

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: LTC-G1400/1600, LTC-F5500/F5600

1.2 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.

1.3 Details of the supplier of the safety data sheet

Company name: AIRTECH EUROPE SARL

Street/POB-No.: Z.I. Haneboesch

Postal Code, city: 4562 Differdange
Luxemburg

WWW: www.airtech.lu

E-mail: sales@airtech.lu

Telephone: +352-582282-1

Telefax: +352-584935

Dept. responsible for information:

Telephone: +352-582282-1, E-mail: sales@airtech.lu

Additional information: LTC-G1400 & LTC-G1600: Prepregs made of carbon fabric with an epoxy resin.
LTC-F5500 & LTC-F5600: Prepregs made of fiberglass fabric with an epoxy resin.

1.4 Emergency telephone number

GIZ-Nord, Germany Telephone: +49 (0)551-19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Skin Irrit. 2; H315 Causes skin irritation.
Eye Irrit. 2; H319 Causes serious eye irritation.
Skin Sens. 1; H317 May cause an allergic skin reaction.
Muta. 2; H341 Suspected of causing genetic defects.
Aquatic Chronic 2; H411 Toxic to aquatic life with long lasting effects.

Classification according to Directive 67/548/EEC or 1999/45/EC

Muta. Cat. 3; R68 Possible risk of irreversible effects.
Xi; R36/38 Irritating to eyes and skin.
Sens.; R43 May cause sensitisation by skin contact.
N; R51-53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Labelling (CLP)



Signal word:

Warning

Hazard statements:	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H341	Suspected of causing genetic defects.
	H411	Toxic to aquatic life with long lasting effects.
Precautionary statements:	P201	Obtain special instructions before use.
	P261	Avoid breathing dust.
	P264	Wash hands and face thoroughly after handling.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P302+P352	IF ON SKIN: Wash with plenty of water/soap.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.	

Labelling (67/548/EEC or 1999/45/EC)

Xn

harmful



N

dangerous for the environment

R phrase(s):	R 36/38	Irritating to eyes and skin.
	R 43	May cause sensitisation by skin contact.
	R 51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S phrase(s):	R 68	Possible risk of irreversible effects.
	S 53	Avoid exposure - obtain special instructions before use.
	S 24/25	Avoid contact with skin and eyes.
	S 28	After contact with skin, wash immediately with soap and plenty of water.
	S 36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S 60	This material and its container must be disposed of as hazardous waste.	
S 61	Avoid release to the environment. Refer to special instructions/Safety data sheets.	

Special labelling

Text for labelling:

Contains p-(2,3-Epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline, Bisphenol-F-epichlorhydrine resin, Bisphenol A - 4-tert-Butylphenol - Epichlorhydrin polymer and Reaction product with Bisphenol-A-(epichlorhydrin) epoxy resin (molecular weight ≤ 700).
Restricted to professional users.

2.3 Other hazards

Processing by heating can produce vapours.
Inhaling hazardous decomposing products can cause serious health damage.
Processing, e.g. by cutting, sawing or grinding, can produce particles and dust.
inhalation of dust/particles: dangerous health properties.

For risks which have to be observed thereby, see chapter 7: Handling, chapter 8: Exposure controls / personal protection and chapter 11: Toxicology.

SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 MixturesChemical characterisation: LTC-G1400 & LTC-G1600: Plastic film on the basis of carbon fibres and epoxy resin.
LTC-F5500 & LTC-F5600: Plastic film on the basis of glass fibers and epoxy resin.

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. 225-716-2 CAS 5026-74-4	p-(2,3-Epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	10 - 20 %	DSD/DPD: Xn; R22. Xi; R38. Sens.; R43. Muta. Cat. 3; R68. N; R51-53. CLP: Acute Tox. 4; H302. Skin Irrit. 2; H315. Skin Sens. 1; H317. Muta. 2; H341. Aquatic Chronic 2; H411.
EC No. - CAS 67924-34-9	Bisphenol A - 4-tert-Butylphenol - Epichlorhydrin polymer	5 - 10 %	DSD/DPD: Sens.; R43. N; R51-53. Xi; R36/38. CLP: Skin Irrit. 2; H315. Eye Irrit. 2; H319. Skin Sens. 1; H317. Aquatic Chronic 2; H411.
EC No. 500-033-5 CAS 25068-38-6	Reaction product with Bisphenol A-epichlorhydrin epoxy resin (molecular weight = 700)	5 - 10 %	DSD/DPD: Sens.; R43. N; R51-53. Xi; R36/38. CLP: Skin Irrit. 2; H315. Eye Irrit. 2; H319. Skin Sens. 1; H317. Aquatic Chronic 2; H411.
EC No. 500-006-8 CAS 28064-14-4	Bisphenol-F-epichlorhydrine resin	5 - 10 %	DSD/DPD: Sens.; R43. N; R51-53. Xi; R36/38. CLP: Skin Irrit. 2; H315. Eye Irrit. 2; H319. Skin Sens. 1; H317. Aquatic Chronic 2; H411.
EC No. 201-248-4 CAS 80-08-0	4,4'-Diamino diphenyl sulfone	5 - 10 %	DSD/DPD: Xn; R22. CLP: Acute Tox. 4; H302.
EC No. - CAS 98155-65-8	2-Benzyl-4-methylimidazole	< 1 %	DSD/DPD: Xi; R36/37/38. CLP: Skin Irrit. 2; H315. Eye Irrit. 2; H319. STOT SE 3; H335.

Additional information: Contains carbon fibres or glass fibers. The maximum workplace exposure limits are, where necessary, listed in section 8.

SECTION 4: First aid measures**4.1 Description of 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.

In case of skin contact: Thoroughly wash skin with soap and water. Change contaminated clothing. 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. 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.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction. Causes skin irritation. Causes serious eye irritation. Harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media:

Water fog, foam, extinguishing powder.

Extinguishing media which must not be used for safety reasons:

High power water jet.

5.2 Special hazards arising from the substance or mixture

Emits toxic fumes under fire conditions.

In case of fire may be liberated: nitrogen oxides (NO_x), aldehydes, acids, carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

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

Additional information:

Hazchem-Code: 2Z

Cool endangered containers with water spray and, if possible, remove from danger zone. Use water spray jet to knock down vapours. Do not breathe fumes. Do not allow fire water to penetrate into surface or ground water.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Avoid exposure - obtain special instructions before use.

Avoid contact with skin, eyes, and clothing. Avoid generation of dust. Avoid formation of aerosols/vapours. Wear protective equipment. Provide adequate ventilation.

In case of development of vapours or dust: Do not inhale vapours or dust particles. Use appropriate respiratory protection. Keep away from unprotected people.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

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

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe 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 formation of aerosols/vapours. Wear protective equipment. When using do not eat, drink or smoke.

In case of development of vapours or dust:
Do not inhale vapours or dust particles.

Precautions against fire and explosion:

Take standard precautions to prevent fire.

7.2 Conditions for safe storage, including any incompatibilities

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 -17 °C for up to 18 month.

This product may be stored at 5 °C for up to 6 month.

Hints on joint storage:

Keep away from food and drinks.

Storage class:

11 = Combustible solids

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
7440-44-0	carbon fibres	Great Britain: WEL-TWA	2 fibres / mL Machinemade mineral fibre (excluding refractory ceramic fibres)
		Great Britain: WEL-TWA	5 mg/m ³
		Great Britain: WEL-TWA	Machinemade mineral fibre (excluding refractory ceramic fibres)
		Ireland: 8 hours	Machinemade mineral fibre (excluding refractory ceramic fibres)
		Ireland: 8 hours	1 fibres / mL of air Machinemade mineral fibre (excluding refractory ceramic fibres)
		Ireland: 8 hours	5 mg/m ³
65997-17-3	Glass fibres	Great Britain: WEL-TWA	Machinemade mineral fibre (excluding refractory ceramic fibres)
		Great Britain: WEL-TWA	2 fibres / mL Machinemade mineral fibre (excluding refractory ceramic fibres)
		Great Britain: WEL-TWA	5 mg/m ³
		Ireland: 8 hours	Machinemade mineral fibre (excluding refractory ceramic fibres)
		Ireland: 8 hours	Machinemade mineral fibre (excluding refractory ceramic fibres)
		Ireland: 8 hours	1 fibres / mL Machinemade mineral fibre (excluding refractory ceramic fibres)
		Ireland: 8 hours	5 mg/m ³
		Ireland: 8 hours	Machinemade mineral fibre (excluding refractory ceramic fibres)
		Ireland: 8 hours	Machinemade mineral fibre (excluding refractory ceramic fibres)

8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area.
In case of development of vapours or dust: Use local exhaust.

Personal protection equipment

Occupational exposure controls

- Respiratory protection: Provide adequate ventilation.
For mechanical processing: Wear a dust mask, in case of excessive dust.
Recommendation: Particulates filter P3 according to EN 143.
When vapours form: Use combination filter type A-P3 according to EN 14387.
- Hand protection: Protective gloves according to EN 374.
Glove material: butyl caoutchouc (butyl rubber), PVC, or nitrile rubber.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
- Eye protection: Tightly sealed goggles according to EN 166.
- Body protection: Wear suitable protective clothing.

General protection and hygiene measures:

Avoid contact with skin, eyes, and clothing. Change contaminated clothing. Avoid generation of dust. Avoid formation of aerosols/vapours. 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.

In case of development of vapours or dust:
Do not inhale vapours or dust particles.

Fibres/dust:

Avoid rubbing. Fibers may penetrate deeper into the skin by rubbing.
Remove fibres from working clothes using a vacuum cleaner

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Form: solid Colour: black
Odour:	characteristic
Odour 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
Explosive properties:	no data available
Explosion limits:	no data available
Vapour pressure:	no data available
Vapour density:	no data available
Density:	(cured) 1.58 g/cm ³
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Thermal decomposition:	no data available
Viscosity, dynamic:	no data available
Explosive properties:	no data available
Oxidizing characteristics:	no data available

9.2 Other information

Additional information: Vapour density: > 1

SECTION 10: Stability and reactivity

10.1 Reactivity

Refer to section: Possibility of hazardous reactions.

10.2 Chemical stability

Stable under recommended storage conditions.
This product may be stored at -17 °C for up to 18 month.
This product may be stored at 5 °C for up to 6 month.

10.3 Possibility of hazardous reactions

No dangerous reactions with proper and specified storage and handling.

In case of strong heating:

Hazardous polymerisation: may occur.

10.4 Conditions to avoid

Keep away from heat. Avoid generation of dust. Avoid formation of aerosols/vapours.

10.5 Incompatible materials

Strong oxidizing agents, strong Lewis acids or mineral acids.

10.6 Hazardous decomposition products

Exothermal decomposition with formation of: toxic gases.

In case of fire may be liberated: nitrogen oxides (NOx), aldehydes, acids, carbon monoxide and carbon dioxide.

Thermal decomposition: no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Toxicological effects: Acute toxicity (oral): Based on available data, the classification criteria are not met. The statement is derived from the properties of the single components.
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 Irrit. 2; H315 = Causes skin irritation.
Eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.
Sensitisation to the respiratory tract: Lack of data.
Skin sensitisation: Skin Sens. 1; H317 = May cause an allergic skin reaction.
Germ cell mutagenicity/Genotoxicity: Muta. 2; H341 = 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.

Carcinogenic, germ cell mutagen and reproduction effects:
Muta. Cat. 3 - Possible risk of irreversible effects.

Symptoms

In case of inhalation:

Processing, e.g. by cutting, sawing or grinding, can produce particles and dust. Inhalation of dust may cause irritation of the respiratory system.

Processing by heating can produce vapours. Inhaling hazardous decomposing products can cause serious health damage.

Other symptoms: fever, sore throat, fatigue.

After contact with skin: The melted product can cause severe burns.

After eye contact: Dust contact with the eyes can lead to mechanical irritation.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: The statement is derived from the properties of the single components.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Further details: no data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 08 04 09* = Waste adhesives and sealants containing organic solvents or other dangerous substances.

MFSU = manufacture, formulation, supply and use

* = Evidence for disposal must be provided.

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

Contaminated packaging

Waste key number: 15 01 02 = Plastic 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.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA: 3077

14.2 UN proper shipping name

ADR/RID, IMDG, IATA: UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Bisphenol A epoxy resin, Bisphenol F Epoxy Resin and p-(2,3-Epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline)

14.3 Transport hazard class(es)

ADR/RID: Class 9, Code: M7

IMDG: Class 9, Subrisk -

IATA: Class 9

14.4 Packing group

ADR/RID, IMDG, IATA: III

14.5 Environmental hazards

Marine pollutant: Yes

14.6 Special precautions for user

Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 90, UN number 3077
 Hazard label: 9
 Special provisions: 274 335 601
 Limited quantities: 5 kg
 EQ: E1
 Contaminated packaging - Instructions: P002 IBC08 LP02 R001
 Contaminated packaging - Special provisions: PP12 B3
 Special provisions for packing together: MP10
 Portable tanks - Instructions: T1 BK1 BK2
 Portable tanks - Special provisions: TP33
 Tank coding: SGAV LGBV
 Tunnel restriction code: E



Sea transport (IMDG)

EmS: F-A, S-F
 Special provisions: 274, 335, 966, 967
 Limited quantities: 5 kg
 EQ: E1
 Contaminated packaging - Instructions: P002, LP02
 Contaminated packaging - Provisions: PP12
 IBC - Instructions: IBC08
 IBC - Provisions: B3
 Tank instructions - IMO: -
 Tank instructions - UN: T1, BK2, BK2, BK3
 Tank instructions - Provisions: TP33
 Stowage and segregation: Category A. When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
 Properties and observations: -



Air transport (IATA)

Hazard: Miscellaneous
 EQ: E1
 Passenger Ltd.Qty.: Pack.Instr. Y956 - Max. Net Qty/Pkg. 30 kg G
 Passenger: Pack.Instr. 956 - Max. Net Qty/Pkg. 400 kg
 Cargo: Pack.Instr. 956 - Max. Net Qty/Pkg. 400 kg
 Special Provisioning: A97 A158 A179
 ERG: 9L
 Remarks: Dry ice is used as refrigerant. Additional regulations have to be considered for dry ice set out by IATA.



14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations - Great Britain**

Hazchem-Code: 2Z

National regulations - EC member states

Volatile organic compounds (VOC):

< 0.6 % by weight = 10 g/L

Labelling of packaging with <= 125mL content

Signal word:

Warning

Hazard statements:

H317

May cause an allergic skin reaction.

H341

Suspected of causing genetic defects.

Precautionary statements:

P201

Obtain special instructions before use.

P261

Avoid breathing dust.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352

IF ON SKIN: Wash with plenty of water/soap.

P308+P313

IF exposed or concerned: Get medical advice/attention.

P405

Store locked up.

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other information**Further information**

Wording of the H-phrases under paragraph 2 and 3:

H302 = Harmful if swallowed.

H315 = Causes skin irritation.

H317 = May cause an allergic skin reaction.

H319 = Causes serious eye irritation.

H335 = May cause respiratory irritation.

H341 = Suspected of causing genetic defects.

H411 = Toxic to aquatic life with long lasting effects.

Wording of the R-phrases under section 2 and 3:

R 22 = Harmful if swallowed.

R 36/37/38 = Irritating to eyes, respiratory system and skin.

R 36/38 = Irritating to eyes and skin.

R 38 = Irritating to skin.

R 43 = May cause sensitisation by skin contact.

R 51/53 = Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 68 = Possible risk of irreversible effects.

Reason of change:

Changes in section 2: Classification, labelling

Changes in section 3: Information on ingredients/classification

General revision

Department issuing data sheet

Contact person:

see section 1: Dept. responsible for information

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 453/2010

Revision date: 22/10/2014

Version: 5

Language: en-GB,IE

Date of first version: 23/11/2009

LTC-G1400/1600, LTC-F5500/F5600

Material number LTC-

Page:

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For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

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 programmes for employees.

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