SAFETY DATA SHEET

This SDS complies with REACH 1907/2006 and 2001/58/EC, GHS, OSHA 29 CFR 1910.1200

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1	Product Identifier:	CuClad® 6700 Bonding Film
	HMIS Rating:	H 1 F 1 R 0
1.2	Relevant identified uses of the substance or mixture and uses advised against.	Thermoplastic Fluoropolymer Film
	Date Prepared:	October 19, 2015
1.3	Details of the Supplier of the Safety Data Sheet:	Rogers Corporation 1100 Governor Lea Rd Bear, DE 19701 Phone: 001-800-635-9333 Fax: 001-302-834-2940 Email: msdsinfo@rogerscorporation.com
1.4	Emergency Telephone Number:	800-424-9300 (U.S. & Canada) Chemtrec 001-703-527-3887 (International – Call Collect) 4001-204937 (China: In-Country)

2. HAZARDS IDENTIFICATION

2.1	GHS Hazard Class	Not classified	
2.2	Signal Word:	Not classified	
	Hazard Statement:	Not classified	
	Precautionary Statements:	Prevention	No Precautionary Statement
		Response	No Precautionary Statement
		Storage	No Precautionary Statement
		Disposal	No Precautionary Statement

2.3	Fire and Explosion:	Not considered flammable or combustible, but this product will burn if involved in a fire.
	Potential Health Effects:	No hazards resulting from the material as supplied. Vapor during processing may be irritating to the respiratory tract and to the eyes. Thermal decomposition can lead to release of irritating gases and vapors. At higher temperatures, (>250 °C), decomposition products may include hydrochloric acid (HCL), hydrofluoric acid (HF) and carbonyl halides. The ACGIH Threshold Limit Values (2007) for Hydrogen Fluoride are TLV-TWA 0.5 ppm and Ceiling Exposure Limit 2 ppm.
	INGESTION:	Unlikely route of exposure. No hazards resulting from the material as supplied.
	INHALATION:	Vapor during processing may be irritating to the respiratory tract. Processing material at temperatures exceeding decomposition temperature may release toxic fumes.
	SKIN CONTACT:	No hazards resulting from the material as supplied.
	EYE CONTACT:	Vapor during processing may be irritating to the eyes.
	OTHER:	This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. However a safety data sheet is being supplied for it on request as it may produce irritating vapors during subsequent processing.
	CHRONIC EFFECTS OF OVEREXPOSURE:	None known to result from the material as supplied

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical Name	CAS No.	%	OSHA PEL	ACGIH TLV
Fluoropolymer film	Trade Secret	100	NE	NE

The material contains no other hazardous ingredients as defined in OSHA's Hazard Communication Standard 29 CFR 1910.1200 or EU directive 1272/2008/EEC, and do not present a health or environmental hazard.

4. FIRST-AID MEASURES

4.1	Description of First Aid Measures:	Inhalation:	Vapor during processing may be irritating to the respiratory tract. If inhaled, remove to fresh air. Obtain medical attention.
		Eye Contact:	Vapor during processing may be irritating to the eyes. In case of eye contact, remove contact lenses and immediately flush eyes and eyelids thoroughly with water for at least 15 minutes while lifting upper and lower eyelids. Obtain medical attention if symptoms persist
		Skin Contact:	No hazards which require special first aid measures.
		Ingestion:	Unlikely route of exposure. No hazards which require special first aid measures. Consult a physician if necessary.
4.2	Most important symptoms and effects, both acute and delayed.	NE	
4.3	Indication of any immediate medical attention and special treatment needed.	Notes to physician: Treat symptomatically.	

5. FIRE-FIGHTING MEASURES

Flash Point:	Not applicable ^{o}C (^{o}F)	Flammable Limits:	LEL	NA	UEL	NA
Method Used:	Not applicable					
Auto Ignition Temperature:	NA					

5.1 Suitable Extinguishing Media: Water spray, alcohol-resistant foam, dry chemical, or carbon dioxide. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture. The solid polymer can only be burned with difficulty. Forms or accumulates static electricity, may cause fire or explosion. May combust when in contact with naked flames, high temperature, in case of fire. In case of fire, hazardous decomposition products may be produced, such as carbon monoxide, carbon dioxide, carbonyl halides, gaseous hydrogen chloride (HCl), gaseous hydrogen fluoride (HF).

5.3 Advice for firefighters. Firefighters should be equipped with self-contained breathing apparatus and protective suit. No unprotected exposed skin areas.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures. In case of fire, toxic fumes are emitted. In fire conditions, use Self-contained Breathing Apparatus and protective suit with no unprotected exposed skin areas.

6.2 Environmental Precautions: Prevent from entering sewer system, surface water or soil.

6.3 Methods and materials for containment and cleaning up. Place spilled material into appropriate container for disposal. Dispose in accordance with national, state and local regulations.

6.4 Reference to Other Sections: Refer to Section 8 for Control Parameters.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling: Wear suitable protective equipment, refer to Section 8. Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for Safe Storage, Including Any Incompatibilities: Keep in a cool, well-ventilated area. Store out of direct sunlight. Avoid excessive heat and ignition sources.

7.3 Specific End Use(s): Bonding of printed circuit materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 **Control Parameters:**

Contains no substances with occupational exposure limit values.

8.2 **Exposure Controls:**

RESPIRATORY PROTECTION: None needed under normal conditions. In the case of vapor during processing, evaluation by a qualified person to determine the appropriate personal protective equipment is required.

VENTILATION:
Provide general ventilation and local exhaust ventilation to meet TLV requirements of individual ingredients (see Section 8.1) and to control dusts and vapors from processing.

Do not exceed melt temperature recommendations in product literature. At higher temperatures (>250°C), chemical decomposition will occur, resulting in the formation of toxic compounds. Thermal decomposition products may include gaseous hydrogen chloride (HCl), gaseous hydrogen fluoride (HF), and carbonyl halides. The ACGIH Threshold Limit Values for Hydrogen Fluoride are TLV-TWA 0.5 ppm and Ceiling Exposure Limit 2 ppm.

If cutting or trimming with power equipment, dust collectors and local ventilation should be used. Avoid unnecessary exposure to dust and handle with care. Keep work area clean of dust. Never use compressed air and avoid dry sweeping.

PERSONAL PROTECTION

HAND:	Cut resistant gloves to prevent mechanical irritation.
EYE:	Wear safety glasses with side shields. Always provide good general, mechanical room ventilation during processing.
RESPIRATORYPROTECTION:	None needed under normal conditions. In the case of vapor during processing, evaluation by a qualified person to determine the appropriate personal protective equipment is required.
SKIN:	When handling hot material, use heat resistant gloves and heat protective clothing.
WORK/HYGIENE PRACTICES:	Provide good personal hygiene after handling. Avoid contact with eyes. Wash hands after handling.
EXPOSURE LIMITS:	Contains no substances with occupational exposure limit values.
OTHER EQUIPMENT:	Safety shower/eyewash in the area.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 **Information on basic physical and chemical properties:**

Appearance:	Clear film
Odor:	Odorless
Physical State:	Solid
Boiling Point:	Not Applicable
Flash Point:	Not Applicable
Melting Point:	190-206°C
Freezing Point:	Not Applicable
Water Solubility:	Negligible
Vapor Pressure:	Not Available for product.
Specific Gravity:	Not Available for product. (Water = 1)
Partition Coefficient:	Not Available for product.
Explosive Properties:	Not Available for product.
Evaporation Rate:	Not Available for product.
Density:	2.08-2.12 g/cm^3
Viscosity:	Not Applicable
Ignition Temperature:	Not Available for product.
pH:	Not Applicable
Flammability:	Not Available for product.
Oxidizing Properties:	Not Applicable

9.2 Other Information: Not Available for product.

10. STABILITY AND REACTIVITY

10.1	Reactivity:	Stable	X	Reactive	
10.2	Chemical Stability:	Stable	X	Unstable	
10.3	Possibility of Hazardous Reactions:	May Occur		Does Not Occur	X

10.4 Conditions to Avoid: Heat, flame and sparks.
Keep away from direct sunlight
Do not exceed melt temperature recommendations in product literature. In order to avoid auto-ignition/hazardous decomposition of thick masses of molten plastic, purgings should be collected in small, flat shapes or thin strands to allow for rapid cooling. Quench in water.

10.5 Incompatible Materials: Strong oxidizing agents

10.6 Hazardous Decomposition Products: At higher temperatures (>250°C) and in case of fire, chemical decomposition will occur, resulting in the formation of toxic compounds. Thermal decomposition products may include gaseous hydrogen chloride (HCl), gaseous hydrogen fluoride (HF), carbonyl halides, carbon monoxide, and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Carcinogenic Status: No information is available.

Acute / Chronic: No information is available.

Reproductive Hazards: No information is available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity: No information is available.

12.2 Persistence and Degradability: No information is available.

12.3 Bioaccumulative Potential: No information is available.

12.4 Mobility in Soil: No information is available.

12.5 Results of PBT and vPvB Assessment: No information is available.

12.6 Other Adverse Effects: No environmental hazards were identified based on a review of available data for the ingredients in this product. Not all of the ingredients have been tested for Ecotoxicity.

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods: Do not dispose of rinse water containing product in a sanitary sewer system or storm water drainage system.

Waste Disposal Method: Dispose of in accordance with applicable, federal, state, provincial, and local laws and regulations.

Container Disposal Method: Recommend contaminated packaging material should be disposed of as stated above for residues and unused product.

14. TRANSPORT INFORMATION

14.1 UN Number: Not Regulated as Hazardous Material / Dangerous Goods

14.2 UN Proper Shipping Name: Not Regulated as Hazardous Material / Dangerous Goods

14.3 Transport Hazard Class(es): Not Regulated as Hazardous Material / Dangerous Goods

14.4 Packing Group: Not Regulated as Hazardous Material / Dangerous Goods

14.5 Environmental Hazards: Not Regulated as Hazardous Material / Dangerous Goods

14.6 Special Precautions for User: Not Regulated as Hazardous Material / Dangerous Goods

14.7	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code.	Not Regulated as Hazardous Material / Dangerous Goods
	DOT/ADR Classification:	Not Regulated as Hazardous Material / Dangerous Goods
	RID Classification:	Not Regulated as Hazardous Material / Dangerous Goods
	IMDG Classification:	Not Regulated as Hazardous Material / Dangerous Goods
	ICAO / IATA Classification:	Not Regulated as Hazardous Material / Dangerous Goods
	Environmental Hazards:	Not Regulated as Hazardous Material / Dangerous Goods

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture.

Canadian (DSL/NDSL):	Article – Exempt
Australian (ACIS):	Article – Exempt
Korea (KECI):	Article – Exempt
Japan (ENCS, MITI):	Article – Exempt
China (IECSC):	Article – Exempt
EU Directive 2011/65/EC (RoHS):	Does not contain any intentionally added substances mentioned by the RoHS directive.
European Union:	This product has been reviewed for compliance with the following European Community Directives: REACH 1907/2006; Directive 1999/45/EC, Regulation (EC) No 1272/2008 on classification, labeling and packaging (CLP) of substances and mixtures.

15.2	Chemical Safety Assessment	NE
	TSCA *(Toxic Substances Control Act):*	All ingredients are listed on the TSCA Inventory or exempt from listing.
	CERCLA *(Comprehensive Emergency Response, Compensation, and Liability Act):*	NA
	SARA TITLE III *(Superfund Amendments and Reauthorization Act):*	NA
	311/312 HAZARD CATEGORIES:	None

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372:

CAS #	CHEMICAL NAME	PERCENT BY WEIGHT
NA	NA	NA

16. OTHER INFORMATION

NA = Not Applicable
NE = Not Established
NC = Not Classified

FILE: 99377-CuClad 6700 Bonding Film SDS-10192015

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REVIEWED BY: Curtis Kempton
DATE: October 19, 2015