

According to Regulation (EC) No.1907/2006 (REACH) and subsequent amendments

Date of first issue : 22.10.2018

1. Identification of the substance/preparation and of the company/undertaking

Product details :

1.1. Trade name

CARBOCAD 3D

1.2. Application of the substance / the preparation Filler/ Extender
Composites objects and/or parts production

1.3. Manufacturer/Supplier

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1.4. Information in case of emergency

Ospedale Niguarda (MI) +39 02 66101029

IRCCS Fondazione Maugeri - Pavia 0382 24444

Ospedali Riuniti - Bergamo 800 883300

Ospedale Careggi - Firenze 055 7947819

Policlinico Umberto I - Roma 06 49978000

Ospedale Cardarelli - Napoli 081 74728702

2. Hazards identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC) n. 1272/2008 [CLP]

Skin Irr. 2; H315 – Causes skin irritation Skin Sens. 1 ;

H317 – May cause an allergic skin reaction Eye Irr. 2;

H319 – Causes serious eye irritation Aquatic Chronic 2;

H411 – Toxic to aquatic life with long lasting effects

2.2 Label elements

Labelling according to Regulation (EC) n. 1272/2008 [CLP]

Hazard pictograms :

Skin and Eye irritation (GHS07)

Hazardous to the aquatic environment (GHS09)

Signal word:

Caution

Hazard statements :

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H319 Causes serious eye irritation

H411 Toxic to aquatic life with long lasting effects

EUH205 Contains epoxy constituents. May produce an allergic reaction

Precautionary statements:

P202 Do not handle until all safety precautions have been read and understood

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P302+P352 f on skin: wash with soap and water
 P305+P351 I If in eye: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing. Call a doctor /physician
 P281 Use personal protective equipments as required
 P301+P310 If swallowed: Immediately call a POISON CENTER or doctor/physician
 P501 Dispose of contents/container to local laws

2.3 Other hazards

Hardened material's dust or particles, coming from mechanical operation as cutting, drilling, smoothing etc., may cause respiratory and/or skin irritation. Heating and/or vacuum free the solvent residues absorbed into the material.

PBT e vPvB :

Substance meets the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

3. Composition/information on ingredients

3.1. Description/CAS No./Dangerous components

3.2. Mixture

CAS – EINECS	Substance	Classification	% weight
CAS: 25068-38-6	Epoxy resin of organic origin	Skin Irr. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Acquatic Chronic 2; H411	≤ 70%
CAS: 78-93-3 EINECS: 204-159-0 Reach Reg.: 01-2119457290-43-xxxx	MEK	Flam. Liq. 2; H255 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	≤ 2%
Carbon, glass and/or Aramide fabric used as support	See material code	-	Balance

4. First aid measures

4.1 Description of first aid measures

In case of persisting adverse effects, consult a doctor/physician or call a poison center.

After Inhalation

Remove affected person the immediate area and bring to fresh air; keep it in a half-sitting position comfortable for breathing.

After skin contact

Take off contaminated clothing. Wash with soap and water if possible, otherwise only with water.

After eye contact

Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing. Call a doctor /physician.

After ingestion

Do not induce vomit. Call a poison center or doctor/physician. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

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The resin mixture is irritant.

Acute effects: May cause an allergic reaction.

Delayed effects: No data available.

4.3 Indication of any need to immediately consult a doctor and special treatments

In case of persisting adverse effects, consult a doctor/physician or call a poison center.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Conventional media as: Water spray , Foam, Carbon dioxide, Extinguishing powder. For a correct choice, consider also all the other materials involved in the fire.

Unsuitable extinguishing media

Do not use water jets directly on burning material. Use water jets only for cooling of surfaces and boxes involved into fire.

5.2 Special hazards arising from substance or mixture

Combustion products of this material have to be classed invariably as respiratory poison. In event of fire, the following can be released: Carbon dioxide (CO₂), Carbon monoxide (CO), Nitrous oxides (NO_x).

5.3 Recommendations for fire-fighters

Cooling material's boxes with water spray jet, in order to prevent the product's decomposition and releasing of hazardous substances. Wear the Always wear full fire prevention gear.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Collect the released material using rubber or plastic gloves; dispose of as special waste not dangerous.

6.2 Environmental precautions

The product does not float and is not biodegradable.

6.3 Methods and material for containment and cleaning up

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6.4 Reference to other

Reference to other sections 8 and 13.

7. Handling and storage

Do not eat, drink or smoke at the workplace.

7.1 Precautions and storage

Advice on safe handling

Ensure good ventilation in the workplace. If this is not observed, do not breathe vapors and avoid contact with eyes and skin. See section 8.

The workplace and professional use must be organized in such a way to minimize or prevent direct

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contact with the substance.

Wear suitable gloves (nitrile materials, neoprene or latex), observing the instructions concerning their permeability and the expiration date, notified by the glove supplier.

General protective and hygiene measures :

It calls for the respect of the security measures governing the use and handling of chemicals. Do not eat, drink, or smoke in work areas. Wash hands after use and remove work clothes and protective equipment before entering areas where you eat.

7.2 Conditions for safe storage, including any incompatibilities

Store the product in original containers or other containers suitable and properly labeled. Keep away from heat sources. Avoid high temperatures. There are not storage incompatibilities with other products.

Requirements for storage rooms and containers:

The area storage facility, equipment and operating procedures must comply with the relevant legislation in the European, national or local level.

Storage facilities must be provided with adequate means to prevent contamination of soil and water in case of leaks or spills.

Further information on storage conditions :

Store the product at a temperature ranging between -15 ° and -18 ° C.

7.3 Specific end use(s)

Anyone besides those enrolled in the section. 1 in 1.2.

8. Exposure controls and personal protection

8.1 Control parameters

Occupational exposure limit values

Methylethylketone Nr. CAS 78-93-3	Type of value : Parameter: Limit value: Regulation:	8 hours limit (ITALY) inhalation 600 mg/m ³ D.lgs. n. 81/2008-attached XXXVIII
Epoxy resin; Nr. CAS : 25068-38-6	DNEL Dermal: I Inhalation: PNEC STP: 10 mg/l Freshwater: Freshwater sediment: Marine water:	8,33 mg/kg bw/day 12,25 mg/m ³ 0,006 mg/l 0,0627 mg/kg wwt 0,0006 mg/l 0,00627 mg/kg wwt

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	Marine water sediment: Soil:	0,0478 mg/kg wwt
Methylethylketone Nr. CAS 78-93-3	DNEL (EC) Dermal:	1161 mg/kg
	DNEL (EC) Inhalation:	600 mg/m3
Methylethylketone Nr. CAS 78-93-3	DNEL (EC) Dermal:	1161 mg/kg
	DNEL (EC) Inhalation:	600 mg/m3

8.2 Exposure controls

Technical measures to prevent exposure:

If ventilation is not sufficient and the possible local intake is impossible or insufficient, the entire working place must be sufficiently ventilated using appropriate machines. Handling the product must be performed by authorized personnel in the course of which must wear appropriate personal protective equipment, see below. The work area must be clean as well as the equipment.

Personal protection equipment :

Eye and face protection

Glasses with side shields or face shield visor DIN EN 166

Hand protection

If potential for contact with skin use gloves suitable material such as latex, neoprene or elastic rubber nitrile, observing the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

Respiratory protection

If you exceed the limits related to the work environment, it is recommended to wear appropriate PPE to CE mark. In particular, it recommends the use of full face masks with combination filters (EN14387), as a backup to engineering controls. Try as much as possible to always ensure efficient and adequate ventilation.

Environmental exposure controls

Emissions from production processes, including those from ventilation must be checked for compliance of environmental protection legislation.

Storage facilities must be provided with adequate means to prevent contamination of soil and water in case of leaks or spills.

9. Physical and chemical properties

9.1. General Information

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- appearance :Carbon, glass and/or Aramide fabric impregnated with epoxy resins mixture
- colour typical
- odour typical
- pH -
- Melting point not applicable
- Boiling point n.a.
- Flash point n.a.
- Evaporation rate
- Lower Flammable Limit n.a.
- Upper Flammable Limit n.a.
- Vapour pressure n.a.
- Vapour density not determined
- Density : $\geq 1.4 \text{ kg/cm}^3$
- Water solubility : insoluble
- Other solubility : the resin is soluble in acetone and methyl ethyl ketone
- Partition coefficient (n-octanol / H₂O) n.a.
- Auto-ignition temperature : $\geq 290^\circ\text{C}$
- Flammable Gas n.a.
- Oxidising liquids n.a.
- Decomposition Temperature : $\geq 250^\circ\text{C}$
- Viscosity n.a.
- Explosive properties : not explosive
- Oxidant properties n.a.

10. Thermal decomposition / conditions to be avoided

10.1 Reactivity

The product is stable under recommended storage and handling conditions (see section 7). If heated it may give rise to an exothermic reaction.

10.2 Chemical stability

See Section 7. This substance is stable under all ordinary circumstances and under normal conditions of use.

10.3 Possibility of hazardous reaction

They do not occur in all ordinary circumstances and under normal conditions of use. Avoid exposure to heat sources.

10.4 Conditions to avoid

Uncontrolled heating of the material.

10.5 Incompatible materials

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10.6 Hazardous decomposition product

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See the section 7.

The substance in case of fire, it can decompose into oxides and carbon monoxides and nitrogen oxides.

11.Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity :

Method: LD50 (epoxy resin cas. 28065-38-6)

Species: Rat

Route of exposure: oral

Effective dose: 15000 mg/kg

Method: LD50 (methylethylketone cas. 78-93-3)

Species: Rat

Route of exposure: oral

Effective dose: 2000 mg/kg

Acute skin toxicity

Method: LD50 (epoxy resin cas. 28065-38-6)

Species: Rabbit

Route of exposure: Dermal

Effective dose: 20000 mg/kg

Method: LD50 (methylethylketone cas. 78-93-3)

Species: Rabbit

Route of exposure: Dermal

Effective dose: > 5000 mg/kg

Acute inhalation toxicity

Method: LC50 (methylethylketone cas. 78-93-3) m

Route of exposure: Inhalation

Species: Rat

Effective dose: > 5000 pp

Skin corrosion/irritation

Skin irritation : Causes skin irritation.

Eye irritation : Causes serious eye irritation

Respiratory irritation : -

Sensitisation Skin : May cause an allergic skin reaction.

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Inhalation : -

Summary of evaluation of CMR properties : -

Other information

No further toxicological information are available.

12. Ecological information

Do not discharge product into the environment.

12.1 Toxicity

Acquatic toxicity

Method : EC50 (epoxy resin cas. 25068-38-6)

Species : Daphnia - Daphnia magna

Value = 1.8 mg/l

Exposure time : 48 h

Method : EC50 (epoxy resin cas. 25068-38-6)

Species : Algae - Scenedesmus subspicatus

Value = 11 mg/l

Exposure time : 72 h

Method : LC50 (epoxy resin cas. 25068-38-6)

Species : Fish - Pimephales promelas

Value = 2 mg/l

Exposure time : 96 h

Method : EC50 (methylethylketone cas. 78-93-3)

Species : Daphnia - Daphnia magna

Value = 308 mg/l

Exposure time : 48 h

Method : EC50 (methylethylketone cas. 78-93-3)

Species : Algae - Scenedesmus subspicatus

Value = 2029 mg/l

Exposure time : 96 h

Method : LC50 (methylethylketone cas. 78-93-3)

Species : Fish - Pimephales promelas

Value = 2993 mg/l

Exposure time : 96 h

12.2 Persistence and degradability

The product is not biodegradable or readily biodegradable

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12.3 Bioaccumulative potential

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12.4 Mobility in soil

No information available

12.5 Result of PBT and vPvB assessment

The substance contained in the mixture does not meet the criteria for the identification of PBT and vPvB substances according to Annex XIII of the REACH Regulation. This substance does not meet the PBT / vPvB criteria of the REACH regulation, Annex XIII.

12.6 Other adverse effects

There is no information available

12.7 Additional ecotoxicological information

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13. Disposal considerations

13.1 Waste treatment methods

Product / packaging disposal

Do not discharge into the sewer. Do not contaminate ponds, waterways or the substance channels or the interface materials. For the disposal of waste resulting from the product, including materials interface, connected to the local legislation. It is therefore advisable to contact the Authorities or companies authorized to recovery / disposal in accordance with the provisions the regulations in force even when the result of the question neutralization of spills or leaks.

14. Transport information

The product is not dangerous under current provisions governing the transport of dangerous goods by road (ADR) and by Rail (RID), by sea (IMDG Code) and by air (IATA).

14.1. UN Number

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14.2. Chemical Name

-

14.3. Class

-

14.4. Packing group

-

14.5. Hazard

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14.6. Special precautions for the transporter

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14.7. Transport/Additional information

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15.Regulations

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

EU regulations

Regulation n°. 1907/2006/EC (REACH).

Regulation n°. 1272/2008/EC (CLP).

Regulation n°. 790/2009/EC (amending, for the purposes of adaptation to technical and scientific progress (ATP), of Regulation n°. 1272/2008/EC).

Regulation EU 286/2011 (amending, for the purposes of adaptation to technical and scientific progress (ATP), of Regulation n°. 1272/2008/EC).

Regulation EU 618/2012 (amending, for the purposes of adaptation to technical and scientific progress (ATP), of Regulation n°. 1272/2008/EC).

Regulation EU 487/2013 (amending, for the purposes of adaptation to technical and scientific progress (ATP), of Regulation n°. 1272/2008/EC).

Regulation EU 2015/830 del 28 May 2015 (amending of Regulation 1907/2006)

National regulations (ITALY)

D.Lgs 81/2008 (consolidated text on the protection of health and safety in the workplace) and subsequent amendments Directive 2009/161 / EU - chemical risk assessment in accordance with Title IX

15.2 Chemical safety assessment

Not elaborate.

16.Other information

16.1 Indication of changes

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16.2 Abbreviations and acronyms

LEGEND:

ADR: European agreement on the international transport of dangerous goods by road

ASTM: American Society for Testing and Materials

EINECS: European Inventory of Existing Commercial Chemical Substances

EC(0/50/100): Effective Concentration 0/50/100

LC(0/50/100): Lethal Concentration 0/50/100

IC50: Inhibitor Concentration 50

NOEL: No Observed Effect Level

NOEC: No Observed Effect Concentration

LOEC: Lowest Observed Effect Concentration

DNEL: Derived No Effect Level

DMEL: Derived Minimum Effect Level

CLP: Classification, Labelling and Packaging

CSR: Chemical Safety Report

LD(0/50/100): Lethal Dose 0/50/100

IATA: International Air Transport Association

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ICAO: International Civil Aviation Organisation

IMDG: International Maritime Dangerous Goods Code

PBT: Persistent, bioaccumulative and toxic

RID: Regulation concerning the international rail transport of Dangerous goods

STEL: Short term exposure limit

TLV: Threshold limit value

TWA: Time Weighted Average

UE: European Union

vPvB: Very persistent very bioaccumulative

N.D.: not determined

N.A.: not available

VwVwS.: Text of Administrative Regulation on the Classification of Substances hazardous to waters into Water Hazard Classes

PNEC: Predicted No Effect Concentration

PNOS: Particulates not Otherwise Specified

BOD: Biochemical Oxygen Demand

COD: Chemical Oxygen Demand

BCF: Bio Concentration Factor

TRGS : Technical Rules for Hazardous Substances

LCLo: Lethal Concentration Low

16.3 Key literature reference and sources data

Toxicological and eco-toxicological data derived from the database available on the IUCLID ESIS (European chemical Substance Information System) and the Chemical Safety Report completed by the registration consortia of substances registered ECHA.

16.4 Text of, H- and EUH - phrases (Number and full text)

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H319 Causes serious eye irritation

H411 Toxic to aquatic life with long lasting effects

EUH205 Contains epoxy constituents. May produce an allergic reaction

16.5 Indication for education

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16.6 Additional information

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All information contained in this document correspond to our present-day knowledge printing. The information is intended to give you advice about the safe handling of the product on the sheet with safety data, as regards the preservation, processing, transportation and disposal. The indications do not have value for other products. If the product is mixed with other products or in the processing, the information contained in the safety data sheet is not necessarily valid for the new material.