



## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 22.12.2022

Version No: 1.00

Revision: 22.12.2022

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

· **1.1 Product identifier**

· **Trade name:**

**LINQCELL™ Graphitized Carbon Papers**

**LINQCELL™ GDP Product Series**

**LINQCELL™ GDL Product Series**

· **CAS Number:**

7440-44-0

· **EC number:**

931-328-0

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

· **Application of the substance / the preparation:**

Electrode for Fuel cells and Electrolyzers  
Gas Diffusion Layer

· **Uses advised against:** No further relevant information available.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

CAPLINQ Europe BV  
Industrieweg 15E  
1566JN Assendelft  
The Netherlands  
+31 20 893 2224  
reach@caplinq.com

CAPLINQ Americas Inc.  
36927 Schoolcraft Rd  
Livonia, MI 48150  
USA  
Tel: +1 (313) 558-8243

CAPLINQ Corporation  
957 Snowshoe Crescent  
Orleans ON, K1C 2Y3  
Canada  
Tel: +1 (613) 482-2215

· **1.4 Emergency telephone number:** 1 (800) 343-5636

### SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

The substance is not classified, according to the CLP regulation.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not determined.

· **vPvB:** Not determined.

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## SECTION 3: Composition/information on ingredients

- **3.1 Substances**
  - **CAS No. Description**  
CAS: 7440-44-0 carbon
  - **Identification number(s)**
  - **EC number:** 931-328-0
- 

## SECTION 4: First aid measures

- **4.1 Description of first aid measures**
  - **General information:** If symptoms persist consult doctor.
  - **After inhalation:** Supply fresh air.
  - **After skin contact:**  
Generally the product does not irritate the skin.  
Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:**  
Rinse opened eye for several minutes under running water.  
Remove contact lenses, if present and easy to do. Continue rinsing.
  - **After swallowing:**  
Rinse mouth.  
Drink plenty of water and provide fresh air. Call for a doctor immediately.
  - **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
  - **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.
- 

## SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
  - **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Use fire extinguishing methods suitable to surrounding conditions.
  - **For safety reasons unsuitable extinguishing agents:** Water with full jet
  - **5.2 Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.  
In case of fire, the following can be released:  
Carbon monoxide  
Carbon dioxide
  - **5.3 Advice for firefighters**
  - **Protective equipment:** Wear self-contained respiratory protective device.
  - **Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.
- 

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation.  
Wear protective clothing.  
Avoid formation of dust.  
Keep away from ignition sources.
  - **6.2 Environmental precautions:** Do not allow product to reach sewage system or any water course.
  - **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Dispose of the material collected according to regulations.
  - **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.
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See Section 13 for disposal information.

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## SECTION 7: Handling and storage

### · 7.1 Precautions for safe handling

Prevent formation of dust.

Any unavoidable deposit of dust must be regularly removed.

Ensure good ventilation/exhaustion at the workplace.

### · Information about fire and explosion protection:

Dust can combine with air to form an explosive mixture.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

### · 7.2 Conditions for safe storage, including any incompatibilities

#### · Storage:

- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

- **Information about storage in one common storage facility:** Store away from oxidising agents.

- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

### · 7.3 Specific end use(s) No further relevant information available.

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## SECTION 8: Exposure controls/personal protection

### · 8.1 Control parameters

#### · Ingredients with limit values that require monitoring at the workplace:

**CAS: 7440-44-0 carbon**OEL (Ireland) Long-term value: 10\* 4\*\* mg/m<sup>3</sup>

\*total inhalable \*\*respirable dust

#### · DNELs

Inhalative DNEL(long/local) 1.84 mg/m<sup>3</sup> (Workers (Industrial/Professional))

### · 8.2 Exposure controls

- **Appropriate engineering controls** No further data; see item 7.

- **Individual protection measures, such as personal protective equipment**

#### · General protective and hygienic measures:

Do not eat, drink, smoke or sniff while working.

Keep away from foodstuffs, beverages and feed.

The usual precautionary measures are to be adhered to when handling chemicals.

- **Respiratory protection:** Not necessary if room is well-ventilated.

#### · Hand protection

Protective gloves and protective skin cream

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

#### · Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

#### · Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye/face protection** Safety glasses

- **Body protection:** Protective work clothing

- **Environmental exposure controls** No further relevant information available.

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## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

#### · Physical state

Solid

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· <b>Form:</b>	Solid
· <b>Colour:</b>	Black
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.
· <b>Melting point/freezing point:</b>	~ 3550 °C
· <b>Boiling point or initial boiling point and boiling range</b>	Not applicable.
· <b>Flammability</b>	Flammable.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	Not applicable.
· <b>Upper:</b>	Not applicable.
· <b>Flash point:</b>	Not determined.
· <b>Ignition temperature:</b>	Not determined.
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	Not applicable.
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	Not applicable.
· <b>Dynamic:</b>	Not applicable.
· <b>Solubility</b>	
· <b>water:</b>	Insoluble.
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure:</b>	Not applicable.
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	2.31 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Bulk density:</b>	150 kg/m <sup>3</sup>
· <b>Vapour density</b>	Not applicable.
· <b>Relative gas density</b>	Not applicable.
· <b>Particle characteristics</b>	See item 3.
· <b>9.2 Other information</b>	
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Molecular weight</b>	12.01 g/mol
· <b>Oxidising properties</b>	No
· <b>Evaporation rate</b>	Not applicable.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** No decomposition if used and stored according to specifications.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Reacts with strong acids and oxidising agents.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
  - **Acute toxicity** Based on available data, the classification criteria are not met.
  - **LD/LC50 values relevant for classification:**
- 
- Oral LD50 > 2000 mg/kg (Rat) (OECD Guideline 423)
- Inhalative LC50 (1h) > 8.5 mg/L (Rat) (OECD Guideline 403, inhalation:dust)  
1 h
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
  - **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
  - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

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- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
  - **Carcinogenicity** Based on available data, the classification criteria are not met.
  - **Reproductive toxicity** Based on available data, the classification criteria are not met.
  - **STOT-single exposure** Based on available data, the classification criteria are not met.
  - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
  - **Aspiration hazard** Based on available data, the classification criteria are not met.
  - **11.2 Information on other hazards**
  - **Endocrine disrupting properties** Substance is not listed.
- 

### SECTION 12: Ecological information

- **12.1 Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
  - **12.2 Persistence and degradability** No further relevant information available.
  - **12.3 Bioaccumulative potential** No further relevant information available.
  - **12.4 Mobility in soil** No further relevant information available.
  - **12.5 Results of PBT and vPvB assessment** Not determined.
  - **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
  - **12.7 Other adverse effects** No further relevant information available.
- 

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
  - **Recommendation:** Must be specially treated adhering to official regulations.
  - **Uncleaned packaging**
  - **Recommendation:** Disposal must be made according to official regulations.
- 

### SECTION 14: Transport information

- **14.1 UN number or ID number**
  - **ADR/RID/ADN, IMDG, IATA** Void
  - **14.2 UN proper shipping name**
  - **ADR/RID/ADN, IMDG, IATA** Void
  - **14.3 Transport hazard class(es)**
  - **ADR/RID/ADN, IMDG, IATA**
  - **Class** Void
  - **14.4 Packing group**
  - **ADR/RID/ADN, IMDG, IATA** Void
  - **14.5 Environmental hazards:** Not applicable.
  - **14.6 Special precautions for user** Not applicable.
  - **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.
  - **Transport/Additional information:** Not dangerous according to the above specifications.
  - **UN "Model Regulation":** Void
- 

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.

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- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
Substance is not listed.
  - **REGULATION (EU) 2019/1148**
  - **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**  
Substance is not listed.
  - **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
  - **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
  - **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
Substance is not listed.
  - **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.
- 

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### · Abbreviations and acronyms:

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

MARPOL: (from Marine Pollutant) International Convention for the Prevention of Marine Pollution from Ships

IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

UN: United Nations (also UNO: United Nations Organization)

NOEC: No Observed Effect Concentration

OECD: Organisation for Economic Co-operation and Development

ASTM: American Society for Testing and Materials

WAF: Water Accommodated Fraction

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative