

## 1. SECTION 1: IDENTIFICATION OF SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Product name	Carbon nanodots (CNDs)
Synonyms	Carbon quantum dots (CQDs), graphene quantum dots, C-dots, carbon nanoparticles
REACH registration #	N/A

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

Identified use(s)	PC21 Laboratory chemicals, Research and Development use only
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### 1.3. Details of the supplier of this SDS

Company	Advanced Nanoparticles Limited
Address	
Email	Info@advancednanoparticles.com

### 1.4. Emergency telephone number(s)

Emergency telephone numbers	CHEMTREC +44 (0)203 885 0382 +1 703 527 3887 +52 55 8526 4930 +55 11 4349 1359 +65 3163 8374
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## 2. SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

### 2.2. Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

### 2.3. Other hazards

The substance/mixture does not contain components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 2.4. Additional information

N/A

### 3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substances

This product is a mixture.

#### 3.2. Mixtures

No components need to be disclosed according to the applicable regulations.

### 4. SECTION 4: FIRST AID MEASURES

#### 4.1. Description of first aid measures

General advice	First aiders should ensure they take adequate steps to protect themselves from exposure (see section 8). Show this SDS to the doctor in attendance.
Inhalation	Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.
Skin contact	Rinse skin with water. If skin irritation occurs, get medical advice/attention.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses if easy to do so. Continue rinsing. If irritation occurs, seek medical advice/attention.
Ingestion	Rinse out mouth with water. Get medical advice/attention if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and chronic, are included on labelling (section 2.2) and in section 11.

#### 4.3. Indication of any immediate medical attention and special treatments needed

Treat symptomatically.

### 5. SECTION 5: FIREFIGHTING MEASURES

#### 5.1. Extinguishing media

Suitable extinguishing media	As appropriate for surrounding fire.
Unsuitable extinguishing media	As appropriate for surrounding fire.

## 5.2. Special hazards arising from the substance or mixture

Carbon oxides.

## 5.3. Advice for firefighters

Firefighters should wear complete protective clothing including self-contained breathing apparatus.

# 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

## 6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Follow safe handling advice and personal protective equipment recommendations, as per section 8.

## 6.2. Environmental precautions

Avoid release into the environment.

## 6.3. Methods and material for containment and cleaning up

Contain the spillage, soak-up with non-combustible absorbent material (e.g. sand, earth, vermiculite, diatomaceous earth) and transfer to a container for disposal according to local/national regulations (see section 13).

## 6.4. Reference to others sections

Sections 8 and 13.

# 7. SECTION 7: HANDLING AND STORAGE

## 7.1. Precautions for safe handling

Advice on safe handling	Avoid inhalation, ingestion and contact with skin and eyes. Use only in a well-ventilated area. Wear protective clothing as per section 8.
Hygiene measures	Keep away from food and drink. Wash hands after handling, before breaks, and at the end of the working day.

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

Advice on safe storage	Store in a well-ventilated place. Keep container tightly closed. Avoid direct sunlight.
Storage temperature	Ambient.
Storage life	Stable under normal conditions.
Incompatible materials	None known.

## 7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

# 8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1. Control parameters

Occupational exposure limits	No occupational exposure limit assigned.
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## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

Ensure adequate ventilation and/or exhaust. A washing facility/water for eye and skin cleaning purposes should be present.

### 8.2.2. Personal protective equipment

Eye protection	Wear eye protection with side protection tested and approved under appropriate government standards such as EN166 (EU).
Hand protection	Handle with gloves. Gloves must be inspected prior to use and proper glove removal techniques should be used. The selected protective gloves must satisfy the specifications of Regulation (EU) 2016/425 and the standard EN374 derived from it.
Body protection	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work environment.
Respiratory protection	No personal respiratory protection is necessary under normal circumstances.
Thermal hazards	Not known.

### 8.2.3. Environmental exposure controls

Avoid release to the environment.

# 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

Physical state	Liquid
Colour	Colourless to slight yellow colour.
Odour	None
Melting point/freezing point (°C)	0
Boiling point (°C)	100
Miscibility with water	Miscible with water

### 9.2. Other information

None.

## 10. SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None anticipated.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

Not known.

### 10.4. Conditions to avoid

Not known.

### 10.5. Incompatible materials

Not known.

### 10.6. Hazardous decomposition products

In the event of fire, see section 5.

## 11. SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

No data available.

### 11.2. Information on other hazards

None known.

## 12. SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

No data available.

### 12.2. Persistence and degradation

No data available.

### 12.3. Bioaccumulative potential

No data available.

### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher/

### 12.6. Endocrine disrupting properties

Not known.

### 12.7. Other adverse effects

Not known.

## 13. SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

Dispose of contents in accordance with local, state or national legislation. Recycle only completely emptied packaging. Normal disposal is via incineration operated by an accredited disposal contractor. Send to a licenced recycler, reclaimer or incinerator.

### 13.2. Additional information

Disposal should be in accordance with local, state or national legislation.

#### 14. SECTION 14: TRANSPORT INFORMATION

IATA/IMO/RID/ADR	Not classified as hazardous for transport.
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#### 15. SECTION 15: REGULATORY INFORMATION

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

Not listed.

##### 15.2. Chemical safety assessment

A REACH chemical safety assessment has not been carried out.

#### 16. SECTION 16: OTHER INFORMATION

##### 16.1. Acronyms

ADN	European Agreement convening the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstracts Service
EC	European Community
IATA	International Air Transport Association
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail

##### 16.2. Disclaimers

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