉末,可能使皮肤或眼睛感到刺激。当分解时产生的气体会刺激眼睛、鼻和咽喉。

**POTENTIAL HEALTH HAZARDS:****潜在的健康危害:****SKIN:** Dust may cause moderate skin irritation.**皮肤:** 粉末将导致中等程度皮肤过敏。**EYES:** Dust may cause moderate eye irritation. Fumes may irritate eyes.**眼睛:** 粉末将导致中等程度眼睛过敏。**INHALATION:** Fibrous glass dust may be released from the fiber-glass cloth substrate when machined.**吸入物:** 当使用玻璃布时玻璃纤维粉末可能会飞散出。**INGESTION:** Not determined.**摄食:** 未定义。**DELAYED EFFECTS:** Our product is reinforced with continuous filament fiber glass. Dust generated from the cutting, grinding, machining, etc., would not be expected to produce respirable particles. IARC considers continuous filaments as unclassifiable or probably non-carcinogenic.**慢性影响:** 我们的产品用的是加强型连续的玻璃纤维丝。当切割、打孔加工时不会产生可吸入的颗粒。IARC组织没有将连续型玻璃纤维丝列入致癌目录。**3. COMPOSITION/INFORMATION ON INGREDIENTS 成份/组成信息**

INGREDIENT NAME	CAS #	WEIGHT %
成分名称	化学文摘号	重量比
Glass Fiber	(65997-17-3)	20—40%
玻璃纤维		
Copper Foil	(7440-50-8)	15—30%
铜箔		
Epoxy Resin	(26265-08-7)	30—60%
溴化环氧树脂		

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#### 4. FIRST-AID MEASURES 急救措施

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**SKIN:** Wash in flowing water or shower. Remove contaminated clothing.

**皮肤:** 脱下已污染衣服, 用流动水冲洗。

**EYE:** Irrigate with flowing water for 15 minutes. If irritation persists, consult a physician.

**眼睛:** 用流动水冲洗15分钟, 如过敏现象持续发生, 请求助于医生。

**INHALATION:** If overcome by dust or smoke, move to fresh air. If not breathing, give mouth-to-mouth resuscitation.

Call physician.

**吸入:** 如粉末烟尘太多请转移到有新鲜空气的地方, 如没有呼吸, 请进行人工呼吸。并致电医生。

**INGESTION:** If large amounts are ingested, consult physician.

**摄食:** 如吸入大量, 请致电医生。

**ADVICE TO PHYSICIAN:** Treat symptomatically

**建议医生:** 处理出现的症状。

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#### 5. FIRE-FIGHTING MEASURES 消防措施

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**FLAMMABLE PROPERTIES:** N/A

**易燃烧性:** 不适用

**FLASH POINT:** N/A

**闪点:** 不适用

**FLASH POINT METHOD:** N/A

**闪点方式:** 不适用

**AUTOIGNITION TEMPERATURE:** Not determined

**自燃点温度:** 未定义

**UPPER FLAME LIMIT (Volume % in air):** N/A

**燃烧上限:** 不适用

**LOWER FLAME LIMIT (Volume % in air):** N/A

**燃烧下限:** 不适用

**FLAME PROPAGATION RATE (Solids):** UL V-0

**燃烧等级:** UL V-0

**OSHA FLAMMABILITY CLASS:** N/A

**OSHA 燃烧级别:** 不适用

**EXTINGUISHING MEDIA:** Water, CO<sub>2</sub> and dry chemical

**灭火介质:** 水、CO<sub>2</sub>及干化学品

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** May give off toxic hydrogen bromide when thermally decomposed.

**不正常火灾及爆炸危险:** 当发生热分解时可能会释放出有毒的溴化氢。

**SPECIAL FIREFIGHTING PRECAUTIONS/INSTRUCTIONS:**

**特别火灾指导:**

Firemen should wear proper protective equipment and positive pressure self-contained breathing apparatus.

消防员须身穿保护装置及正压呼吸设施。

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#### 6. ACCIDENTAL RELEASE MEASURES 泄漏应急处理

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**IN CASE OF SPILL OR OTHER RELEASE:** (Always wear recommended personal protection equipment)

**如有泄漏或其他释放:** (通常身穿所推荐的保护设施)

Not applicable, material is an article.

不适用于固体材料。

**Spills and releases may have to be reported to local authorities.**

**有关泄漏应报告当地政府。**

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#### 7. HANDLING AND STORAGE 操作处置与储存

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**NORMAL HANDLING:** (Always wear recommended personal protective equipment.)

**规范指南:** (建议穿戴个人防护设施)

The primary exposure route is inhalation of dust when machine/punched or from fumes or vapors when heated.

主要是预防暴露部位吸入当机器打孔时或冒烟、气化液体受热时所产生的粉尘。

**STORAGE RECOMMENDATIONS:** Stored in the absence of a catalytic environment such as UV light or excessive radiation, and in a cool, dry, clean, fireproof, flat and corrosion-free room.

**贮存建议:** 贮存在无催化作用的环境里, 例如无UV光或过量的辐射, 且在阴凉、干燥、干净、防火、平坦和无腐蚀性气体的室内。

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## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION 接触控制和个体防护

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**ENGINEERING CONTROLS:** Use local exhaust ventilation to control dust.

**工程控制:** 使用当地除尘通风设施。

**PERSONAL PROTECTIVE EQUIPMENT:**

**个人防护措施:**

**SKIN PROTECTION:** For brief contact to dust, no precautions other than clean body-covering clothing should be needed. Use gloves and aprons when prolonged or frequently repeated contact occurs.

**皮肤保护:** 对于短暂性的接触粉尘, 需要时清洗身体或衣服, 无预防措施。对于长期性的接触, 要配带手套和围裙

**EYE PROTECTION:** Use appropriate eye protection when machining material.

**眼睛保护:** 当加工材料时使用眼睛保护装置。

**RESPIRATORY PROTECTION:** When respiratory protection is required for certain operations, use a NIOSH-approved dust respirator.

**呼吸保护:** 当进行产生大量粉尘的操作时使用规范的粉尘防毒面罩。

**ADDITIONAL RECOMMENDATIONS:** N/A

**其它建议:** 不适用

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## 9. PHYSICAL AND CHEMICAL PROPERTIES 理化特性

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**APPEARANCE:** Yellow

**外观:** 黄色

**PHYSICAL STATE:** Solid

**物理形态:** 固体

**ODOR:** None, unless heated

**气味:** 无味, 除非加热

**SPECIFIC GRAVITY:** (Water = 1.0) 1.7 +/- 0.25

**比重:** (水=1.0) 1.7+/-0.25

**SOLUBILITY IN WATER:** (Weight %) Negligible in water

**水溶性:** (重量%) 在水中可忽略

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## 10. STABILITY AND REACTIVITY 稳定性和反应性

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**NORMALLY STABLE?** (conditions to avoid) Stable

**通常稳定?** 稳定

**INCOMPATIBILITIES:** Not determined

**不兼容性:** 未定义

**HAZARDOUS DECOMPOSITION PRODUCTS:** CO, CO<sub>2</sub>, HBr, Oxides of nitrogen if heated in excess of 300 deg. C. Laser drilling or cutting may result in copper metal fume.

**危险的腐化产品:** CO, CO<sub>2</sub>, HBr, NO<sub>x</sub> (当加热超过300℃), 激光打孔或切割时会产生铜金属烟尘。

**HAZARDOUS POLYMERIZATION?** None

**危险聚合物?** 无

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## 11. TOXICOLOGICAL INFORMATION 毒理学信息

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**IMMEDIATE (ACUTE) EFFECTS:** Dust may cause moderate eye, skin and respiratory irritation.

**敏感反应:** 灰尘将导致眼、皮肤中度过敏。

**DELAYED (SUBCHRONIC & CHRONIC) EFFECTS:** NTP has determined that respirable size glasswool may be reasonably anticipated to be a carcinogen. IARC has also classified glasswool as a possible carcinogen. Our product is reinforced with continuous filament fiber glass. Dust generated from the cutting, grinding, machining, etc., would not be expected to produce respirable particles. IARC considers continuous glass filaments as unclassifiable or probably non

carcinogenic.

**慢性反应:** NTP组织认为悬浮性的玻璃棉颗粒理论上可致癌。IARC组织也将玻璃棉列为致癌物。我们的产品是加强型的连续玻璃纤维丝产品。当切割、研磨、制造时通常不会产生吸入性颗粒。IARC组织认为连续型玻璃纤维丝不会致癌。

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## 12. ECOLOGICAL INFORMATION 生态学信息

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Not Biodegradable

非生物降解。

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## 13. DISPOSAL CONSIDERATIONS 废弃处置

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**Is the unused product a hazardous waste substances list of country hazardous waste if discarded?** No  
**列入国家危险废物名录的危险废物不能够再利用时是否被丢弃?** 不

**OTHER DISPOSAL CONSIDERATIONS:** Disposal must be made in accordance with all applicable Local regulations. Copper should be recycled.

**其它处置问题:** 处置必须遵循当地的法律法规。铜箔是可以再利用的。

**Suggestion method after products will be discarded:**

1. Separate reuse method: crush products into powder then separate the valued copper, recycling left plastic powder as a filler.

2. Incineration method.

3. Bury into deep earth.

**产品报废之后有以下几种处置方法:**

1. 分离法, 将产品粉碎, 将铜箔回收利用, 剩余物可作填充料;

2. 焚烧法;

3. 填埋法。

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## 14. TRANSPORT INFORMATION 运输信息

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For additional information on shipping regulations affecting this material, contact the information number found on the first page.

当运输规则影响到物料时, 需要取得额外信息, 请和第一页所提供的联系方式联系。

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## 15. REGULATORY INFORMATION 法规信息

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**HAZARDOUS WASTE SUBSTANCES LIST OF COUNTRY:** 国家危险废物名录

The resin system components listed in the hazardous waste substances list of country (HW13). 环氧化合物类被列入国家危险废物名录当中 (HW13)。

**ADDITIONAL REGULATORY INFORMATION:**

**附加法规资料:**

SHENGYI TECHNOLOGY(SHAANXI) CO., LTD. does not use polybromide-biphenyls or polybromide-biphenyloxides as a fire retardant in any of our epoxy resin systems.

陕西生益科技有限公司没有采用多溴联苯或多溴联苯基氧化物作为阻燃剂在产品的环氧树脂体系当中。

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## 16. OTHER INFORMATION 其它信息

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Edit Company: SHENGYI TECHNOLOGY(SHAANXI) CO., LTD.

编制单位: 陕西生益科技有限公司

Bibliography: GB/T 16483, Safety data sheet for chemical products-Content and order of sections.

参考文献: GB/T 16483, 化学品安全技术说明书