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

1.1. Product identifier

Product Form : Mixture
Product Name : Nylon W

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 : MarkForged 3D printing material

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Company
MarkForged, Inc
85 School St
Watertown MA 02472
T: 844-700-1035 (9:00 A.M to 6:00 P.M. EST)
support@markforged.com
www.markforged.com

1.4. Emergency telephone number

Emergency number : +1 703-741-5970 / 1-800-424-9300 (Chemtrec)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification According to Regulation (EC) No. 1272/2008 [CLP]
Not classified

2.2. Label elements

Labelling According to Regulation (EC) No. 1272/2008 [CLP]
No labelling applicable

2.3. Other hazards

Other hazards not contributing to the classification : Exposure may agravate pre-existing eye, skin, or respiratory conditions. There is the risk of thermal burns on contact with hot or molten material. Irritating fumes may be given off during processing or normal conditions of use, ensure adequate ventilation. Fibers are not expected to be released under normal conditions of use. If the product is altered outside of its intended use, and dust is formed, proper precautions should be taken to ensure material is not respirated. Product contains ingredients that are combustible dusts. Under normal conditions of use, this product is not expected to generate dust, however, if dust is generated take appropriate precautions for a combustible dust hazard - do not generate dust during clean-up, use non-sparking tools, vacuum cleanup is preferred however utilize dust suppressants if necessary, do not allow dust to accumulate in the workplace, utilize proper ventilation systems with explosion relief valves.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification According to Regulation (EC) No. 1272/2008 [CLP]
Titanium dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5	0,3 - 1,2	Not classified
.epsilon.-Caprolactam	(CAS-No.) 105-60-2 (EC-No.) 203-313-2 (EC Index-No.) 613-069-00-2	< 0,3	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid measures after skin contact : Gently wash with plenty of soap and water. Cool skin rapidly with cold water after contact with molten product. Removal of solidified molten material from skin requires medical assistance.

First-aid measures after eye contact : No health effects expected. If irritation does occur, flush with lukewarm, gently flowing water for 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists. Removal of solidified molten material from the eyes requires medical assistance.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use. Prolonged contact with large amounts of dust may cause mechanical irritation. Risk of thermal burns on contact with molten product.

Symptoms/effects after inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of normal use. Repeated or prolonged exposure to dust particles may result in fibrosis (Pneumoconiosis).

Symptoms/effects after skin contact : Prolonged exposure may cause skin irritation. Risk of thermal burns on contact with molten product.

Symptoms/effects after eye contact : May cause slight irritation to eyes. Risk of thermal burns on contact with molten product.

Symptoms/effects after ingestion : Ingestion may cause adverse effects. Gastrointestinal irritation.

Chronic symptoms : None known. There are no known health effects from the long term use or contact with non-respirable continuous filament fibers, which the type of fiber that is used. Non-respirable fibers cannot reach the deep lung because they have a diameter of greater than 3.5 micrometers. Fibers of this diameter cannot penetrate the narrow, bending passages of the human respiratory tract to reach the lower regions of the lung, and thus have no possibility of causing serious pulmonary damage. They deposit on the surfaces of the upper respiratory tract, nose, or pharynx. These fibers are then cleared through normal physiological mechanisms. If dust or fumes are generated, repeated exposure through inhalation may cause cancer or respiratory diseases.

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

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray, fog, carbon dioxide (CO_2), alcohol-resistant foam, or dry chemical.

Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire. Application of water stream to hot product may cause frothing and increase fire intensity.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not considered flammable but may burn at high temperatures.

Explosion hazard : Product is not explosive. Contains substances that are combustible dusts. If the product is processed and dusts are generated and become dispersed with an ignition source, this may cause a combustible dust explosion. Keep dust levels to a minimum and follow applicable regulations.

Reactivity : Hazardous reactions will not occur under normal conditions.

Hazardous decomposition products in case of fire : Thermal decomposition generates: Carbon oxides (CO, CO_2). Hydrocarbons. Ammonia. amines. Ketones. Hydrogen cyanide. Nitrogen oxides. Nitriles.

5.3. Advice for firefighters

Precautionary measures fire : Exercise caution when fighting any chemical fire.

Firefighting instructions : Use water spray or fog for cooling exposed containers. Do not breathe fumes from fires or vapours from decomposition.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Do not allow run-off from fire fighting to enter drains or water courses. Do not add water to molten material as this may cause spattering.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid prolonged contact with eyes, skin and clothing. Avoid breathing dust. Avoid generating dust.

6.1.1. For non-emergency personnel

Protective equipment : Use appropriate personal protective equipment (PPE).

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams.

Methods for cleaning up : Clean up spills immediately and dispose of waste safely. Recover the product by vacuuming, shoveling or sweeping. Avoid generation of dust during clean-up of spills. For particulates and dust: Vacuum clean-up is preferred. If sweeping is required use a dust suppressant. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to other sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : When processed, the product dust is combustible. Use care during processing to minimize generation of dust. Risk of thermal burns on contact with molten product. Contains a hygroscopic material which can absorb moisture from the air. Avoid temperatures > 315 °C, product decomposes and creates irritating fumes.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid creating or spreading dust. Avoid breathing dust. Avoid prolonged contact with eyes, skin and clothing. Use appropriate personal protective equipment (PPE).

Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep container closed when not in use. Store in a dry, cool and well-ventilated place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible materials : Strong acids, strong bases, strong oxidizers. Moisture.

7.3. Specific end use(s)

MarkForged 3D printing material

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

.epsilon.-Caprolactam (105-60-2)		
EU	IOELV TWA (mg/m³)	10 mg/m³ (dust and vapour)
EU	IOELV STEL (mg/m³)	40 mg/m³ (dust and vapour)
Austria	MAK (mg/m³)	5 mg/m³ (inhalable fraction)

.epsilon.-Caprolactam (105-60-2)		
Austria	MAK Short time value (mg/m³)	40 mg/m³ (inhalable fraction)
Belgium	Limit value (mg/m³)	1 mg/m³ (dust) 10 mg/m³ (vapour)
Belgium	Limit value (ppm)	2,2 ppm (vapour)
Belgium	Short time value (mg/m³)	3 mg/m³ (dust) 40 mg/m³ (vapour)
Belgium	Short time value (ppm)	8,7 ppm (vapour)
Bulgaria	OEL TWA (mg/m³)	1 mg/m³ (dust and vapour)
Bulgaria	OEL STEL (mg/m³)	3 mg/m³ (dust and vapour)
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	10 mg/m³ (dust and vapour)
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	40 mg/m³ (dust and vapour)
Cyprus	OEL TWA (mg/m³)	10 mg/m³ (dust or vapour)
Cyprus	OEL STEL (mg/m³)	40 mg/m³ (dust or vapour)
France	VLE (mg/m³)	40 mg/m³ (indicative limit-powder and vapour)
France	VME (mg/m³)	10 mg/m³ (indicative limit-powder and vapour)
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	5 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-inhalable fraction; dust and vapour)
Gibraltar	Eight hours mg/m3	10 mg/m³ (dust and vapour)
Gibraltar	Short-term mg/m3	40 mg/m³ (dust and vapour)
Greece	OEL TWA (mg/m³)	20 mg/m³ (vapour) 5 mg/m³ (dust)
Greece	OEL TWA (ppm)	5 ppm (vapour)
Greece	OEL STEL (mg/m³)	40 mg/m³ (vapour)
Greece	OEL STEL (ppm)	10 ppm (vapour)
USA ACGIH	ACGIH TWA (mg/m³)	5 mg/m³ (inhalable fraction and vapour)
Italy	OEL TWA (mg/m³)	10 mg/m³ (dust and vapour)
Italy	OEL STEL (mg/m³)	40 mg/m³ (Testing must measure dust and vapour at the same time-dust and vapour)
Latvia	OEL TWA (mg/m³)	10 mg/m³ (dust and vapour)
Spain	VLA-ED (mg/m³)	10 mg/m³ (indicative limit value-dust and vapour)
Spain	VLA-EC (mg/m³)	40 mg/m³ (dust and vapour)
Switzerland	MAK (mg/m³)	5 mg/m³ (inhalable dust)
Netherlands	Grenswaarde TGG 8H (mg/m³)	20 mg/m³ (fume) 1 mg/m³ (dust)
United Kingdom	WEL TWA (mg/m³)	1 mg/m³ (dust only) 10 mg/m³ (dust and vapour)
United Kingdom	WEL STEL (mg/m³)	3 mg/m³ (dust only) 20 mg/m³ (dust and vapour)
Czech Republic	Expoziční limity (PEL) (mg/m³)	1 mg/m³ (dust) 10 mg/m³ (vapour)
Denmark	Grænseværdie (langvarig) (mg/m³)	10 mg/m³ (steam) 1 mg/m³ (dust and powder)
Denmark	Grænseværdie (langvarig) (ppm)	2 ppm (steam)
Estonia	OEL TWA (mg/m³)	5 mg/m³ (dust and fume)
Estonia	OEL STEL (mg/m³)	40 mg/m³ (dust and fume)

.epsilon.-Caprolactam (105-60-2)		
Finland	HTP-arvo (8h) (mg/m³)	10 mg/m³
Finland	HTP-arvo (15 min)	40 mg/m³
Hungary	AK-érték	10 mg/m³
Hungary	CK-érték	40 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	10 mg/m³
Ireland	OEL (15 min ref) (mg/m3)	40 mg/m³
Lithuania	IPRV (mg/m³)	10 mg/m³ (dust and fume)
Lithuania	TPRV (mg/m³)	40 mg/m³ (dust and fume)
Luxembourg	OEL TWA (mg/m³)	10 mg/m³ (powder and vapour)
Luxembourg	OEL STEL (mg/m³)	40 mg/m³ (powder and vapour)
Malta	OEL TWA (mg/m³)	10 mg/m³ (dust and vapour)
Malta	OEL STEL (mg/m³)	40 mg/m³ (dust and vapour)
Norway	Grenseverdier (AN) (mg/m³)	40 mg/m³ (total sum of gas and particulate matter (aerosol) of the substance)
Norway	Grenseverdier (AN) (ppm)	10 ppm (total sum of gas and particulate matter (aerosol) of the substance)
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	60 mg/m³ (total sum of gas and particulate matter (aerosol) of the substance)
Norway	Grenseverdier (Korttidsverdi) (ppm)	15 ppm (total sum of gas and particulate matter (aerosol) of the substance)
Poland	NDS (mg/m³)	5 mg/m³ (vapour and inhalable fraction)
Poland	NDSCh (mg/m³)	15 mg/m³ (vapour and inhalable fraction)
Romania	OEL TWA (mg/m³)	10 mg/m³ (dust and vapour)
Romania	OEL STEL (mg/m³)	40 mg/m³ (dust and vapour)
Slovakia	NPHV (priemerná) (mg/m³)	10 mg/m³ (dust and vapour)
Slovakia	NPHV (Hraničná) (mg/m³)	40 mg/m³ (dust and vapour)
Slovenia	OEL TWA (mg/m³)	10 mg/m³ (dust and vapour)
Slovenia	OEL STEL (mg/m³)	40 mg/m³ (dust and vapour)
Sweden	nivågränsvärde (NVG) (mg/m³)	5 mg/m³ (dust and vapour)
Sweden	kortidsvärde (KTV) (mg/m³)	40 mg/m³ (dust and vapour)
Portugal	OEL TWA (mg/m³)	10 mg/m³ (indicative limit value-inhalable fraction, dust and vapour)
Portugal	OEL STEL (mg/m³)	40 mg/m³ (indicative limit value-dust and vapour)
Portugal	OEL chemical category (PT)	A5 - Not Suspected as a Human Carcinogen

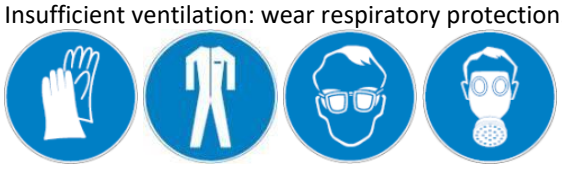
Titanium dioxide (13463-67-7)		
Austria	MAK (mg/m³)	5 mg/m³ (alveolar dust, respirable fraction)
Austria	MAK Short time value (mg/m³)	10 mg/m³ (alveolar dust, respirable fraction)
Belgium	Limit value (mg/m³)	10 mg/m³
Bulgaria	OEL TWA (mg/m³)	10 mg/m³ (respirable dust)
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	10 mg/m³ (total dust) 4 mg/m³ (respirable dust)
France	VME (mg/m³)	10 mg/m³
Greece	OEL TWA (mg/m³)	10 mg/m³ (inhalable fraction) 5 mg/m³ (respirable fraction)
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
Latvia	OEL TWA (mg/m³)	10 mg/m³
Spain	VLA-ED (mg/m³)	10 mg/m³

Titanium dioxide (13463-67-7)		
Switzerland	MAK (mg/m³)	3 mg/m³ (respirable dust)
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ (total inhalable) 4 mg/m³ (respirable)
United Kingdom	WEL STEL (mg/m³)	30 mg/m³ (calculated-total inhalable) 12 mg/m³ (calculated-respirable)
Denmark	Grænseværdie (langvarig) (mg/m³)	6 mg/m³
Estonia	OEL TWA (mg/m³)	5 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	10 mg/m³ (total inhalable dust) 4 mg/m³ (respirable dust)
Ireland	OEL (15 min ref) (mg/m3)	30 mg/m³ (calculated-respirable dust) 12 mg/m³ (calculated)
Lithuania	IPRV (mg/m³)	5 mg/m³
Norway	Grenseverdier (AN) (mg/m³)	5 mg/m³
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	10 mg/m³ (value calculated)
Poland	NDS (mg/m³)	10 mg/m³ (the concentration of the respirable Crystalline silica fraction is determined simultaneously-inhalable fraction)
Romania	OEL TWA (mg/m³)	10 mg/m³
Romania	OEL STEL (mg/m³)	15 mg/m³
Slovakia	NPHV (priemerná) (mg/m³)	5 mg/m³
Sweden	nivågränsvärde (NVG) (mg/m³)	5 mg/m³ (total dust)
Portugal	OEL TWA (mg/m³)	10 mg/m³
Portugal	OEL chemical category (PT)	A4 - Not Classifiable as a Human Carcinogen

8.2. Exposure controls

Appropriate engineering controls : Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Avoid creating or spreading dust. Maintain sufficient mechanical or natural ventilation to assure concentrations remain below PEL/TLV. Use local exhaust if necessary. Power equipment should be equipped with properly designed dust collection devices. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure all national/local regulations are observed.

Personal protective equipment : Not generally required. The use of personal protective equipment may be necessary as conditions warrant. Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for protective clothing : Chemically resistant materials and fabrics.

Hand protection : Wear protective gloves.

Eye and Face Protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Thermal hazard protection : When working with hot material, use suitable thermally protective clothing.

Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	No data available
Odour	:	No data available
Odour threshold	:	No data available
pH	:	No data available
Evapouration rate	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	> 400 °F (> 204,44 °C)
Auto-ignition temperature	:	No data available
Decomposition temperature	:	> 315 °C (> 599 °F)
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	> 1 (Water=1)
Solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Viscosity	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Hazardous reactions will not occur under normal conditions.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight, extremely high or low temperatures, and incompatible materials. Avoid creating or spreading dust.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizers. Moisture.

10.6. Hazardous decomposition products

Thermal decomposition generates: Carbon oxides (CO, CO_2). Nitrogen oxides. Hydrocarbons. Ammonia. Amines. Ketones. Hydrogen cyanide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met)

.epsilon.-Caprolactam (105-60-2)	
LD50 oral rat	1210 mg/kg
LD50 dermal rabbit	1438 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	8,16 mg/l/4h
ATE CLP (dust,mist)	1,50 mg/l/4h

Titanium dioxide (13463-67-7)	
LD50 oral rat	> 10000 mg/kg

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

.epsilon.-Caprolactam (105-60-2)	
IARC group	4

Titanium dioxide (13463-67-7)	
IARC group	2B

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Symptoms/Injuries After Inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of normal use. Repeated or prolonged exposure to dust particles may result in fibrosis (Pneumoconiosis).

Symptoms/Injuries After Skin Contact : Prolonged exposure may cause skin irritation. Risk of thermal burns on contact with molten product.

Symptoms/Injuries After Eye Contact : May cause slight irritation to eyes. Risk of thermal burns on contact with molten product.

Symptoms/Injuries After Ingestion : Ingestion may cause adverse effects. Gastrointestinal irritation.

Chronic Symptoms : None known. There are no known health effects from the long term use or contact with non-respirable continuous filament fibers, which the type of fiber that is used. Non-respirable fibers cannot reach the deep lung because they have a diameter of greater than 3.5 micrometers. Fibers of this diameter cannot penetrate the narrow, bending passages of the human respiratory tract to reach the lower regions of the lung, and thus have no possibility of causing serious pulmonary damage. They deposit on the surfaces of the upper respiratory tract, nose, or pharynx. These fibers are then cleared through normal physiological mechanisms. If dust or fumes are generated, repeated exposure through inhalation may cause cancer or respiratory diseases.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified.

.epsilon.-Caprolactam (105-60-2)	
LC50 fish 1	930 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	> 500 mg/l (Exposure time: 48 h - Species: Daphnia magna Straus)
LC50 fish 2	1400 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	828 - 2920 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

Nylon W	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Nylon W	
Bioaccumulative potential	Not established.

.epsilon.-Caprolactam (105-60-2)	
BCF fish 1	< 1
Log Pow	-0,02

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container in accordance with local, regional, national, and international regulations. Material should be recycled if possible.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.
In accordance with ADR / RID / IMDG / IATA / ADN

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
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

14.6. Special precautions for user

No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 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

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

.epsilon.-Caprolactam (105-60-2)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Titanium dioxide (13463-67-7)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Date of Preparation or Latest Revision : 26/04/2019

Data sources : Information and data obtained and used in the authoring of this safety data sheet could come from database subscriptions, official government regulatory body websites, product/ingredient manufacturer or supplier specific information, and/or resources that include substance specific data and classifications according to GHS or their subsequent adoption of GHS.

Other information : According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Full Text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Indication of Changes

Section	Change	Date Changed	Version
3, 8, 11	Removed ingredient	26/04/2019	1.1

Abbreviations and Acronyms

ACGIH – American Conference of Governmental Industrial Hygienists
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
BCF - Bioconcentration Factor
BEI - Biological Exposure Indices (BEI)
BOD – Biochemical Oxygen Demand
CAS No. - Chemical Abstracts Service Number
CLP – Classification, Labeling and Packaging Regulation (EC) No 1272/2008
COD – Chemical Oxygen Demand
EC – European Community
EC50 - Median Effective Concentration
EEC – European Economic Community
EINECS – European Inventory of Existing Commercial Chemical Substances
EmS-No. (Fire) - IMDG Emergency Schedule Fire
EmS-No. (Spillage) - IMDG Emergency Schedule Spillage
EU – European Union
ErC50 - EC50 in Terms of Reduction Growth Rate
GHS – Globally Harmonized System of Classification and Labeling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC Code - International Bulk Chemical Code
IMDG - International Maritime Dangerous Goods
IPRV - Ilgalaikio Poveikio Ribinis Dydis
IOELV – Indicative Occupational Exposure Limit Value
LC50 - Median Lethal Concentration
LD50 - Median Lethal Dose
LOAEL - Lowest Observed Adverse Effect Level
LOEC - Lowest-Observed-Effect Concentration
Log Koc - Soil Organic Carbon-water Partitioning Coefficient
Log Kow - Octanol/water Partition Coefficient
Log Pow - Ratio of the equilibrium concentration (C) of a dissolved substance in a two-phase system consisting of two largely immiscible solvents, in this
MARPOL - International Convention for the Prevention of Pollution
NDS - Najwyzsze Dopuszczalne Stezenie
NDSCh - Najwyzsze Dopuszczalne Stezenie Chwilowe
NDSP - Najwyzsze Dopuszczalne Stezenie Pulapowe
NOAEL - No-Observed Adverse Effect Level
NOEC - No-Observed Effect Concentration
NRD - Nevirsytinas Ribinis Dydis
NTP – National Toxicology Program
OEL - Occupational Exposure Limits
PBT - Persistent, Bioaccumulative and Toxic
PEL - Permissible Exposure Limit
pH – Potential Hydrogen
REACH – Registration, Evaluation, Authorisation, and Restriction of Chemicals
RID – Regulations Concerning the International Carriage of Dangerous Goods by Rail
SADT - Self Accelerating Decomposition Temperature
SDS - Safety Data Sheet
STEL - Short Term Exposure Limit
TA-Luft - Technische Anleitung zur Reinhaltung der Luft
TEL TRK – Technical Guidance Concentrations
ThOD – Theoretical Oxygen Demand
TLM - Median Tolerance Limit
TLV - Threshold Limit Value
TPRD - Trumpalaikio Poveikio Ribinis Dydis
TRGS 510 - Technische Regel für Gefahrstoffe 510 - Lagerung von Gefahrstoffen in ortsbeweglichen Behältern
TRGS 552 – Technische Regeln für Gefahrstoffe - N-Nitrosamine
TRGS 900 - Technische Regel für Gefahrstoffe 900 – Arbeitsplatzgrenzwerte
TRGS 903 - Technische Regel für Gefahrstoffe 903 - Biologische Grenzwerte
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average
VOC – Volatile Organic Compounds
VLA-EC - Valor Límite Ambiental Exposición de Corta Duración
VLA-ED - Valor Límite Ambiental Exposición Diaria
VLE – Valeur Limite D'exposition
VME – Valeur Limite De Moyenne Exposition

case octanol and water
MAK – Maximum Workplace Concentration/Maximum Permissible Concentration
vPvB - Very Persistent and Very Bioaccumulative
WEL – Workplace Exposure Limit
WGK - Wassergefährdungsklasse

EU GHS SDS

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.