

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

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

1.1 Product identifier

Product Name Nickel Doped Multi-walled Carbon Nanotubes (Diameter: 28-48 nm, length: 15-35 µm)
Synonyms Ni-MWCNT
Chemical Name Nickel Doped Multi-walled Carbon Nanotubes
Chemical Formula NiC
CAS No. N/A
EC No. Not available.
Index No. 006-104-00-2
REACH Registration No. Not applicable.

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*

1.3 Details of the supplier of the safety data sheet

Company Identification Ossila Limited
Address of Supplier Solpro Business Park
Windsor Street
Sheffield
Postal code S4 7WB, UK
Telephone: +441142999180
E-mail info@ossila.com
Office hours 08:00 - 17:00

1.4 Emergency telephone number

Emergency Phone # +44 (0) 20 3885 0382 (CHEMTREC)

Other Regions	Emergency Phone Number (CHEMTREC)
Europe, Middle East, Africa	+44 20 3885 0382
North America	+1 703 527 3887
Central America	+52 55 8526 4930
South America	+55 11 4349 1359
Asia, India, and Oceania	+65 3163 8374

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP) Skin Sens. 1: May cause an allergic skin reaction
Eye Irrit. 2: Causes serious eye irritation
STOT SE 3: May cause respiratory irritation
Carc. 1B: May cause cancer
STOT RE 1: Causes damage to organs through prolonged or repeated exposure
Aquatic Chronic 3: Harmful to aquatic life with long lasting effects

2.2 Label elements

Product Name According to Regulation (EC) No. 1272/2008 (CLP)
MWCNT

Hazard Pictogram(s)



Signal Word(s) Danger

Hazard Statement(s) H317: May cause an allergic skin reaction
H319: Causes serious eye irritation
H335: May cause respiratory irritation
H350i: May cause cancer
H372: Causes damage to organs through prolonged or repeated exposure
H412: Harmful to aquatic life with long lasting effects

Precautionary Statement(s) P260: Do not breathe dust/fume.
P264: Wash hands thoroughly after handling.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection.
P312: Call a POISON CENTER or doctor if you feel unwell.

P318: if exposed or concerned, get medical advice.
P319: Get medical help if you feel unwell.
P302 + P352 + P333 + P313: IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313: If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

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.

2.4 Additional Information

Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Hazardous ingredient(s)	CAS No.	EC No.	%W/W	Hazard Statement(s)
Nickel Doped Multi-Walled Carbon Nanotubes Index number: 006-104-00-2	N/A	Not available.	≤ 100	Skin Sens. 1 H317 Eye Irrit. 2 H319 STOT SE 3 H335 Carc. 1B H350i STOT RE 1 H372 (lung, inhalation) Aquatic Chronic 3 H412

3.2 Mixtures

Not applicable.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Advice First aiders should ensure they have taken adequate steps to protect themselves from exposure (see Section 8 for recommended personal protection equipment). Show this safety data sheet 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 present and easy to do. Continue rinsing.

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 delayed, are included on labelling (Section 2.2) and in Section 11.

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

5.2 Special hazards arising from the substance or mixture

Nickel/nickel oxides
Carbon oxides

5.3 Advice for firefighters

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Sweep up spilled substance - avoid making dust. Use vacuum equipment for collecting spilt materials, where practicable. Dispose of contents in accordance with local, state or national legislation.

6.4 Reference to other sections

See Also Section 8, 13.

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 workday.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature

Store in a well-ventilated place. Keep container tightly closed.

Storage life

Ambient.

Incompatible materials

Stable under normal conditions.

7.3 Specific end use(s)

None known.

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
8.1.1 Occupational Exposure Limits

UK – EH40 Workplace Exposure Limits (WEL).

Occupational Exposure Limits

SUBSTANCE.	CAS No.	LTCL (8 hr TWA ppm)	LTCL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Nickel and its inorganic compounds: nickel and water-insoluble nickel compounds (as Ni)	N/A		0.5			

Region

Source

EU

EU Occupational Exposure Limits

United Kingdom

UK Workplace Exposure Limits EH40/2005 (Third edition, published 2018)

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 protection 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 have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 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-place.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls.

Thermal hazards

None known.

8.2.3. Environmental Exposure Controls

Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State

Solid: Powder.

Colour

Black.

Odour

Not known.

Odour threshold

Not known.

Melting point/freezing point

Not known.

Initial boiling point and boiling range

Not known.

Flammability

Not known.

Lower and upper explosion limit

Not known.

Flash Point

Not known.

Auto-ignition temperature (°C)

Not known.

Decomposition temperature (°C)

Not known.

pH

Not known.

Kinematic viscosity

Not known.

Solubility(ies)

Solubility (Water): Not known.

Solubility (Other): Not known.

Partition coefficient: n-octanol/water (log value)

Not known.

Vapour pressure

Not known.

Density

Not known.

Relative density

Not known.

Relative vapour density

Not known.

Particle characteristics

Not known.

9.2 Other information

None.

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

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - Ingestion	No data available.
Acute toxicity - Skin Contact	No data available.
Acute toxicity - Inhalation	No data available.
Skin corrosion/irritation	No data available.
Serious eye damage/irritation	No data available.
Skin sensitization data	No data available.
Respiratory sensitization data	No data available.
Germ cell mutagenicity	No data available.
Carcinogenicity	No data available.
Reproductive toxicity	No data available.
Lactation	No data available.
STOT - single exposure	No data available.
STOT - repeated exposure	No data available.
Aspiration hazard	No data available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties	None known.
11.2.2. Information on other hazards	None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity - Aquatic invertebrates	No data available.
Toxicity - Fish	No data available.
Toxicity - Algae	No data available.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.

12.2 Persistence and Degradation

Not known.

12.3 Bioaccumulative potential

Not known.

12.4 Mobility in soil

Not known.

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.

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 licensed recycler, reclaimer or incinerator.

13.2 Additional Information

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

SECTION 14: TRANSPORT INFORMATION

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

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

European Regulations - Authorisations and/or Restrictions On Use

Candidate List of Substances of Very High Concern for Authorisation	Not listed
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REACH: ANNEX XIV list of substances

subject to authorisation	Not listed
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REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Not listed
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Community Rolling Action Plan (CoRAP)	Not listed
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Regulation (EC) N° 850/2004 of the European Parliament and of the Council on persistent organic pollutants	Not listed
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Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer	Not listed
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Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of hazardous chemicals	Not listed
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National regulations

Other	Not known.
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15.2 Chemical Safety Assessment

A REACH chemical safety assessment has not been carried out.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements:

LEGEND
Acronyms

ADN : European Agreement concerning 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
 CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
 DNEL : Derived No Effect Level
 EC : European Community
 EINECS : European Inventory of Existing Commercial Chemical Substances
 IATA : International Air Transport Association
 IBC : Intermediate Bulk Container
 ICAO : International Civil Aviation Organization
 IMDG : International Maritime Dangerous Goods
 LTEL : Long term exposure limit
 PBT : Persistent, Bioaccumulative and Toxic
 PNEC : Predicted No Effect Concentration
 REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals
 RID : Regulations concerning the International Carriage of Dangerous Goods by Rail
 STEL : Short term exposure limit
 STOT : Specific Target Organ Toxicity
 UN : United Nations
 vPvB : very Persistent and very Bioaccumulative

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