



GRACE ELECTRON CORP. (GUANGZHOU)

廣州宏仁電子工業有限公司

Add: No.1 Yunpu 1st Road, Luogang District, Guangzhou, China

Tel.: 0086-20-82266188

Fax: 0086-20-82264258

MATERIAL SAFETY DATA SHEET

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GA-LD

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

CHEMICAL PRODUCT NAME: Copper Clad Laminates (GA-LD)
COMPANY: GRACE ELECTRON CORP. (GUANGZHOU)
ADDRESS: No.1 Yunpu 1st Road, Luogang District, Guangzhou, China.
POST CODE: 510530
FAX: 0086-20-82264258
EMERGENCY CALL OF COMPANY: 0086-20-13802731873
TECHNOLOGY DESCRIPTION NO: MSDS- GA-LD
DATE OF TAKING EFFECT: June.1.2015
EMERGENCY CALL OF COUNTRY: 110(Accident); 119 (Fire); 120(Casualty)

2. HADARDS IDENTIFICATION

FATALNESS CATEGORY: No relative data
INCURSION: Dust from trimming, drilling and milling operations can break the body by inbreathing and touching.
HEALTHY HARMFULNESS: Dust from trimming, drilling and milling operations may cause skin irritation to the eye and the respiratory tract.
ENVIRONMENT HARMFULNESS: Not expected to cause any environment harmful.
EXPLOSIVE DANGEROUSNESS: No explosive substances

3. COMPOSITION

THE PRODUCTS ARE MIXTURE

| INGREDIENT NAME | WEIGHT% | CAS No. |
|-----------------|---------|------------|
| Copper | 57~100% | 7440-50-8 |
| Fiber Glass | 0~25% | 65997-17-3 |
| Resin | 0~19% | / |

REMARK: This product does not contain reportable hazardous ingredients as defined by the OSHA Hazard Communication Standard (29CFR1910, 1200).

4. FIRST AID MEASURES

It is indicated that discomfort or injury cause by dust from trimming, drilling and milling operations.

SKIN TOUCH: Wash it with water or soap to prevent dust from entering skin pores.

EYE CONTACT: Take victim away the pollution area, wash eyes with abundance water at least 15 minutes and consult a physician if necessary.

ABSORPTION: Take victim away the pollution area and send for a doctor if necessary.

EAT: Consult a physician if eat.



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5. FIRE FIGHTING MEASURES

DANGER CHARACTERISTIC: High temperature, open flame and oxidant may cause on fire and poisonous gas.

HAZARDOUS COMBUSTION PRODUCTS: CO, CO₂, HBr, smoke, ash

EXTINGUISHING MEDIA: Water, CO₂ and dry chemical is unfit it.

PRECAUTION FOR FIRE FIGHTING: Firemen should wear fire-defense clothes, breathing apparatus, fire-defense glove and so on.

6. ACCIDENTAL RELEASE MEASURES

Not applicable, material is a solid.

7. HANDLING AND STORAGE

HANDLING: Keep the good industrial hygiene action. During trimming, drilling and milling operations minimize the chance of inhalation of dusts and contact with skin and eyes. Provide adequate ventilation.

STORAGE: Store in a dry place away from moisture, excessive heat and sources.

8. CONTACT CONTROL/PERSONAL PROTECTION

MAX TOLERANCE CONSISTENCE: No relative data

TEST METHOD: Arithmometer for dust particle

ENGINEERING CONTROL: Use exhausts ventilation for control dust

RESPIRATORY PROTECTION: Use dustproof respirator when trimming, drilling and milling

EYE PROTECTION: Wear safety glasses when trimming, drilling and milling

BODY PROTECTION: Wear dustproof smock when trimming, drilling and milling

HANDS PROTECTION: Wear dustproof gloves when trimming, drilling and milling

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND PHYSICAL STATE: Yellow solid, no odor at room temperature and normal pressure

MELTING POINT: No relative data

DENSITY (WATER= 1) : >1

BOILING POINT: No relative data

VAPOUR DENSITY: No relative data

FLASH POINT: No relative data

LOWER EXPLODE LIMIT: No relative data

FLAMMABLE POINT: 440 °C

UPPER EXPLODE LIMIT: No relative data

WATER SOLUBILITY: Insoluble

MAJOR USE: Substrate for printed circuitry; Multilayer Boards

Main purpose: Used in the PCB



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10. STABILITY AND REACTIVITY

STABILITY: Being stable under the conditions of room temperature and normal pressure

MATERIALS TO AVOID: Strong oxidizing agents.

CONDITIONS TO AVOID: If being attacked by oxidizing agents and over 125°C, the material will decompose with the time.

HAZARDOUS POLYMERIZATION: None

DECOMPOSITION PRODUCTS: CO, CO₂, HBr

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: Have no acute toxicity

STIMULATION: Dust from trimming, drilling and milling operations may cause middling irritation to the eye and the skin.

12. ECOLOGICAL INFORMATION

ECOLOGICAL TOXICITY: No relative data

BIODEGRADABILITY: Not biodegradable

NONBIODEGRADABILITY: No relative data

13. DISPOSAL CONSIDERATIONS

WASTE PROPERTY: Organic Resin Waste (HW13)

WASTE DISPOSAL: 1. Recycled is encouraged, i.e. copper portion of laminate.

2. Landfill in accordance with state and local requirements.

3. Burns down with the control to Process

WASTE NOTE: When abandoned should ensure that not cause the pollution to the environment

14. TRANSPORT INFORMATION

DANGEROUS COMMODITY CODE: No relative data

UN CODE: No relative data

SIGN OF PACKING: No relative data

CLASS OF PACKING: No relative data

PACKING: With PE filter film kraft paper packing

PRECAUTION: 1. Prevents moistly

2. The product may cause slip, scratch when the vehicle is stop and start suddenly.



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15. REGULATION INFORMATION

< Safety Management Regulations of Chemical Dangerous Goods >(February 17, 1987 the State Council issued)

The product did not be included the <Common signs and the classification of dangerous chemicals GB13690-92>

The product did not be included the <The description of dangerous goods table GB12268-90>

16. OTHER INFORMATION

FILLING DATE: June.1.2015

FILLING DEPARTMENT: Tech. and R&D Dept. Grace Electron Corp. (GUANGZHOU)

Data review department: Tech. and R&D Dept. Grace Electron Corp. (GUANGZHOU)

USERS NOTICE: The user should read and understand this material, According to application demand judge the usability

REVISIONS NOTE: Amendment according to <Chemical product security technical manual compilation stipulation scope GB16483-2000>