

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Copper Clad Laminate(Autolad 3)

**PRODUCT USE:** Substrate for printed circuitry ;Multilayer Boards.

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

No.5 Western Industry Road North Industry District,Dongguan SSL  
Sci.&Tech.Industry Park,Dongguan City,Guangdong ,P.R.China

**FOR MORE INFORMATION CALL:** (0769)22271828\ 22899388  
(MONDAY-FRIDAY, 8:00AM-5:00PM)

**IN CASE OF EMERGENCY CALL:** (0769)22271828\ 22899388  
(24 HOURS/DAY, 7 DAYS/WEEK)

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS #	WEIGHT %
Continuous Filament Fiber Glass	(65997-17-3)	2-50
Copper	(7440-50-8)	10-95
Brominated Epoxy Resin	(26265-08-7)	1.5-40
Inorganic filler	Proprietary	0.5-20

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW:

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

### POTENTIAL HEALTH HAZARDS:

**SKIN:** Dust may cause moderate skin irritation.

**EYES:** Dust may cause moderate eye irritation. Fumes may irritate eyes.

**INHALATION:** Fibrous glass dust may be released from the fiber-glass cloth substrate when machined.

**INGESTION:** Not determined.

**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.

#### 4. FIRST AID MEASURE

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

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

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

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

**ADVICE TO PHYSICIAN:** Treat symptomatically.

#### 5. FIRE FIGHTING MEASURES

**FLAMMABLE PROPERTIES:** N/A

**FLASH POINT:** N/A

**FLASH POINT METHOD:** N/A

**AUTOIGNITION TEMPERATURE:** Not determined

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

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

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

**OSHA FLAMMABILITY CLASS:** N/A

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

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

**SPECIAL FIREFIGHTING PRECAUTIONS/INSTRUCTIONS:** Firemen should wear proper protective equipment and positive pressure self-contained breathing apparatus.

#### 6. ACCIDENTAL RELEASE MEASURES

**IN CASE OF SPILL OR OTHER RELEASE:** (Always wear recommended personal protection equipment) Not applicable, material is an article. Spills and releases may have to be reported to local authorities.

#### 7. HANDLING AND STORAGE

**NORMAL HANDLING:** (Always wear recommended personal protective equipment.) The primary exposure route is inhalation of dust when machine/punched or from fumes or vapors when heated.

**STORAGE RECOMMENDATIONS:** N/A

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

**PERSONAL PROTECTIVE EQUIPMENT:**

## 8. (CONTINUED) EXPOSURE CONTROLS/PERSONAL PROTECTION

**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.

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

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

**ADDITIONAL RECOMMENDATIONS:** N/A

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Yellow to amber sheets

**PHYSICAL STATE:** Solid

**ODOR:** None, unless heated

**SPECIFIC GRAVITY:** (WATER = 1.0) 1.5 +/- 0.25

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

## 10. STABILITY AND REACTIVITY

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

**INCOMPATIBILITIES:** Not determined

**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.

**HAZARDOUS POLYMERIZATION?** None

## 11. TOXICOLOGICAL INFORMATION

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

**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.

## 12. ECOLOGICAL INFORMATION Not Biodegradable

## 13. DISPOSAL CONSIDERATIONS

**IS THE UNUSED PRODUCT A HAZARDOUS WASTE SUBSTANCES LIST OF COUNTRY HAZARDOUS WASTE IF DISCARDED?** NO

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

**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.

### 13. (CONTINUED) DISPOSAL CONSIDERATIONS

2. Incineration method: incinerate the unused products, this method may produce some brominated compound gas.
3. Bury into deep earth.

### 14. TRANSPORT INFORMATION

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

### 15. REGULATORY INFORMATION

**HAZARDOUS WASTE SUBSTANCES LIST OF COUNTRY:** The resin system components listed in the hazardous waste substances list of country (HW13).

**ADDITIONAL REGULATORY INFORMATION:** SHENGYI TECHNOLOGY CO., LTD. does not use polybromide-biphenyls or polybromide-biphenyloxides as a fire retardant in any of our epoxy resin systems.

### 16. REGULATORY INFORMATION

**CURRENT ISSUE DATE:** 31/03/2014

**PREVIOUS ISSUE DATE:** 17/02/2014

**CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:** Reviewed and re-issued for other regulatory requirements.