

## 1. Product and company identification

### Product identifier

Trade name: LTC-G1400/1600, LTC-F5500/F5600  
LTC-G1400 & LTC-G1600: Prepreg made of carbon fabric with an epoxy resin.  
LTC-F5500 & LTC-F5600: Prepreg made of fiberglass fabric with an epoxy resin.

### Relevant identified uses of the substance or mixture and uses advised against

General use: Carbon epoxy prepreg/glass fibers epoxy prepreg.  
Reserved for industrial and professional use.

### Details of the supplier of the safety data sheet

Company name:	Airtech International, Inc. 5700 Skylab Road Huntington Beach, CA 92647 E-mail: <a href="mailto:airtech@airtechintl.com">airtech@airtechintl.com</a> Website: <a href="http://www.airtechonline.com">www.airtechonline.com</a> Telephone: +1 714.899.8100 Dept. responsible for information: Telephone: +1 714.899.8100 E-mail: <a href="mailto:airtech@airtechintl.com">airtech@airtechintl.com</a>	Airtech Europe Sarl Zone industrielle Haneboesch L-4562 Differdange Luxembourg Website: <a href="http://www.airtech.lu">www.airtech.lu</a> Telephone: +352 582.282 Dept. responsible for information: Telephone: +352 582.282 E-mail: <a href="mailto:sales@airtech.lu">sales@airtech.lu</a>
	Tygavac Advanced Materials Ltd. The Causeway Broadway Business Park Chadderton, Oldham OL9 9XD United Kingdom Website: <a href="http://www.tygavac.co.uk">www.tygavac.co.uk</a> Telephone: +44 161.947.1610 Dept. responsible for information: Telephone: +44 161.947.1610 E-mail: <a href="mailto:sales@tygavac.co.uk">sales@tygavac.co.uk</a>	Airtech Asia Ltd. No. 161 of Anyuan Rd Chagugang County Wuqing District 301721, Tianjin, P.R. China Website: <a href="http://www.airtech.asia">www.airtech.asia</a> Telephone: +86 22 8862 9800 Telefax: +86 22 8862 9900 Dept. responsible for information: Telephone: +86 22 8862 9800 E-mail: <a href="mailto:airtech.asia@airtechasia.com.cn">airtech.asia@airtechasia.com.cn</a>

### Emergency phone number

**CHEMTREC EMERGENCY PHONE:**  
**Within USA/Canada: 1-(800)424-9300**  
**International: +1 703-741-5970**

## 2. Hazards identification

### Emergency overview

Appearance: Form: solid  
Color: black  
Odor: characteristic  
Classification: Skin Irritation - Category 2; Eye Irritation - Category 2A; Sensitization - skin - Category 1; Germ cell mutagenicity - Category 2; Aquatic toxicity - chronic - Category 2;

Hazard symbols:



Signal word:

**Warning**

Hazard statements:

Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
Suspected of causing genetic defects.  
Toxic to aquatic life with long lasting effects.

Precautionary statements:

Obtain special instructions before use.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash hands and face thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF ON SKIN: Wash with plenty of water/soap.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF exposed or concerned: Get medical advice/attention.  
Specific treatment (see ' First aid ' on this label).  
If skin irritation occurs: Get medical advice/attention.  
If skin irritation or rash occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
Collect spillage.  
Store locked up.  
Dispose of contents/container to hazardous or special waste collection point.

**Regulatory status**

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

**Hazards not otherwise classified**

see section 11: Toxicological information

**3. Composition / Information on ingredients**

Chemical characterization:

LTC-G1400 & LTC-G1600: Carbon fabric impregnated with an epoxy resin system  
LTC-F5500 & LTC-F5600: Fibreglass fabric impregnated with an epoxy resin system

Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 5026-74-4	p-(2,3-Epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	10 - 20 %	Acute Toxicity - oral - Category 4. Skin Irritation - Category 2. Sensitization - skin - Category 1. Germ cell mutagenicity - Category 2. Aquatic toxicity - chronic - Category 2.
CAS 68610-41-3	2-Propenenitrile, polymer with 1,3-butadiene, carboxy-terminated, polymers with bisphenol A and epichlorohydrin	5 - 10 %	Skin Irritation - Category 2. Eye Irritation - Category 2A. Sensitization - skin - Category 1. Aquatic toxicity - chronic - Category 2.
CAS 80-08-0	4,4'-Diamino diphenyl sulfone	5 - 10 %	Acute Toxicity - oral - Category 4.
CAS 25036-25-3	Bisphenol-A-epichlorhydrine resin, Molar mass: >= 700	5 - 10 %	Skin Irritation - Category 2. Eye Irritation - Category 2A. Sensitization - skin - Category 1. Aquatic toxicity - chronic - Category 2.
CAS 28064-14-4	Bisphenol-F-epichlorhydrine resin	< 5 %	Skin Irritation - Category 2. Eye Irritation - Category 2A. Sensitization - skin - Category 1. Aquatic toxicity - chronic - Category 2.
CAS 25068-38-6	Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <=700)	< 3 %	Skin Irritation - Category 2. Eye Irritation - Category 2A. Sensitization - skin - Category 1. Aquatic toxicity - chronic - Category 2.

#### 4. First aid measures

In case of inhalation:	Remove the casualty into fresh air and keep him calm. In case of breathing difficulties administer oxygen. Immediately get medical attention.
Following skin contact:	Thoroughly wash skin with soap and water. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician. If you touch the melted product, wash the skin immediately using plenty of cold water and call a doctor.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.
After swallowing:	Immediately get medical attention. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting.

#### Most important symptoms/effects, acute and delayed

May cause an allergic skin reaction. Causes skin irritation. Causes serious eye irritation.

#### Information to physician

Treat symptomatically.

## 5. Fire fighting measures

Flash point/flash point range:

No data available

Auto-ignition temperature:

No data available

Suitable extinguishing media:

Water spray jet, foam, dry chemical powder.

Extinguishing media which must not be used for safety reasons:

Full water jet.

### Specific hazards arising from the chemical

Emits toxic fumes under fire conditions.

In case of fire may be liberated: nitrogen oxides (NO<sub>x</sub>), aldehydes, acids, carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Cool endangered containers with water spray and, if possible, remove from danger zone. Use a water fog to control vapors. Do not breathe fumes. Do not allow fire water to penetrate into surface or ground water.

## 6. Accidental release measures

Personal precautions:

Avoid exposure - obtain special instructions before use.

Avoid contact with skin, eyes, and clothing. Avoid generation of dust. Avoid the formation of aerosol/vapors. Do not breathe dust. Wear appropriate protective equipment. Provide adequate ventilation.

Environmental precautions:

Do not allow to enter into ground-water, surface water or drains. In case of release, notify competent authorities.

Methods for clean-up:

Take up mechanically, placing in appropriate containers for disposal. Final cleaning.

## 7. Handling and storage

### Handling

Advices on safe handling: Obtain special instructions before use. Provide adequate ventilation, and local exhaust as needed. Avoid contact with skin, eyes, and clothing. Avoid generation of dust. Avoid the formation of aerosol/vapors. Wear appropriate protective equipment. When using do not eat, drink or smoke.

Precautions against fire and explosion:

Take standard precautions to prevent fire.

### Storage

Requirements for storerooms and containers:

Store locked up. Keep container tightly closed and in a well-ventilated place.

Refrigerated storage is recommended to maintain product quality.

Do not drop, drag or bang the container. Do not weld.

This product may be stored at 1.4 °F for up to 18 months.

This product may be stored at 41 °F for up to 6 months.

Hints on joint storage:

Keep away from food and drinks.

## 8. Exposure controls / personal protection

### Engineering controls

Provide good ventilation and/or an exhaust system in the work area.  
In case of development of vapors or dust: Use local exhaust.  
See also information in chapter 7, section storage.

### Personal protection equipment (PPE)

Eye/face protection	Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.
Skin protection	Wear suitable protective clothing. Protective gloves according to OSHA Standard - 29 CFR: 1910.138. Glove material: butyl caoutchouc (butyl rubber), PVC, or nitrile rubber. Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Respiratory protection:	Provide adequate ventilation. For mechanical processing: Wear a dust mask, in case of excessive dust. Recommendation: Particulates filter N100 according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2. When vapors form: Use combination filter type A-P3 according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.
General hygiene considerations:	Avoid contact with skin, eyes, and clothing. Take off contaminated clothing and wash it before reuse. Avoid generation of dust. Avoid the formation of aerosol/vapors. When using do not eat, drink or smoke. Have eye wash bottle or eye rinse ready at work place. Wash hands before breaks and after work. Avoid rubbing. Fibers may penetrate deeper into the skin by rubbing. Remove fibers and/or dust from working clothes using a vacuum cleaner

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Appearance:	Form: solid Color: black
Odor:	characteristic
Odor threshold:	No data available
pH value:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	(cured) 1.58 g/cm <sup>3</sup>
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available

Additional information: Vapor density: > 1

## 10. Stability and reactivity

- Reactivity: Refer to section: Possibility of hazardous reactions.
- Chemical stability: Stable under recommended storage conditions.  
This product may be stored at 1.4 °F for up to 18 months.  
This product may be stored at 41 °F for up to 6 months.
- Possibility of hazardous reactions  
No dangerous reactions with proper and specified storage and handling  
In case of strong heating:  
Hazardous polymerisation: may occur.
- Conditions to avoid: Keep away from heat. Avoid generation of dust. Avoid the formation of aerosol/vapors.
- Incompatible materials: Strong oxidizing agents, strong Lewis acids or mineral acids.
- Hazardous decomposition products:  
Exothermal decomposition with formation of: toxic gases, nitrogen oxides (NOx),  
aldehydes, acids, carbon monoxide and carbon dioxide.
- Thermal decomposition: No data available

## 11. Toxicological information

### Toxicological tests

- Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.
- Acute toxicity (oral): Based on available data, the classification criteria are not met.  
ATEmix calculated: > 2000 mg/kg
- Information about p-(2,3-Epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline:  
LD50 Rat (male/female): approx. 1037 mg/kg bw (OECD 401)
- Information about 4,4'-Diamino diphenyl sulfone:  
LD0 Rabbit (male/female): approx. 600 mg/kg bw
- Acute toxicity (dermal): Lack of data.
- Acute toxicity (inhalative): Lack of data.
- Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation.
- Serious eye damage/irritation: Eye Irritation -  
Category 2A = Causes serious eye irritation.
- Sensitisation to the respiratory tract: Lack of data.
- Skin sensitisation: Sensitization - skin - Category 1 = May cause an allergic skin reaction.
- Germ cell mutagenicity/Genotoxicity: Germ cell mutagenicity -  
Category 2 = Suspected of causing genetic defects.
- Carcinogenicity: Lack of data.
- Reproductive toxicity: Lack of data.
- Effects on or via lactation: Lack of data.
- Specific target organ toxicity (single exposure): Lack of data.
- Specific target organ toxicity (repeated exposure): Lack of data.
- Aspiration hazard: Lack of data.

Other information: Chronic toxicity - Carcinogenic effect:  
4,4'-Diamino diphenyl sulfone:  
Carcinogen Status:  
IARC Rating: Group 3  
OSHA Carcinogen: not listed  
NTP Rating: not listed

## 12. Ecological information

### Ecotoxicity

Aquatic toxicity: Toxic to aquatic life with long lasting effects.

### Mobility in soil

No data available

### Persistence and degradability

Further details: No data available

### Additional ecological information

Volatile organic compounds (VOC):

< 0.6 % by weight = 10 g/L

General information: Do not allow to enter into ground-water, surface water or drains.

## 13. Disposal considerations

### Product

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.

### Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.  
Handle contaminated packages in the same way as the substance itself. Do not remove label until container is thoroughly cleaned. Non-contaminated packages may be recycled.

## 14. Transport information

### USA: Department of Transportation (DOT)

Proper shipping name: Not restricted

### Sea transport (IMDG)

Proper shipping name: Not restricted  
Marine pollutant: not applicable

### Air transport (IATA)

Proper shipping name: Not restricted  
Remarks: Dry ice is used as refrigerant. Additional regulations have to be considered for dry ice set out by IATA.

### Further information

No dangerous good in sense of these transport regulations.



## 15. Regulatory information

### National regulations - U.S. Federal Regulations

p-(2,3-Epoxypropoxy)-N,N-bis(2,3-epoxypropyl) aniline:

TSCA Inventory: listed; EPA flags T

TSCA HPVC: not listed

4,4'-Diamino diphenyl sulfone:

TSCA Inventory: listed

TSCA HPVC: not listed

Carcinogen Status:

IARC Rating: Group 3

OSHA Carcinogen: not listed

NTP Rating: not listed

Bisphenol-A-epichlorhydrine resin, Molar mass: >= 700:

TSCA: listed - Flags: XU

Bisphenol-F-epichlorhydrine resin:

TSCA Inventory: listed; UVCB;

EPA flags XU

TSCA HPVC: not listed

Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <=700):

TSCA Inventory: listed; EPA flags XU

TSCA HPVC: not listed

### National regulations - Great Britain

Hazchem-Code: -

## 16. Other information

Text for labeling:

Contains 10 - 20 % p-(2,3-Epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline, 5 - 10 % 2-Propenenitrile, polymer with 1,3-butadiene, carboxy-terminated, polymers with bisphenol A and epichlorhydrin, 5 - 10 % 4,4'-Diamino diphenyl sulfone, 5 - 10 % Bisphenol-A-epichlorhydrine resin, Molar mass: >= 700, < 5 % Bisphenol-F-epichlorhydrine resin, < 3 % Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <=700). Safety data sheet available on request.

Hazard rating systems:



NFPA Hazard Rating:

Health: 2 (Moderate)

Fire: 1 (Slight)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 2 (Moderate) - Chronic effects

Flammability: 1 (Slight)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

HEALTH	*	2
FLAMMABILITY		1
PHYSICAL HAZARD		0
		X

Reason of change:

Changes in section 1: Company/undertaking identification

### Department issuing data sheet

Contact person:

see section 1: Dept. responsible for information





## SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200 and ANSI standard  
Z400.1-2010

Revision date: 9/4/2018  
Version: 14  
Language: en-US  
Date of first version: 11/23/2009

### LTC-G1400/1600, LTC-F5500/F5600

Material number 1049

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This data sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, and which additional precautions may be necessary. All health and safety information contained in this data sheet should be provided to your employees and customers. It is your responsibility to develop appropriate workplace instructions and training programs for employees.

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