

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

1.1. Product identifier

Product form	: Substance
Trade name	: TUBALL
Chemical name	: Carbon Nanotubes
IUPAC name	: Carbon Nanotubes
CAS No	: 308068-56-6
REACH registration No	: Not yet available

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

1.2.1. Relevant identified uses

Use of the substance/mixture : The additive used for producing lithium-ion batteries, composites, rubbers, transparent conductive coatings, and other materials.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer:

PHT
24, Inzhenernaya str., Novosibirsk,
630090, Russia
Telephone number: +7 383 201 83 87 (09.00-18.00, Novosibirsk time)
Email: russia@ocsial.com

Supplier:

Europe:
OCSiAl Ltd
207 Regent Street
W1B 3HH London
T +44 20 3126 4860
europe@ocsial.com

Asia:
OCSiAl Ltd
33F Trade Tower WTC
Seoul 135-729, South Korea
T +82 50 8113 6959
asiapacific@ocsial.com

USA:
OCSiAl LLC
1804 Embarcadero Rd., Suite 202
Palo Alto, California 94303, USA
T +1 415 906 5271
usa@ocsial.com

1.4. Emergency telephone number

Europe:
+44 20 3126 4860
09.00-17.00 GMT

Asia:
+82 50 8113 6959
01.00-09.00 GMT

USA:
+1 415 906 5271
09.00-17.00 GMT

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Eye Irrit. 2 H319
STOT SE 3 H335

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Xi; R36/37

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) : Warning

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according to Regulation (EC) No. 453/2010

Hazard statements (CLP)	: H319 - Causes serious eye irritation H335 - May cause respiratory irritation
Precautionary statements (CLP)	: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray P264 - Wash hands thoroughly after handling P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective gloves/protective clothing/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

2.3. Other hazards

PBT: not yet assessed
vPvB: not yet assessed

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Carbon Nanotube Single-walled below 2 nm (diameter), > 1 micron (length)	(CAS No) 308068-56-6 (REACH-no) Not yet available	65 - 95	Xi; R36/37
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Carbon Nanotube Single-walled below 2 nm(diameter), > 1 micron (length)	(CAS No) 308068-56-6 (REACH-no) Not yet available	65 - 95	Eye Irrit. 2, H319 STOT SE 3, H335

Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	: Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Powder, alcohol-resistant foam, water spray, carbon dioxide.
Unsuitable extinguishing media	: None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: None known.
Explosion hazard	: None known.
Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters

Protective equipment for firefighters	: In case of fire: Wear self-contained breathing apparatus.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear suitable protective clothing.
Emergency procedures	: Avoid formation of dust. Avoid contact with skin, eyes and clothes. Ensure adequate ventilation. Evacuate area.

6.1.2. For emergency responders

Protective equipment	: Wear suitable protective clothing, gloves and eye/face protection.
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Emergency procedures : Provide adequate ventilation. Evacuate area. Avoid generation of dust. Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6.3. Methods and material for containment and cleaning up

For containment : Sweep up, shovel or vacuum. Avoid generation of dust.
Methods for cleaning up : Use approved industrial vacuum cleaner for removal. Avoid generation of dust. Collect in closed containers for disposal.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : None known.
Precautions for safe handling : Avoid contact with skin, eyes and clothes. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide adequate ventilation to minimize dust concentrations.
Storage duration : 3 years.
Storage conditions : Store in dry, cool, well-ventilated area. Keep container tightly closed.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Gloves. Protective clothing. Dust production: dust mask with filter type P1.



Materials for protective clothing : Wear suitable protective clothing. Wear chemical resistant protective clothing (EN 14605) and protective shoes (S1P or S3).
Hand protection : Wear suitable gloves tested to EN374.
Skin and body protection : Safety glasses with face shield. DIN EN 14605.
Respiratory protection : Dust production: dust mask with filter type P1. half-mask with filter according to EN 149. Use multi-purpose combination (US) or type ABEK (EN) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Powder.
Colour : Black.
odour : Odourless.
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available

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Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1,7 - 1,9 g/cm ³
Solubility	: insoluble in: Water. organic solvents.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content : < 5 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Thermal combustion may release carbon monoxide and dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

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12.5. Results of PBT and vPvB assessment

TUBALL (308068-56-6)

PBT: not yet assessed

vPvB: not yet assessed

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Dispose of this material and its container to hazardous or special waste collection point.

Waste treatment methods : Disposal through controlled incineration or authorised waste dump.

Sewage disposal recommendations : Prevent entry to sewers and public waters.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

No dangerous good in sense of transport regulations

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

14.6.4. Inland waterway transport

No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

VOC content : < 5 %

Seveso Information :

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

CSA has not been established

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according to Regulation (EC) No. 453/2010

SECTION 16: Other information

Other information

: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. It is the user's responsibility to take the mentioned precautionary measures and to ensure that this information is complete and sufficient for the use of this product.

Full text of R-, H- and EUH-phrases:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H319	Causes serious eye irritation
H335	May cause respiratory irritation
R36/37	Irritating to eyes and respiratory system
Xi	Irritant

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product