

# Material Safety Data Sheet

## Section One: Product and Manufacturer

Product: Epoxy Woven Fiberglass Copper Clad Laminate and Prepreg
Product Name: GEM-3-09
Manufacturer's Address and Telephone: 55, Wei-Wong Street, Su-Lin City, Taipei County, Taiwan, R.O.C. Tel: +886-2-2680-6311
Emergency Telephone/Fax: +886-02-26806311ext.2706/Fax:+886-02-26807234

## Section Two: Ingredient Identification

Prepreg product is composed of semi-cured resin (B-stage) and reinforced with E-glass fabric; Copper Clad Laminate is composed of fully cured (C-stage) prepreg and adhered with copper foil. Resin components include halogenated organic elements and other trace elements of volatile organic materials.

### Mixture: Resin, E-Glass Fabric and Copper Foil

Chemical Property:		
Substance Name	Concentration (Percentage)	Substance Category(CAS No)
E-Glass Fabric	15~35%	65997-17-3
Copper Foil	10~30%	7440-50-8
Epoxy Resin	20~40%	26265-08-7
Fillers	40~60%	21645-51-2

## Section Three: Hazardous Ingredient Identification

Most Important Harmful Effect	Healthy Harmful Effect: No harm to health
	Environmental Effect: NA
	Physical & Chemical harm: NA
	Special Harm: NA
Major Symptom: NA	
Article Harmful Category: NA	

## Section Four: First Aid Measures

First aid measures for different ways of exposures: Inhalation: Immediately flush mouth and nose with large amounts of temperate water.
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<p>Skin contact: Use compressed air to blow the skin and clothes. Wash skin thoroughly with water with mild soap.</p> <p>Eye contact: Immediately use water to flush the eyes and seek medical attention.</p> <p>First-Aid for accidental ingestion: Force to vomit, flush the mouth with water, and seek immediate medical attention..</p>
<p>Most Important Symptom and Harmful Effect: Sensitive reaction from skin contact with dusts; Skin cuts or bruises from careless trimming operation..</p>
<p>Protection to the First-Aid Personnel: N/A</p>
<p>Hints to the Medical Doctor: N/A</p>

### Section Five: Fire Fighting Measures

<p>Proper Extinguishing Media: Water spray, dry chemical powder, or carbon dioxide.</p>
<p>Possible Special Harm during Fire Fighting: Inhalation of smoke from burning.</p>
<p>Special Fire Fighting Procedure: N/A</p>
<p>Special Protection Equipment for Fire Fighter: Wear full bunker gear including a positive pressure self-contained breathing apparatus in any close place.</p>

### Section Six: Accidental Release Measures

<p>Personal Attention: Solid Substance, No Risk of Leakage</p>
<p>Environmental Attention: N/A</p>
<p>Clean Up Measure: N/A</p>

### Section Seven: Safe Handling and Storage

<p>Holding: NA</p>
<p>Storage: (Laminate) Packed: Room Temp. → 2 years</p>

### Section Eight: Special Protection

<p>Engineering Control: NA</p>
<p>Control Parameter: Average acceptable daily density for 8 hours/Average acceptable density for short period/Highest acceptable density: N/A</p>
<p>Biological Index: N/A</p>
<p>Personal Protection Equipment: Respiratory Protection: Micro dusts and particles may come out from drilling, edge trimming,</p>

and cutting. Dust collection should be used during these processes, and operator should wear gauze mask to prevent inhalation.

Hand Protection: Wearing cotton gloves may help keep scraps from hurting personnel during handling.

Eye Protection: Not necessary, but wearing safety glasses or face shield when machining or sawing can help avoid dust contact during operation

Skin & Body Protection: NA

Hygiene Measure: NA

### Section Nine: Physical and Chemical Properties

Substance Status: Solid	Shape: Pieces in flat rectangle pieces
Color: Light Yellow	Smell: N/A
PH Value: 6~7	Boiling Point/Range: N/A
Decomposition Temp.: N/A	Fire Flash Point: N/A °C Test Method: Open Cup Close Cup
Temperature of Spontaneous Combustion: N/A	Explosion Limit: N/A
Steam Pressure: N/A	Steam Density: N/A
Specific Gravity: 2.00~2.10	Dissolution: Not water soluble

### Section Ten: Stability and Reactivity

Stability: Stable Under Room Temperature
Possible Harmful Reaction Under Special Condition: During combustion
Conditions to be avoided: Stored in temperature .higher than 21°C at RH more than 50% unpacked.
Incompatible Materials: Stay away from fire, strong acid、strong oxidizers, and related chemicals
Hazardous Decomposition: Hydrocarbon of variable compositions.

### Section Eleven: Toxicological Information

Urgent Toxicity: NA
Partial Effect: NA
Sensitization: NA
Slow or Long Term Toxicity: NA
Special Effect: NA

## Section Twelve: Ecological Information

Possible Environmental Effect/Environmental Flow: NA

## Section Thirteen: Disposal Measures

Method of Disposal: Proper landfill after complete burning.

## Section Fourteen: Transport Information

International Transportation Regulation : NA

United Nation Code : NA

Domestic Transportation: Laminate by Truck ; Prepreg by airtight refrigerated Truck.

Special Delivery measures and attention: Prepreg needs to be stored in the refrigerated truck with temp. 23°C ↓ ,85%RH ↓

## Section Fifteen: Regulatory Information

Regulation Applied : NA

## Section Sixteen: Other Information

Reference Document	NA	
Business Unit	Name : CCL Technical Dept., Electronic Materials Div. Nan Ya Plastics Corporation.	
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