

## 1. Chemical product and company identification ▶

Substance name : TUBALL COAT\_E H2O 0.2% (NIS) beta  
 Type of product : Nanoform embedded in a matrix

### Company information

#### Supplier

東京都千代田区内神田 1-11-13

楠本化成株式会社

Japan:

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#### Emergency phone number

EMEA : +44 1865 407333 (English) (Carechem 24)

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

## 2. Hazards identification

### GHS classification

Physical hazards	Explosives	classification not possible
	Flammable gases	No classification
	aerosol	classification not possible
	Oxidizing gases	No classification
	Gases under pressure	No classification
	Flammable liquids	classification not possible
	Flammable solids	No classification
	Self-reactive substances and mixtures	classification not possible
	Pyrophoric liquids	classification not possible
	Pyrophoric solids	No classification
	Self-heating substances and mixtures	classification not possible
	Substances and mixtures which in contact with water emit flammable gases	classification not possible
	Oxidizing liquids	classification not possible
	Oxidizing solids	No classification
	Organic peroxides	classification not possible
	Corrosive to metals	classification not possible
	Desensitized explosives	classification not possible
Health hazards	Acute toxicity (oral)	classification not possible
	Acute toxicity (dermal)	classification not possible
	Acute toxicity (inhalation:gas)	classification not possible
	Acute toxicity	classification not possible

	(inhalation:vapours)	
	Acute toxicity (inhalation:dust/mist)	classification not possible
	Skin corrosion/irritation	classification not possible
	Serious eye damage/eye irritation	classification not possible
	Respiratory sensitization	classification not possible
	Skin sensitization	classification not possible
	Germ cell mutagenicity	classification not possible
	Carcinogenicity	classification not possible
	Reproductive toxicity	classification not possible
	Specific target organ toxicity (single exposure)	classification not possible
	Specific target organ toxicity (repeated exposure)	classification not possible
	Aspiration hazard	classification not possible
Environmental hazards	Hazardous to the aquatic environment, short-term (acute)	classification not possible
	Hazardous to the aquatic environment, long-term (chronic)	classification not possible
	Hazardous to the ozone layer	classification not possible

### 3. Composition/information on ingredients ►

Distinction of substance or mixture : Mixture

Generic name : TUBALL COAT\_E H2O 0.2% (NIS) beta

Name	Concentration (%)	Formula	Reference number in the gazette list		CAS-No.
			CSCL No.	ISHL No.	
Water	96.6 - 98.3	H2O	-	-	7732-18-5
Oxirane, methyl-, polymer with oxirane	1.5 - 3	-	-	-	Trade secret
Single wall carbon nanotubes*	0.2 - 0.4	C	-	-	N/A

Comments : \* Single wall carbon nanotubes TUBALL™.  
Judging by the carbon content of the carbon nanotubes (CNTs), carbon nanotubes do not fall under the new chemical substance inventory of the Chemical Substances Control Law.

### 4. First aid measures

#### 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 eyes with water as a precaution.

First-aid measures after ingestion : Rinse mouth out with water.  
Get medical advice/attention.

#### Notes to physician

Other medical advice or treatment : Treat symptomatically.

## 5. Fire fighting measures

Suitable extinguishing media : Water spray, Dry powder, Foam, Carbon dioxide

Unsuitable extinguishing media : None known

Fire hazard : Not applicable.

Explosion hazard : Not applicable.

Hazardous decomposition products in case of fire : Toxic fumes may be released

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

## 6. Accidental release measures

### Personal Precautions, Protective Equipment and Emergency Procedures

#### For non-emergency personnel

Protective equipment : Wear suitable protective clothing.

Emergency procedures : Ventilate spillage area.

#### 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.  
Avoid contact with skin, eyes and clothing.  
Evacuate area.

#### Environmental precautions

Environmental precautions : Avoid release to the environment.

#### Methods and Equipment for Containment and Cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

## 7. Handling and storage

### Handling

Technical measures : No data available

Precautions for safe handling : Ensure good ventilation of the work station.  
Wear personal protective equipment.

Prevents handling of incompatible substances or mixtures : No data available

Hygiene measures : Do not eat, drink or smoke when using this product.  
Always wash hands after handling the product.

### Storage ►

Storage conditions : Store in a well-ventilated place.  
Keep cool.

Material used in packaging/containers : No data available

Incompatible products : Strong oxidizing agents. Strong acids.

Special rules on packaging : Keep container tightly closed.  
Storage temperature : > 5 ° C

## 8. Exposure controls / Personal protection equipment ►

### Single wall carbon nanotubes

#### Japan – Occupational Exposure Limits

Exposure limits (JSOH)	【Occupational exposure limits for dusts】 (Class 1) Respirable dust 0.5mg/m3 Total dust 2mg/m3
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Appropriate engineering controls : Ensure good ventilation of the work station

#### Protective equipment

Personal protective equipment : Safety glasses, Protective clothing, Gloves

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

Hand protection : Protective gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)		>0.18		
	Polyvinylchloride (PVC)				
	Neoprene rubber				

Eye protection : Safety glasses

Skin and body protection : Wear suitable protective clothing

Personal protective equipment symbol(s)



Environmental exposure controls : Avoid release to the environment.

## 9. Physical and chemical properties

Physical state : Liquid  
Colour : Black  
Odour : Odourless  
pH : No data available  
Melting point : Not applicable  
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  
Flammability (solid, gas) : Not applicable  
Vapour pressure : No data available  
Relative density : No data available  
Density : No data available  
Relative gas density : No data available  
Solubility : No data available  
Partition coefficient n-

octanol/water (Log Pow)

Explosive limits (vol %) : No data available

Viscosity, kinematic : No data available

## 10. Stability and reactivity

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use.

Conditions to avoid : None under recommended storage and handling conditions (see section 7).

Incompatible materials : Strong oxidizing agents. Strong acids.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information ►

Acute toxicity (oral) : classification not possible

Acute toxicity (dermal) : classification not possible

Acute toxicity (inhalation) : classification not possible (gas)  
classification not possible (Vapour)  
classification not possible (dust, mist)

### Oxirane, methyl-, polymer with oxirane

LD50 oral rat	> 2000 mg/kg
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Skin corrosion/irritation : classification not possible

Serious eye damage/irritation : classification not possible

Respiratory sensitization : classification not possible

Skin sensitization : classification not possible

Germ cell mutagenicity : classification not possible

Carcinogenicity : classification not possible

Reproductive toxicity : classification not possible

### Single wall carbon nanotubes

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

STOT-repeated exposure : classification not possible

### 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 : classification not possible

### Single wall carbon nanotubes

Viscosity, kinematic	Not applicable
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## 12. Ecological information ►

### 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) : classification not possible  
 Hazardous to the aquatic environment, long-term (chronic) : classification not possible

Oxirane, methyl-, polymer with oxirane	
LC50 fish - 96h	> 100 mg/l <i>Leuciscus idus</i> (golden orfe)
EC50 crustacea - 48h	> 100 <i>Daphnia magna</i> (Water flea)
EC50 algae - 72h	> 100 mg/l

#### Persistence and degradability

TUBALL COAT_E H2O 0.2% (NIS) beta	
Persistence and degradability	No data available
Single wall carbon nanotubes	
Not rapidly degradable	

#### Bioaccumulative potential

TUBALL COAT_E H2O 0.2% (NIS) beta	
Bioaccumulative potential	No data available

#### Mobility in soil

TUBALL COAT_E H2O 0.2% (NIS) beta	
Mobility in soil	No data available

#### Hazardous to the ozone layer

Ozone : classification not possible  
 Other adverse effects : No additional information available

### 13. Disposal considerations ►

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.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Ecology - waste materials : Avoid release to the environment.

Regional legislation (waste) : Disposal must be done according to official regulations.

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

### 14. Transport information

#### International Regulations

##### Overland transport (UN RTDG)

UN-No. (UN RTDG) : Not applicable  
 Proper Shipping Name (UN RTDG) : Not applicable  
 Packing group (UN RTDG) : Not applicable  
 Transport hazard class(es) (UN RTDG) : Not applicable

#### Regulations in Japan

Other information : No supplementary information available

### 15. Regulatory information

#### National law

Law Relating to Prevention of Marine Pollution and Maritime Disasters : Harmless Substances (Enforcement Order, Art. Appended Table 1-2)

Foreign Exchange and Foreign : Export Trade Control Order, Appended Table 1, Para.16

Trade Control Act

Single walled carbon nanotubes are listed with its element  
"Carbon" ; others are all listed

## 16. Other information

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

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.

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