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

1.1 Product identifier

Trade name: Beta Prepreg

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

General use: Carbon epoxy prepreg.
For industrial purposes only.

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

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 Directive 67/548/EEC or 1999/45/EC

Sens.; R43 May cause sensitisation by skin contact.
R52-53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

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

Xi

irritant

R phrase(s):
- R 43 May cause sensitisation by skin contact.
- R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S phrase(s):
- S 44 If you feel unwell, seek medical advice (show the label where possible).
- S 28 After contact with skin, wash immediately with soap and plenty of water.
- S 37 Wear suitable gloves.
- S 60 This material and its container must be disposed of as hazardous waste.

Special labelling

Text for labelling: Contains 7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate, Thermoset resin and Phenol.

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.
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 Mixtures

Chemical characterization: Plastic film on the basis of carbon fibres and epoxy resin.

Hazardous ingredients:

Ingredient	Designation	Content	Classification
REACH 01-2119846733-44-xxxx EINECS 219-207-4 CAS 2386-87-0	7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	< 15 %	EU: Sens.; R43. CLP: Skin Sens. 1; H317.
REACH 01-0000019919-xxxx ELINCS 476-290-1	Thermoset resin	< 10 %	EU: Xi; R38. Sens.; R43. N; R51-53. CLP: Skin Irrit. 2; H315. Skin Sens. 1; H317. Aquatic Chronic 2; H411.
REACH 01-2119471329-32-xxxx EINECS 203-632-7 CAS 108-95-2	Phenol	< 0,5 %	EU: C; R34. Muta. Cat. 3; R68. T; R23/24/25. Xn; R48/20/21/22. CLP: Acute Tox. 3; H301. Acute Tox. 3; H311. Acute Tox. 3; H331. Skin Corr. 1B; H314. Muta. 2; H341. STOT RE 2; H373.

SECTION 4: First aid measures

4.1 Description of first aid measures

In case of inhalation: In case of inhalation of decomposition products, affected person should be moved into fresh air and kept still. Immediately get medical attention.

In case of troubles after inhalation of dust:
Move victim to fresh air. Consult physician immediately.

In case of skin contact: Wash with generous amount of water and soap.
In case of skin reactions, consult a physician.

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: Never give anything by mouth to an unconscious person. Rinse mouth with water. Do not induce vomiting. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction. May cause irritations.

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:

Foam, extinguishing powder, water fog, carbon dioxide.

Extinguishing media which must not be used for safety reasons:

Full 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 (NOx), 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: -

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 contact with skin and eyes. Wear protective equipment. Provide fresh air.

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

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains. If necessary notify appropriate authorities.

6.3 Methods and material for containment and cleaning up

Avoid generation of dust. 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: Provide adequate ventilation, and local exhaust as needed.

Avoid contact with skin and eyes. Avoid generation of dust.
Wear suitable protective clothing and gloves.
When using do not eat, drink or smoke.
Wash hands before breaks and after work.

In case of development of vapours or dust: Do not inhale vapours or dust particles.
The use of local exhaust ventilation is recommended.

Precautions against fire and explosion:

Usual measures for fire prevention.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place. Store in a dry place.
Keep away from heat sources, sparks and open flames.
Protect from: UV-radiation/sunlight

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 Fiber	Great Britain: WEL-TWA	2 fibres / mLMachinemade mineral fibre (excluding refractory ceramic fibres)
		Great Britain: WEL-TWA	5 mg/m³ Machinemade mineral fibre (excluding refractory ceramic fibres)
		Great Britain: WEL-TWA	Machinemade mineral fibre (excluding refractory ceramic fibres)
		Ireland: 8 hours	1 fibres / mL of airMachinemade mineral fibre (excluding refractory ceramic fibres)
		Ireland: 8 hours	5 mg/m³ Machinemade mineral fibre (excluding refractory ceramic fibres)
		Ireland: 8 hours	Machinemade mineral fibre (excluding refractory ceramic fibres)
108-95-2	Phenol	Europe: IOELV: STEL	16 mg/m³; 4 ppm
		Europe: IOELV: TWA	8 mg/m³; 2 ppm
		Great Britain: WEL-STEL	16 mg/m³; 4 ppm
		Great Britain: WEL-TWA	7.8 mg/m³; 2 ppm
		Ireland: 15 minutes	16 mg/m³; 4 ppm
		Ireland: 8 hours	8 mg/m³; 2 ppm

8.2 Exposure controls

Provide adequate ventilation. In case of development of vapours or dust: The use of local exhaust ventilation is recommended.

Personal protection equipment

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded.
For mechanical processing: Dust mask (Filter P1 according to EN 143).
When vapours form: Use combination filter type A-P1 according to EN 14387.

Hand protection: Protective gloves according to EN 374.
Glove material: Nitrile rubber (0.4 mm).

For mechanical processing:
Combination Protective gloves against mechanical risks according to EN 388 / Use protective gloves when handling hot molten mass. (according to EN 407) /
Chemically resistant gloves according to EN 374

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 and eyes. Change contaminated clothing. Avoid generation of dust. Have eye wash bottle or eye rinse ready at work place. When using do not eat, drink or smoke. 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:	Physical state: solid Colour: black (with yellowish resin)
Odour:	weak
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 no data available
Vapour pressure:	no data available
Vapour density:	no data available
Density:	no data available
Water solubility:	almost 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: no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Refer to section: Possibility of hazardous reactions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation: May occur.

10.4 Conditions to avoid

Excessive heating. Avoid generation of dust.
Protect from: UV-radiation/sunlight

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

Emits toxic fumes under fire conditions.
In case of fire may be liberated: Nitrogen oxides (NOx), 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): Lack of data.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Lack of data.

Eye damage/irritation: Lack of data.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Skin Sens. 1; H317 = May cause an allergic skin reaction.

Germ cell mutagenicity/Genotoxicity: Lack of data.

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: Fibres and dust:
Causes temporarily: Skin irritation, mucous membrane irritation, eye irritations.

During mechanical processing the following substances may be formed in traces: WHO-fibres.
Definition WHO-fibres: length (L) > 5 µm and diameter (D) < 3 µm and L:D > 3:1
Classification WHO-fibres: Causes concern for man owing to possible carcinogenic effects. Should be regarded as if they are carcinogenic to man.

Information about Thermoset resin:

LD50, rat (oral): >5000 mg/kg (OECD 423).
LD50, rat (dermal): > 2000 mg/kg (OECD 402).

Mutagenicity (in-vitro):
Gene-mutations mammalian cells: positive (OECD 476).
Bacterial mutagenicity: positive (Ames test, OECD 471) .

Information about Phenol:
LD50, rat (oral): >340 mg/kg (OECD 401).
LD50, rat (dermal): 660 mg/kg (OECD 402).
LD50, rat (inhalative): 900 mg/m³/8h.

Mutagenicity (in-vitro):
Chromosomal aberrations: positive.

Symptoms

In case of inhalation:
Inhaling hazardous decomposing products can cause serious health damage.

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

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information about Thermoset resin:

Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 1.3 mg/L/48 h (OECD 202).
Algae toxicity:
NOEC Pseudokirchneriella subcapitata (green algae): 2.8 - 5.3 mg/L/72 h (OECD 201).

Information about 7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:

Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 40 mg/L/48 h (OECD 202).
Algae toxicity:
EC50 Pseudokirchneriella subcapitata (green algae): 90 mg/L/72 h (OECD 201).
Fish toxicity:
EC50 Oncorhynchus mykiss: 24 mg/L/96 h (OECD 203).

12.2. Persistence and degradability

Further details: Biodegradation: Product is not readily biodegradable.

Information about 7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:
71%/28d, failing 10-d window (OECD 301 B).

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: Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 07 02 14* = Wastes from additives containing dangerous substances.
* = Evidence for disposal must be provided.

Recommendation: Dispose of waste according to applicable legislation.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA: not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA: Not restricted

14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA: not applicable

14.4 Packing group

ADR/RID, IMDG, IATA: not applicable

14.5 Environmental hazards

Marine pollutant: No

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

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

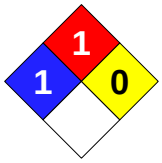
Hazchem-Code: -

National regulations - EC member states

Volatile organic compounds (VOC):
0 % by weight

National regulations - USA

Hazard rating systems:



NFPA Hazard Rating:
Health: 1 (Slight)
Fire: 1 (Slight)
Reactivity: 0 (Minimal)

HMIS Version III Rating:
Health: 1 (Slight)
Flammability: 1 (Slight)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
	X

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:

H301 = Toxic if swallowed.
H311 = Toxic in contact with skin.
H314 = Causes severe skin burns and eye damage.
H315 = Causes skin irritation.
H317 = May cause an allergic skin reaction.
H331 = Toxic if inhaled.
H341 = Suspected of causing genetic defects.
H373 = May cause damage to organs through prolonged or repeated exposure.
H411 = Toxic to aquatic life with long lasting effects.
H412 = Harmful to aquatic life with long lasting effects.
EUH205 = Contains epoxy constituents. May produce an allergic reaction.

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

R 23/24/25 = Toxic by inhalation, in contact with skin and if swallowed.
R 34 = Causes burns.
R 38 = Irritating to skin.
R 43 = May cause sensitisation by skin contact.
R 48/20/21/22 = Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
R 51/53 = Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 52/53 = Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 68 = Possible risk of irreversible effects.

Literature: - IARC Vol 81, 23.08.2002 - Man-made Vitreous Fibers

Reason of change: Changes in section 2: Classification, labelling
Changes in section 3: information on ingredients (classification Thermoset resin)
General revision

Date of first version: 24/3/2010

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

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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