

SECTION 1: Identification of the substance or mixture and of the supplier

1.1. Product identifier

Product form : Mixture
Generic name : TUBALL MATRIX 610
Type of product : Nanoform embedded in a matrix

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

Recommended use : Industrial use as additive in polymers, resins and/or coatings

1.3. Details of the supplier of the safety data sheet

Supplier

China:
OCSiAl Hong Kong Limited
No. 1102, 11/F, Lippo Sun
Plaza, 28 Canton Road,
Tsim Sha Tsui, Kowloon,
Hong Kong
T +852 3575 3946
09:00-17:00; GMT+8
china@ocsial.com

1.4. Emergency telephone number

EMEA : +44 1865 407333 (English) (Carechem 24)
East/South East Asia : +65 3158 1074 (English, Hindi, Japanese, Korean, Malay, Mandarin) (Carechem 24)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to MOI notification B.E. 2555 (2012)

Not classified as a hazardous chemical

2.2. Label elements

Labelling according to MOI notification B.E. 2555 (2012)

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Severely refined paraffinic mineral oils	Trade Secret	85.5
Olefin polymer	Trade Secret	9.5
Single wall carbon nanotubes*	N/A	5

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According to the MOI Notification B.E. 2555 (2012)

Comments : * Single wall carbon nanotubes TUBALL™

SECTION 4: First aid measures

4.1. Description of necessary first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth out with water. Do not induce vomiting. If you feel unwell, seek medical advice.

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

Symptoms/effects	: Excessive exposure may lead to burning sensation in the mouth and throat, salivation, nausea, abdominal pain, vomiting, and diarrhoea.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause moderate irritation, including burning sensation, tearing, redness or swelling.

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

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Fire fighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam.
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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	: Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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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	: Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Provide adequate ventilation. Evacuate area.

6.2. Environmental precautions

Avoid release to the environment. Do not allow to enter into surface water or drains. Collect contaminated extinguishing water separately and must not enter the sewage system.

6.3. Methods and materials for containment and cleaning up

For containment	: Clean spills promptly. Ventilate affected area. Stop leak if safe to do so.
Methods for cleaning up	: Mechanically recover the product. Clear up rapidly by scoop or vacuum. Collect in closed container and remove to a safe place for disposal by burning.

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According to the MOI Notification B.E. 2555 (2012)

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.
- Information on mixed storage : Store away from water (including sewage plant).
- Special rules on packaging : Keep container tightly closed.

SECTION 8: Exposure controls / Personal protection equipment

8.1. Control parameters

No additional information available

Exposure limit values for the other components

No additional information available

8.2. Monitoring

No additional information available

8.3. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.

8.4. Personal protective equipment ►

- Hand protection : Chemically resistant protective gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves, Reusable gloves	Nitrile rubber (NBR), Use neoprene or rubber gloves		≥ 0.11		

- Eye protection : Chemical goggles or safety glasses

- Skin and body protection : Protective clothing (with elasticated cuffs and closed neck)

- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment



- Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

- Physical state : Solid
- Appearance : Viscous. Pasty.
- Colour : Black
- Odour : No data available
- Odour threshold : No additional information available
- pH : No additional information available
- Melting point, Freezing point : Freezing point: Not applicable
- Boiling point : No data available
- Flash point : Not applicable
- Auto-ignition temperature : Not applicable
- Flammability : Non flammable.
- Vapour pressure : No additional information available

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Evaporation rate	: No additional information available
Explosive limits	: Not applicable
Explosive properties	: No data available
Minimum ignition energy	: No data available
Solubility	: No additional information available
Density	: No additional information available
Relative density	: No additional information available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available

SECTION 10: Stability and reactivity

Chemical stability	: Stable under normal conditions.
Conditions to avoid	: None under recommended storage and handling conditions (see section 7).
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Incompatible materials	: Strong oxidizing agents. Acids. Bases.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

Single wall carbon nanotubes

NOAEL (animal/female, F0/P)	no adverse effects seen at highest dose tested > 1000 mg/kg bw/day - OECD 422
NOAEL (animal, F1)	> 1000 mg/kg bw/day - for adverse effects on prenatal development (conceptus to birth) - OECD 422
NOAEL (animal, F1)	> 1000 mg/kg bw/day - for adverse effects on postnatal development (pup) - OECD 422
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

Single wall carbon nanotubes

NOAEL (oral, rat, 90 days)	no adverse effects seen at highest dose tested > 1000 mg/kg bodyweight/day - OECD 422
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Aspiration hazard	: Not classified
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SECTION 12: Ecological information

12.1. Ecotoxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

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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

12.5. Other adverse effects

Ozone : Not classified
Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Prevent entry to sewers and public waters.
Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information : Clean up even minor leaks or spills if possible without unnecessary risk.

SECTION 14: Transport information

IMDG	IATA	UNRTDG
14.1. UN number		
Not regulated for transport		
Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name		
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

UN RTDG

No data available

IMDG

No data available

IATA

No data available

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According to the MOI Notification B.E. 2555 (2012)

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 specific for the product in question

Other relevant regulations

Thailand Existing Chemicals Inventory (DIW)	Applicable	Severely refined paraffinic mineral oils
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15.2. International agreements

No additional information available

SECTION 16: Other information

Version : 1.1
Issue date : 09/01/2023
Revision date : 11/05/2023

Abbreviations and acronyms : ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
WGK - Water Hazard Class
OEL - Occupational Exposure Limit
EN - European Standard
CAS-No. - Chemical Abstract Service number
IOELV - Indicative Occupational Exposure Limit Value
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
EC-No. - European Community number
N.O.S. - Not Otherwise Specified
vPvB - Very Persistent and Very Bioaccumulative
TLM - Median Tolerance Limit
NOAEL - No-Observed Adverse Effect Level
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
PNEC - Predicted No-Effect Concentration
BLV - Biological limit value
NOEC - No-Observed Effect Concentration
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
LOAEL - Lowest Observed Adverse Effect Level
NOAEC - No-Observed Adverse Effect Concentration
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
DMEL - Derived Minimal Effect level
LD50 - Median lethal dose
OECD - Organisation for Economic Co-operation and Development
DNEL - Derived-No Effect Level
IARC - International Agency for Research on Cancer
EC50 - Median effective concentration
IATA - International Air Transport Association
IMDG - International Maritime Dangerous Goods
LC50 - Median lethal concentration
PBT - Persistent Bioaccumulative Toxic
SDS - Safety Data Sheet
STP - Sewage treatment plant
ATE - Acute Toxicity Estimate

Full text of H-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
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According to the MOI Notification B.E. 2555 (2012)

Full text of H-statements:	
H319	Causes serious eye irritation

Revision : All recent revision(s) are noted by a bold triangle pointed to right '►'.

Disclaimer : 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 mentioned precaution measures and ensure that this information is complete and sufficient for the use of this product.

Safety Data Sheet (SDS), Thailand

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.