

# Safety data sheet

## according to Regulation (EC) No 1907/2006, Article 31

Printing date 22.03.2024

Version number 3

Revision: 22.03.2024

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

- **1.1 Product identifier**
- **Trade name:** C60 Fullerene Powder
- **CAS Number:**  
99685-96-8
- **EC number:**  
628-630-7
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Product category** PC21 Laboratory chemicals
- **Application of the substance / the mixture** Laboratory chemicals
- **Uses advised against** Any use not specified above.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Mitolab ltd  
Unit 1  
Bethel House  
Kilgetty  
Pembrokeshire  
SA68 0NP  
  
Tel: 07896 204093
- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:**  
Members of the public seeking specific information on poisons should contact:  
In England and Wales: NHS 111 - dial 111  
In Scotland: NHS 24 - dial 111

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

- Eye Irrit. 2 H319 Causes serious eye irritation.
- STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Hazard statements**  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.
- **Precautionary statements**  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 Wear eye protection / face protection.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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### SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description**  
99685-96-8 Fullerene-C60
- **Identification number(s)**
- **EC number:** 628-630-7

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately rinse with water.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Check for and remove any contact lenses.  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; call for medical help immediately.
- **Information for doctor:** Treat symptomatically and supportively.
- **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**  
Combustible  
As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.  
Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Do not inhale explosion gases or combustion gases.  
Wear fully protective suit.
- **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**  
Avoid formation of dust.  
Ensure adequate ventilation

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- **6.2 Environmental precautions:** Do not allow product to enter drains.
- **6.3 Methods and material for containment and cleaning up:**
  - Pick up mechanically.
  - Send for recovery or disposal in suitable receptacles.
  - Ensure adequate ventilation.
- **6.4 Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of dust.
- **Information about fire - and explosion protection:**
  - There is a risk of a dust explosion if the following conditions are met:
    - The substance is present in very finely distributed form (powder, dust).
    - The substance is whirled up in sufficient quantity in the air.
    - An ignition source is present (flame, spark, electrostatic discharge, etc.)
- **7.2 Conditions for safe storage, including any incompatibilities**
  - **Storage:**
  - **Requirements to be met by storerooms and receptacles:** No special requirements.
  - **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.
  - **Storage class:** 11
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see section 7.
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

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

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Ensure that eyewash stations and safety showers are close to the workstation location.

- **Respiratory protection:** When dust/mist are present use a Particulate filter, type P2.

- **Protection of hands:**



Protective gloves.

Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

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**

Nitrile rubber, NBR

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.

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- **Penetration time of glove material**

Break-through time: &gt;480 minutes

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

- **Eye protection:**



Safety glasses with side-shields conforming to EN166.

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

- **Body protection:**



Protective work clothing

- **Limitation and supervision of exposure into the environment**

Do not allow to enter drains, sewers or watercourses.

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Powder
<b>Colour:</b>	Grey - Black
<b>Odour:</b>	Odourless
<b>Odour threshold:</b>	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

<b>Melting point/freezing point:</b>	280 °C
<b>Initial boiling point and boiling range:</b>	Undetermined.

- **Flash point:** 94 °C

- **Flammability (solid, gas):** Not applicable.

- **Decomposition temperature:** Not determined.

- **Ignition temperature:** Not determined.

- **Explosive properties:** Product does not present an explosion hazard.

- **Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

- **Vapour pressure:** Not determined.

<b>Density at 20 °C:</b>	1.6 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

- **Solubility in / Miscibility with water:**

Insoluble.

- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**

<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.

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· **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
There is a risk of a dust explosion if the following conditions are met:
  - The substance is given in very finely distributed form (powder, dust).
  - The substance is whirled up in sufficient quantity in the air.
  - An ignition source is present (flame, spark, electrostatic discharge, etc.)
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Heat and static discharge.
- **10.5 Incompatible materials:** Strong oxidising agents.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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**  
May cause respiratory irritation.
- **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.

### 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.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

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### SECTION 13: Disposal considerations

#### · 13.1 Waste treatment methods

##### · Recommendation

Recommended Hierarchy of Controls:

- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

##### · Uncleaned packaging:

##### · Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Disposal must be made according to official regulations.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

##### · Recommended cleansing agents: Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

#### · 14.1 UN-Number

· ADR/RID/ADN, IMDG, IATA Not applicable

#### · 14.2 UN proper shipping name

· ADR/RID/ADN, IMDG, IATA Not applicable

#### · 14.3 Transport hazard class(es)

· ADR/RID/ADN, ADN, IMDG, IATA

· Class Not applicable

#### · 14.4 Packing group

· ADR/RID/ADN, IMDG, IATA Not applicable

#### · 14.5 Environmental hazards:

Not applicable.

#### · 14.6 Special precautions for user

Not applicable.

#### · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

#### · UN "Model Regulation":

Not applicable

### SECTION 15: Regulatory information

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

##### · Poisons Act

· Regulated explosives precursors Substance is not listed.

· Regulated poisons Substance is not listed.

· Reportable explosives precursors Substance is not listed.

· Reportable poisons Substance is not listed.

##### · 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.

- **Department issuing SDS:** Product safety department.
- **Abbreviations and acronyms:**  
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)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- **\* Data compared to the previous version altered.**

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