



One Technology Drive/ P.O. Box 188 /Rogers, CT 06263-0188 / 860.774.9605

PRODUCT SAFETY INFORMATION SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: XT/duroid™ High Performance Circuit Materials

CHEMICAL FAMILY: Laminate Material

HMIS RATING: H 1 F 1 R 0

USE OF MATERIAL: Circuit Material

EMERGENCY PHONE: 860-774-9605 (Monday – Friday 8 a.m. – 5 p.m. EST)

CHEMTREC: 800-424-9300 (U.S. & Canada) (24 Hours)
703-527-3887 (International – Call Collect) (24 Hours)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS No.</u>	<u>EINECS /ELINCS</u>	<u>%</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>China OEL</u>	<u>EU Classification</u>
Polymer	Proprietary	Proprietary	15-70	NE	NE	NE	NC according to 67/548/EEC
Copper	7440-50-8	231-159-6	25-70	1 mg/m ³	1 mg/m ³	1 mg/m ³	"
Glass Fiber (Continuous Filament)	65997-17-3	266-046-0	0-20	5 mg/m ³ (Resp.)	3 mg/m ³ (Resp.)	3 mg/m ³ (Resp.)	"

The material contains no other hazardous ingredients as defined in OSHA's Hazard Communication Standard 29 CFR 1910.1200 or EU directive 1999/45/EC, and do not present a health or environmental hazard according to directive 67/548/EC.

3. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE MATERIAL: Not classified as hazardous under 1999/45/EC.

LABELING REQUIREMENTS: None

EFFECTS OF OVEREXPOSURE: None are expected with normal handling. Machining may cause the following:

INHALATION: Dusts may cause respiratory irritation. Copper fumes may cause metal fume fever with flu-like symptoms that usually subside after 24 hours.

EYE CONTACT: Dusts may cause irritation.

SKIN CONTACT: Dusts may cause irritation. Molten material may cause burns.

INGESTION: Not a likely route of exposure. If ingested, seek medical attention.

CHRONIC: NE

4. FIRST-AID MEASURES

INHALATION:	Remove to fresh air. Obtain medical attention if symptoms persist.
EYE CONTACT:	Flush eyes with large amounts of water for 15 to 20 minutes. Obtain medical attention if symptoms persist.
SKIN CONTACT:	If hot or molten material contacts skin, cool rapidly with cold water. If stuck to skin, do not remove. Obtain medical attention and allow polymer to come off naturally. Removal of adhered polymer may result in more tissue damage.
INGESTION:	Not a likely route of exposure. Low toxicity is expected. Obtain medical attention if symptoms persist.

5. FIRE-FIGHTING MEASURES

FLASH POINT:	NA	Flammable Limits:	LEL	NA	UEL	NA
AUTOIGNITION TEMPERATURE:	595°C (Polymer)					
EXTINGUISHING MEDIA:	<input checked="" type="checkbox"/> X Water Spray <input checked="" type="checkbox"/> X Dry Chemical	<input checked="" type="checkbox"/> X Foam <input type="checkbox"/> Other –	<input checked="" type="checkbox"/> X CO ₂			
SPECIAL FIRE FIGHTING PROCEDURES:	Firefighters should be equipped with self-contained breathing apparatus and turnout gear.					
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None Known					

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:	Wear suitable protective equipment. Do not breathe dust.
ENVIRONMENTAL PRECAUTIONS:	Prevent from entering sewer system, surface water or soil.
CLEANING METHODS:	Sweep or vacuum dust for disposal.

7. HANDLING AND STORAGE

HANDLING:	Wear suitable protective equipment (refer to Section 8). Wash hands with soap and water after handling.
STORAGE:	Keep container tightly closed in a cool, well-ventilated area.

8. ENGINEERING CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:	None needed under normal conditions. If material is heated and odors are noticeable and/or irritating a respirator meeting NIOSH requirements should be used. A qualified individual should evaluate each situation.
<u>VENTILATION</u>	
LOCAL:	Recommended for all industrial operations. If heating, required.
GENERAL:	Recommended for all industrial operations.
<u>PERSONAL PROTECTION</u>	
HAND:	Heavy Rubber Gloves
EYE:	Safety glasses with side shields.
OTHER:	Safety shower/eyewash in the area if possible tissue exposure to materials.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Film, Off-White or Grey
ODOR:	None
PHYSICAL STATE:	Solid
BOILING POINT:	NA
MELTING POINT:	343 °C (Polymer)
FREEZING POINT:	NA
FLASH POINT:	°C (°F)
WATER SOLUBILITY:	Soluble
VAPOR DENSITY:	NA
VAPOR PRESSURE:	NA
SPECIFIC GRAVITY:	NE (Water = 1)
PARTITION COEFFICIENT:	NA
EVAPORATION RATE:	NA
RELATIVE DENSITY:	NE
VISCOSITY:	NA
AUTO-IGNITION TEMPERATURE:	595°C (Polymer)
DECOMPOSITION TEMPERATURE:	NA
PH:	NA
FLAMMABILITY:	Product may burn.

10. STABILITY AND REACTIVITY

STABLE	<input checked="" type="checkbox"/>	UNSTABLE	<input type="checkbox"/>
MATERIALS TO AVOID:	<input type="checkbox"/>	NE	<input type="checkbox"/>
HAZARDOUS POLYMERIZATION:	<input type="checkbox"/>	May Occur	<input checked="" type="checkbox"/>
HAZARDOUS DECOMPOSITION PRODUCTS:	<input type="checkbox"/>	Carbon Monoxide, Carbon Dioxide, and Hydrocarbons	Does Not Occur

11. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS:	NA
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12. ECOLOGICAL INFORMATION

NA

13. DISPOSAL CONSIDERATION

PHYSICAL/CHEMICAL PROPERTIES AFFECTING DISPOSAL:	None
ENVIRONMENTAL TOXICITY DATA:	NA
WASTE DISPOSAL METHOD:	Dispose of in accordance with applicable federal, state, provincial, and local laws and regulations.

14. TRANSPORT INFORMATION

UN NUMBER:	Not Regulated
UN PROPER SHIPPING NAME:	Not Regulated
HAZARD CLASS (ES):	Not Regulated
PACKING GROUP:	Not Regulated
ENVIRONMENTAL HAZARDS:	Not Regulated

15. REGULATORY INFORMATION

INTERNATIONAL REGULATIONS:

Canadian (DSL/NDSL): NE
Australian (ACIS): NE
Korea (KECI): NE
Japan (ENCS, MITI): NE
China (SEPA) NE
EU Directive 2002/95/EC (RoHS): Does not contain any intentionally added substances mentioned by the RoHS directive.

European:

Symbol Not classified according to directive 67/548/EEC (dangerous substances) and 1999/45/EC (dangerous preparations).

R-Phase(s):

S-Phase(s):

TSCA
(*Toxic Substances Control Act*): All materials are listed or exempt from TSCA 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:

<u>CAS #</u>	<u>CHEMICAL NAME</u>	<u>PERCENT BY WEIGHT</u>
NA	NA	NA

16. OTHER INFORMATION

NA = Not Applicable

FILE: XTduroid

NE = Not Established

99226

NC = Not Classified

REVISED BY: Greg Sullivan, CIH

DATE: 11/5/2012

REVISION ITEMS & DATE:

- Section 1, Trade Name – 11/10/10
- Section 1, MSDS Changed to PSIS –

11/5/12

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