TUBALL MATRIX 207

Safety Data Sheet

In accordance with the Regulation on Safety Data Sheets Regarding Hazardous Substances and Mixtures published in the Official Journal numbered 29204 on December 13, 2014
Issue date: 6/7/2021 Revision date: 6/9/2022 Version: 2.1

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

1.1. Product identifier ►

Product form	:Mixture
Trade name	:TUBALL MATRIX 207
Type of product	:Nanoform embedded in a matrix

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

Use of the substance/mixture	:	Industrial use as additive in polymers, resins and/or coatings

1.3. Details of the supplier of the safety data sheet ►

Supplier
Europe:
OCSiAl Europe S.a.r.l.
L-3364, Leudelange,
1, rue de la Poudrerie,
Grand Duchy of
Luxembourg
T +352 27 99 03 73
09.00-17.00 GMT+2
europe@ocsial.com

1.4. Emergency telephone number ►

Europe:
+352 27 99 03 73
09.00-17.00; GMT+2

Türkiye:
Acil: 112
Ulusal Zehir Merkezi
(UZEM): 114

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (OG) 11.12.2013 - 28848 [SEA]

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects	:	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

2.2. Label elements

Classification according to Regulation (OG) 11.12.2013 - 28848 [SEA]

Hazard pictograms (SEA) :

GHS07

Signal word (SEA)	:	Warning
Hazardous ingredients	:	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.

Hazard statements (SEA) : H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.

Precautionary statements (SEA) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face with soap and water thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - IF ON SKIN: Wash with plenty of water/…
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 - Specific treatment (see on this label).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards not contributing to the classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (OG) 11.12.2013 - 28848 [SEA]
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	(CAS-No.) 68609-97-2 (EC-No.) 271-846-8 (EC-No.) 603-103-00-4	90	Skin Irrit. 2, H315 Skin Sens. 1, H317
Single wall carbon nanotubes*	(EC-No.): 943-098-9	10	Eye Irrit. 2, H319

Comments : * Single wall carbon nanotubes TUBALL™

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of 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. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

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. Get medical advice/attention.

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

Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction. Irritation.

Symptoms/effects after eye contact : Causes serious eye irritation. Eye irritation.

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	:	Water spray. Dry powder. Foam.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture ►

Fire hazard	:	Flammable vapours can accumulate in head space of closed systems. Residue may be flammable and explosive.
Explosion hazard	:	May form flammable/explosive vapour-air mixture.
Hazardous decomposition products in case of fire	:	Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters ►

Firefighting instructions	:	Do not enter fire area without proper protective equipment, including respiratory protection. Eliminate all ignition sources if safe to do so. Evacuate area.
Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

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. Avoid inhalation of vapours.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	:	Mechanically recover the product.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections ►

For disposal of contaminated materials refer to section 13 : "Disposal considerations". For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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.
Incompatible products : Oxidizing agent.
Heat and ignition sources : Keep away from open flames, hot surfaces and sources of ignition.
Information on mixed storage : Store away from water (including sewage plant).
Special rules on packaging : Keep only in original container. Keep container tightly closed.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs. (68609-97-2)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	1 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	3.6 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0.5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.87 mg/m³
Long-term - systemic effects, dermal	0.5 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.106 mg/l
PNEC aqua (marine water)	0.011 mg/l
PNEC aqua (intermittent, freshwater)	0.072 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	307.16 mg/kg dwt
PNEC sediment (marine water)	30.72 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l

Single wall carbon nanotubes	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	No hazard identified
Acute - systemic effects, inhalation	Low hazard (no threshold identified)
Acute - local effects, dermal	No hazard identified
Acute - local effects, inhalation	Low hazard (no threshold identified)
Long-term - systemic effects, dermal	No hazard identified
Long-term - local effects, dermal	No hazard identified
Long-term - local effects, inhalation	Low hazard (no threshold identified)

Single wall carbon nanotubes	
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	No hazard identified
Acute - systemic effects, inhalation	Low hazard (no threshold identified)
Acute - systemic effects, oral	No hazard identified
Acute - local effects, dermal	No hazard identified
Acute - local effects, inhalation	No hazard identified
Long-term - systemic effects, dermal	No hazard identified
Long-term - local effects, dermal	No hazard identified
Long-term - local effects, inhalation	No hazard identified
PNEC (Water)	
PNEC aqua (freshwater)	No hazard identified
PNEC aqua (marine water)	No hazard identified
PNEC (Sediment)	
PNEC sediment (freshwater)	No hazard identified
PNEC sediment (marine water)	No hazard identified
PNEC (Soil)	
PNEC soil	No hazard identified
PNEC (Oral)	
PNEC oral (secondary poisoning)	No potential to cause toxic effects if accumulated (in higher organisms) via the food chain
PNEC (STP)	
PNEC sewage treatment plant	No data available: testing technically not feasible

8.2. Exposure controls ►

Appropriate engineering controls : Ensure good ventilation of the work station.
Personal protective equipment : Gloves. Safety glasses. Protective clothing.
Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Chemically resistant protective gloves.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves, Disposable gloves	Butyl rubber		>0.18		
Reusable gloves, Disposable gloves	Nitrile rubber (NBR)		>0.18		
Reusable gloves, Disposable gloves	Neoprene rubber (HNBR)		>0.18		

Eye protection : Chemical goggles or safety glasses. Emergency eye wash fountain with clean water. Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : In case of inadequate ventilation wear respiratory protection. Selection of respiratory protection must be based on the result of the risk assessment

Personal protective equipment symbol(s)

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
Appearance	:	Flakes. Pasty.
Colour	:	Black
Odour	:	Slight
Odour threshold	:	No data available
pH	:	No data available
pH solution	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	> 200 °C (Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.)
Freezing point	:	Not applicable
Boiling point	:	No data available
Flash point	:	142 °C (Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.)
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	> 200 °C (Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.)
Flammability (solid, gas)	:	Non flammable.
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

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

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

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs. (68609-97-2)	
LD50 oral rat	> 26.8 g/kg
LD50 dermal rabbit	> 4000 nl/kg
LC50 Inhalation - Rat	> 0.15 mg/l - 7 Hours

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
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

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs. (68609-97-2)	
LOAEL (dermal, rat/rabbit, 90 days)	10 mg/kg bodyweight/day
NOAEL (dermal, rat/rabbit, 90 days)	1 mg/kg bodyweight/day

Single wall carbon nanotubes	
NOAEL (oral, rat, 90 days)	no adverse effects seen at highest dose tested > 1000 mg/kg bodyweight/day - OECD 422

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

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

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs. (68609-97-2)	
LC50 fish - 96h	> 100 mg/l Oncorhynchus mykiss (Rainbow trout) - OECD 203
EC50 crustacea - 48h	7.2 mg/l Daphnia magna (Water flea) - OECD 202
EC50 algae - 72h	843.75 mg/l Selenastrum capricornutum - OECD 201

12.2. Persistence and degradability

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs. (68609-97-2)	
Persistence and degradability	Readily biodegradable.
Biodegradation	87 % - 28 days - OECD 301F

12.3. Bioaccumulative potential

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs. (68609-97-2)	
Partition coefficient n-octanol/water (Log Pow)	> 3.77 (20 °C) - OECD 107

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs. (68609-97-2)	This substance/mixture does not meet the PBT criteria according to the Regulation on Safety Data Sheets Regarding Hazardous Substances and Mixtures published in the Official Journal numbered 29204 on December 13, 2014 This substance/mixture does not meet the vPvB criteria according to the Regulation on Safety Data Sheets Regarding Hazardous Substances and Mixtures published in the Official Journal numbered 29204 on December 13, 2014
Single wall carbon nanotubes	This substance/mixture does not meet the PBT criteria according to the Regulation on Safety Data Sheets Regarding Hazardous Substances and Mixtures published in the Official Journal numbered 29204 on December 13, 2014 This substance/mixture does not meet the vPvB criteria according to the Regulation on Safety Data Sheets Regarding Hazardous Substances and Mixtures published in the Official Journal numbered 29204 on December 13, 2014

12.6. Other adverse effects

Ozone : Not classified
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 at hazardous or special waste collection point. Disposal must be done according to official regulations.
Waste Management Regulation published in the Official Journal numbered 29314 on April 2, 2015.
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.
European List of Waste (LoW) code : 06 13 99 - wastes not otherwise specified

SECTION 14: Transport information

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

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

14.6. Special precautions for user

Overland transport
No data available

Transport by sea
No data available

Air transport
No data available

Inland waterway transport
No data available

Rail transport
No data 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. National regulations

Local regulations (Turkey) : Regulation on Transportation of Dangerous Goods by Road published in the Official Journal numbered 28801 on October 24, 2013
Personal Protective Equipment Regulation published in the Official Journal numbered 30761 on May 1, 2019
Regulation on Use of Personal Protective Equipments in Workplaces published in the Official Journal numbered 28695 on July 2, 2013
Occupational Health and Safety Regulation published in the Official Journal numbered 25311 on December 9, 2003
Regulation on Test Methods that will be Applied to Determine the Physicochemical, Toxicological and Ecotoxicological Properties of Substances and Mixtures published in the Official Journal numbered 28848 on December 11, 2013
Regulation on Health and Safety Precautions When Working with Chemical Substances published in the Official Journal numbered 28733 on August 12, 2013
Regulation on Health and Safety Precautions When Working with Carcinogenic and Mutagenic Substances published in the Official Journal numbered 28730 on August 6, 2013.

This product doesn't contain any substances that is controlled or prohibited for use according to the Regulation on Ozone Depleting Substances published in the Official Journal numbered 30031 on April 7, 2017.

Substance(s) are not subject to Regulation on Persistent Organic Pollutants (O.G. 14.11.2018-30595)

SECTION 16: Other information

Abbreviations and 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
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit

Abbreviations and acronyms	
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class
BCF	Bioconcentration factor
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
IARC	International Agency for Research on Cancer
OECD	Organisation for Economic Co-operation and Development
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
N.O.S.	Not Otherwise Specified

Data sources : ECHA (European Chemicals Agency). Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.

Full text of H- and EUH-statements	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
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), Turkey

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.