SAFETY DATA SHEET

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758

n-Heptanoic acid
10520

Version / Revision	6	**Revision Date**	14-Jul-2026
Supersedes Version	5.00***	**Issuing date**	14-Jul-2026

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

1.1. Product identifier

Identification of the substance/preparation **n-Heptanoic acid**

Chemical Name Heptanoic acid
CAS-No 111-14-8
EC No. 203-838-7

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

Identified uses Intermediate***
Uses advised against None

1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification
OXEA GmbH
Rheinpromenade 4A
D-40789 Monheim
Germany***

Product Information
Product Stewardship
FAX: +49 (0)208 693 2053
email: sc.psq@oxea.com

1.4. Emergency telephone number

Emergency telephone number +44 (0) 1235 239 670 (UK)
available 24/7

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

This substance is classified based on Directive 1272/2008/EC and its amendments (CLP Regulation)

Acute inhalation toxicity Category 4, H332
Skin corrosion/irritation Category 1B, H314
Serious eye damage/eye irritation Category 1, H318
Target Organ Systemic Toxicant - Single exposure Category 3, H335

Additional information
For full text of Hazard- and EU Hazard-statements see SECTION 16.

2.2. Label elements

Labelling according to Regulation 1272/2008/EC and its amendments (CLP Regulation).

Hazard pictograms

Signal word **Danger**

Hazard statements
H332: Harmful if inhaled.
H314: Causes severe skin burns and eye damage.
H335: May cause respiratory irritation.

Precautionary statements
P260: Do not breathe gas/mist/vapours.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER/doctor.
P403 + P233: Store in a well ventilated place. Keep container tightly closed.

2.3. Other hazards

Components of the product may be absorbed into the body by inhalation

PBT and vPvB assessment This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

Endocrine disrupting assessments The substance is not listed on the candidate list according to Art. 59(1), REACh. The substance was not assessed as having endocrine disrupting properties according to regulation 2017/2100/EU or 2018/605/EU.

SECTION 3: Composition / information on ingredients

3.1. Substances

Component	CAS-No	1272/2008/EC	Concentration (%)
Heptanoic acid***	111-14-8	Acute Tox. 4; H332 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335 ATE = 4,7 mg/L (inhalation) (dust/mist)	> 95,5

For full text of Hazard- and EU Hazard-statements see SECTION 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Keep at rest. Aerate with fresh air. Symptoms of poisoning may develop many hours after exposure. Call a physician immediately.

Skin

Wash off immediately with soap and plenty of water. When symptoms persist or in all cases of doubt seek medical advice.

Eyes
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

Ingestion
Call a physician immediately. Do not induce vomiting without medical advice.

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

Main symptoms
cough, headache, nausea, shortness of breath, vomiting, convulsions.

Special hazard
Lung irritation, Lung oedema.

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

General advice
Remove contaminated, soaked clothing immediately and dispose of safely. First aider needs to protect himself.

Treat symptomatically. If ingested, flush stomach and compensate acidosis.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
foam, dry chemical, carbon dioxide (CO2), water spray

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Under conditions giving incomplete combustion, hazardous gases produced may consist of:
carbon monoxide (CO)
carbon dioxide (CO2)
Combustion gases of organic materials must in principle be graded as inhalation poisons
Vapours are heavier than air and may spread along floors

5.3. Advice for firefighters

Special protective equipment for firefighters
Fire fighter protection should include a self-contained breathing apparatus (NIOSH-approved or EN 133) and full fire-fighting turn out gear.

Precautions for firefighting
Cool containers / tanks with water spray. Water run-off and vapor cloud may be corrosive. Dike and collect water used to fight fire. Keep people away from and upwind of fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: For personal protective equipment see section 8. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep people away from and upwind of spill/leak. Ensure adequate ventilation, especially in confined areas. Keep away from heat and sources of ignition.
For emergency responders: Personal protection see section 8.

6.2. Environmental precautions

Prevent further leakage or spillage. Do not discharge product into the aquatic environment without pretreatment (biological treatment plant).

6.3. Methods and material for containment and cleaning up

Methods for containment
Stop the flow of material, if possible without risk. Dike spilled material, where this is possible.

Methods for cleaning up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Dispose of in accordance with local regulations. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

6.4. Reference to other sections

For personal protective equipment see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Provide sufficient air exchange and/or exhaust in work rooms.

Hygiene measures
When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

Advice on the protection of the environment
See Section 8: Environmental exposure controls.

Incompatible products
bases
amines

7.2. Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). In case of fire, emergency cooling with water spray should be available. Ground and bond containers when transferring material.

Technical measures/Storage conditions
Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Keep at temperatures between 0 and 38 °C (32 and 100 °F).

Temperature class
T3

7.3. Specific end use(s)

Intermediate***

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Exposure limits European Union

No exposure limits established

Exposure limits UK

No exposure limits established.

DNEL & PNEC

This substance is registered as intermediate under strictly controlled conditions.

Heptanoic acid*, CAS: 111-14-8**
Workers

DN(M)EL - long-term exposure - systemic effects - Inhalation	98,7 mg/m³
DN(M)EL - acute / short-term exposure - systemic effects - Inhalation	Medium hazard (no threshold derived)
DN(M)EL - long-term exposure - local effects - Inhalation	Medium hazard (no threshold derived)
DN(M)EL - acute / short-term exposure - local effects - Inhalation	Medium hazard (no threshold derived)
DN(M)EL - long-term exposure - systemic effects - Dermal	14 mg/kg bw/day
DN(M)EL - acute / short-term exposure - systemic effects - Dermal	Medium hazard (no threshold derived)
DN(M)EL - long-term exposure - local effects - Dermal	Medium hazard (no threshold derived)
DN(M)EL - acute / short-term exposure - local effects - Dermal	Medium hazard (no threshold derived)
DN(M)EL - local effects - eyes	Medium hazard (no threshold derived)

General population

DN(M)EL - long-term exposure - systemic effects - Inhalation	8,7 mg/m³
DN(M)EL - acute / short-term exposure - systemic effects - Inhalation	Hazard unknown (no further information necessary)
DN(M)EL - long-term exposure - local effects - Inhalation	Medium hazard (no threshold derived)
DN(M)EL - acute / short-term exposure - local effects - Inhalation	Hazard unknown (no further information necessary)
DN(M)EL - long-term exposure - systemic effects - Dermal	5 mg/kg bw/day
DN(M)EL - acute / short-term exposure - systemic effects - Dermal	Hazard unknown (no further information necessary)

DN(M)EL - long-term exposure - local effects - Dermal	Medium hazard (no threshold derived)
DN(M)EL - acute / short-term exposure - local effects - Dermal	Medium hazard (no threshold derived)
DN(M)EL - long-term exposure - systemic effects - Oral	5*** mg/kg bw/day***
DN(M)EL - acute / short-term exposure - systemic effects - Oral	Medium hazard (no threshold derived)***
DN(M)EL - local effects - eyes	Medium hazard (no threshold derived)

Environment

PNEC aqua - freshwater	0,4 mg/l
PNEC aqua - marine water	0,04 mg/l
PNEC aqua - intermittent releases	0,612 mg/l***
PNEC STP	1000 mg/l
PNEC sediment - freshwater	2,08 mg/kg dw
PNEC sediment - marine water	0,21 mg/kg dw
PNEC Air	No hazard identified
PNEC soil	0,12 mg/kg dw
Secondary poisoning	No potential for bioaccumulation

8.2. Exposure controls

Special adaptations (REACh)
Not applicable.

Appropriate Engineering controls
General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts) should be used in mechanical ventilation systems.

Personal protective equipment

General industrial hygiene practice
Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Ensure that eyewash stations and safety showers are close to the workstation location.

Hygiene measures
When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

Eye protection
Tightly fitting safety goggles. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face.
Equipment should conform to EN 166

Hand protection
Wear protective gloves. Recommendations are listed below. Other protective material may be used, depending on the situation, if adequate degradation and permeation data is available. If other chemicals are used in conjunction with this chemical, material selection should be based on protection for all chemicals present.

Suitable material	nitrile rubber
Evaluation	according to EN 374: level 6
Glove thickness	approx 0.55 mm
Break through time	> 480 min

Suitable material	polyvinylchloride / nitrile rubber
Evaluation	according to EN 374: level 6
Glove thickness	approx 0.9 mm
Break through time	> 480 min

Skin and body protection
Impervious clothing. Wear face-shield and protective suit for abnormal processing problems.

Environmental exposure controls
If possible use in closed systems. If leakage can not be prevented, the substance needs to be suck off at the emersion point, if possible without danger. If recycling is not practicable, dispose of in compliance with local regulations. Inform the responsible authorities in case of leakage into the atmosphere, or of entry into waterways, soil or drains.

Additional advice
Further details on substance data can be found in the registration dossier under the following link: http://echa.europa.eu/information-on-chemicals/registered-substances.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	pungent
Odour threshold	0,6 - 10,4 ppm
Melting point/freezing point	-8 °C
Boiling point or initial boiling point and boiling range	223 °C @ 1013 hPa
Flammability	Even if not classified as flammable, the product is capable of catching fire or being set on fire.
Lower explosion limit	1,09 Vol %
Upper explosion limit	10,1 Vol %
Flash point	117 °C @ 1013 hPa
Method	DIN EN ISO 3679
Autoignition temperature	275 °C @ 999 hPa***
Method	EU A.15
Decomposition temperature	No data available
pH	4,8 @ 20 °C (68 °F)
Kinematic Viscosity	3,704 mm²/s @ 30 °C
Solubility	1,96 - 5,32 g/l @ 25 °C, in water
Partition coefficient n-octanol/water (log value)	2,54 (calculated) KOW WIN

Vapour pressure

Values [hPa]	Values [kPa]	Values [atm]	@ °C	@ °F	Method
0,013	0,0013	< 0,001	20	68	OECD 104
0,2	0,02	< 0,001	50	122	OECD 104

Density and/or relative density

Values	@ °C	@ °F	Method
0,918	20	68	

Relative vapour density	4,5 (Air = 1) @ 20 °C (68 °F)
Particle characteristics	not applicable

9.2. Other information

Explosive properties	Does not apply, substance is not explosive. There are no chemical groups associated with explosive properties
Oxidizing properties	Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties
Molecular weight	130,19
Molecular formula	C7 H14 O2
log Koc	1,2 calculated
Dissociation constant	pKa 4,75 @ 20 °C (68 °F) (calculated)
Refractive index	1,422 @ 20 °C
Evaporation rate	No data available

SECTION 10: Stability and Reactivity

10.1. Reactivity

The reactivity of the product corresponds to the typical reactivity shown by the substance group as described in any text book on organic chemistry.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Avoid contact with heat, sparks, open flame and static discharge. Avoid any source of ignition.

10.5. Incompatible materials

bases, amines.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Likely routes of exposure Ingestion, Inhalation, Eye contact, Skin contact

Acute toxicity				
Heptanoic acid (111-14-8)				
Routes of Exposure	Endpoint	Values	Species	Method
Inhalative	LC50	> 4,6 mg/l (4h)	rat, male/female	OECD 403

Heptanoic acid*, CAS: 111-14-8**
Assessment
The available data lead to the classification given in section 2
Dermal acute toxicity data were not determined, because of the corrosive properties of the substance
For acute oral toxicity, no data are available

Irritation and corrosion				
Heptanoic acid (111-14-8)				
Target Organ Effects	Species	Result	Method	
Skin	rabbit	corrosive	OECD 404	
Respiratory tract	rat	irritating	OECD 403	4h

Heptanoic acid*, CAS: 111-14-8**
Assessment
The available data lead to the classification given in section 2
Available skin corrosion data suffice for classification of eye corrosion without further testing

Sensitization				
Heptanoic acid (111-14-8)				
Target Organ Effects	Species	Evaluation	Method	
Skin	guinea pig	not sensitizing	OECD 406	

Heptanoic acid*, CAS: 111-14-8**
Assessment
Based on available data, the classification criteria are not met for:
Skin sensitization
For respiratory sensitization, no data are available

Subacute, subchronic and prolonged toxicity				
Heptanoic acid (111-14-8)				
Type	Dose	Species	Method	
Subacute toxicity	NOAEL: 1750 mg/kg/d	rat, male/female	OECD 407	Oral
Subacute toxicity	LOAEL: 3500 mg/kg/d	rat, male/female	OECD 407	Oral
Subchronic toxicity	NOAEL: 1000 mg/kg/d	rat, male/female	OECD 408	Oral

Heptanoic acid*, CAS: 111-14-8**
Assessment
Based on available data, the classification criteria are not met for:
STOT RE

Carcinogenicity, Mutagenicity, Reproductive toxicity					
Heptanoic acid (111-14-8)					
Type	Dose	Species	Evaluation	Method	
Mutagenicity		Salmonella typhimurium	negative	OECD 471 (Ames)	In vitro study
Developmental Toxicity	NOAEL 1000 mg/kg/d	rat		OECD 414, Oral	Maternal toxicity
Developmental Toxicity	NOAEL 1000 mg/kg/d	rat		OECD 414, Oral	Teratogenicity
Mutagenicity		human lymphocytes	negative	OECD 473 (Chromosomal Aberration)	In vitro study
Mutagenicity		mouse lymphoma cells	negative	OECD 476 (Mammalian Gene Mutation)	In vitro study
Developmental Toxicity	NOAEL 300 mg/kg/d	rabbit		OECD 414, Oral	Maternal toxicity
Developmental Toxicity	NOAEL > 1000	rabbit		OECD 414, Oral	Fetal toxicity,

	mg/kg/d				Embryotoxicity
Reproductive toxicity	NOAEL < 200 mg/kg/d	rat, parental, female		OECD 421 Oral***	Maternal toxicity
Reproductive toxicity	NOAEL 1000 mg/kg/d	rat, 1. Generation, male/female		OECD 421 Oral***	
Reproductive toxicity***	NOAEL >= 1000 mg/kg/d***	rat, parental male/female***		OECD 443 Oral***	Reproductive toxicity:***
Reproductive toxicity***	NOAEL >= 1000 mg/kg/d***	rat, 1. Generation, male/female***		OECD 443 Oral***	Developmental toxicity***

Heptanoic acid*, CAS: 111-14-8**
CMR Classification
The available data on CMR properties are summarized in the table above. They do not indicate a classification into categories 1A or 1B
Evaluation
Based on available data, the classification criteria are not met for:
Reproductive toxicity
Developmental toxicity
Mutagenicity

Heptanoic acid*, CAS: 111-14-8**
Main symptoms
cough, headache, nausea, shortness of breath, vomiting, convulsions.
Target Organ Systemic Toxicant - Single exposure
The available data lead to the classification given in section 2
Target Organ Systemic Toxicant - Repeated exposure
Based on available data, the classification criteria are not met for:
STOT RE
Aspiration toxicity
no data available

11.2. Information on other hazards

Endocrine disrupting properties
The substance has not been identified as having endocrine disrupting properties in accordance with section 2.3.
Heptanoic acid*, CAS: 111-14-8**
Other adverse effects
Components of the product may be absorbed into the body by inhalation.
Note
Handle in accordance with good industrial hygiene and safety practice. Further details on substance data can be found in the registration dossier under the following link:
http://echa.europa.eu/information-on-chemicals/registered-substances.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity			
Heptanoic acid (111-14-8)			
Species	Exposure time	Dose	Method
Pimephales promelas (fathead minnow)	96h	LC50: > 92 mg/l	OECD 203
Raphidocelis subcapitata***	72h	EC50: 61,2 mg/l (Growth	OECD 201

		rate)	
Pseudomonas putida	17 h	EC50: > 1000 mg/l (Growth inhibition)	DIN 38412, part 8
Daphnia magna (Water flea)	48 h	EC50: 72 mg/l	OECD 203
Oryzias latipes (Medaka)	96 h	LC50: 74,8 mg/l	OECD 203

Long term toxicity				
Heptanoic acid (111-14-8)				
Type	Species	Dose	Method	
Reproductive toxicity	Daphnia magna (Water flea)	NOEC: 40 mg/l (21d)	OECD 211	
Aquatic toxicity	Raphidocelis subcapitata***	NOEC: 46 mg/l (3d) Growth rate	OECD 201	

Terrestrial toxicity				
Heptanoic acid (111-14-8)				
Species	Exposure time	Dose	Type	Method
Eisenia fetida	56 d	NOEC: 10 mg/kg soil dw	Reproduction	OECD 222
Eisenia fetida	28 d	NOEC: > 32 mg/kg soil dw	Mortality	OECD 222
Beta vulgaris (Sugar beet)	21 d	NOEC: 7,6 mg/kg soil dw	Growth	OECD 208
Brassica rapa (Turnip)	21 d	EC10: 1,2 mg/kg soil dw	Growth	OECD 208
Lactuca sativa (Lettuce)	21 d	EC10: 27,7 mg/kg soil dw	Growth	OECD 208
Lolium perenne (Ryegrass)	21 d	NOEC: 7,6 mg/kg soil dw	Growth	OECD 208
Soil microorganism	28 d	NOEC: 300 mg/kg soil dw	Nitrogen transformation	OECD 216

12.2. Persistence and degradability

Heptanoic acid*, CAS: 111-14-8**
Biodegradation
98,7 % (11 d), Sewage, domestic, non-adapted, aerobic, OECD 301 A / ISO 7827.

Abiotic Degradation		
Heptanoic acid (111-14-8)		
Type	Result	Method
Hydrolysis	not expected	
Photolysis	No data available***	

12.3. Bioaccumulative potential

Heptanoic acid (111-14-8)		
Type	Result	Method
log Pow	2,54	KOW WIN, calculated
BCF	No data available	

12.4. Mobility in soil

Heptanoic acid (111-14-8)		
Type	Result	Method
Adsorption/Desorption	log Koc: 1,2	calculated
Surface tension	no data available	
Distribution to environmental compartments	no data available	

12.5. Results of PBT and vPvB assessment

Heptanoic acid*, CAS: 111-14-8**
PBT and vPvB assessment
This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

12.6. Endocrine disrupting properties

The substance has not been identified as having endocrine disrupting properties in accordance with section 2.3.

12.7. Other adverse effects

Heptanoic acid*, CAS: 111-14-8**
No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product Information
Disposal required in compliance with all waste management related state and local regulations. The choice of the appropriate method of disposal depends on the product composition by the time of disposal as well as the local statutes and possibilities for disposal.
Hazardous waste according to European Waste Catalogue (EWC)

Uncleaned empty packaging
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

SECTION 14: Transport information

ADR/RID

14.1. UN number or ID number	UN 3265
14.2. UN proper shipping name	Corrosive liquid, acidic, organic, n.o.s. (n-Heptanoic acid)
14.3. Transport hazard class(es)	8
14.4. Packing group	II
14.5. Environmental hazards	no
14.6. Special precautions for user	
ADR Tunnel restriction code	(E)
Classification Code	C3

Hazard Number	80

ADN

ADN: Container and Tanker

14.1. UN number or ID number	UN 3265
14.2. UN proper shipping name	Corrosive liquid, acidic, organic, n.o.s. (n-Heptanoic acid)
14.3. Transport hazard class(es)	8
14.4. Packing group	II
14.5. Environmental hazards	no
14.6. Special precautions for user	
Classification Code	C3
Hazard Number	80

ICAO-TI / IATA-DGR

14.1. UN number or ID number	UN 3265
14.2. UN proper shipping name	Corrosive liquid, acidic, organic, n.o.s. (n-Heptanoic acid)
14.3. Transport hazard class(es)	8
14.4. Packing group	II
14.5. Environmental hazards	no
14.6. Special precautions for user	no data available

IMDG

14.1. UN number or ID number	UN 3265
14.2. UN proper shipping name	Corrosive liquid, acidic, organic, n.o.s. (n-Heptanoic acid)
14.3. Transport hazard class(es)	8
14.4. Packing group	II
14.5. Environmental hazards	no
14.6. Special precautions for user	
EmS	F-A, S-B
14.7. Maritime transport in bulk according to IMO instruments	
Product name	n-Heptanoic acid
Ship type	3
Pollution category	Z
Hazard class	S/P

SECTION 15: Regulatory information

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

Regulation 1272/2008, Annex VI

Heptanoic acid*, CAS: 111-14-8**

Classification	Skin Corr. 1B; H314
Hazard pictograms	GHS05 Corrosion

Signal word Danger
Hazard statements H314

DI 2012/18/EU (Seveso III)
Category not subject

VOC according to DI 2010/75/EU (Industry Emission Directive)

Component	Status
Heptanoic acid*** CAS: 111-14-8	not subject

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 No. 758

Component	Status
Heptanoic acid*** CAS: 111-14-8	The substance is/will be pre-registered

For details and further information please refer to the original regulation.

International Inventories

Heptanoic acid*, CAS: 111-14-8**
AICS (AU)
DSL (CA)
IECSC (CN)
EC-No. 2038387 (EU)
ENCS (2)-608 (JP)
ISHL (2)-608 (JP)
KECI KE-18284 (KR)
INSQ (MX)
PICCS (PH)
TSCA (US)
NZIoC (NZ)
TCSI (TW)

National regulatory information Great Britain

Releases to air (Pollution Inventory Substances)
not subject

Releases to water (Pollution Inventory Substances)
not subject

Releases to sewer (Pollution Inventory Substances)
not subject
For details and further information please refer to the original regulation

15.2. Chemical safety assessment

The Chemical Safety Report (CSR) has been generated. For Exposure Scenarios see the annex.***

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H332: Harmful if inhaled.
H335: May cause respiratory irritation.

Abbreviations
A table of terms and abbreviations can be found under the following link:
http://echa.europa.eu/documents/10162/13632/information_requirements_r20_en.pdf

Training advice
For effective first-aid, special training / education is needed.

Sources of key data used to compile the datasheet
Information contained in this safety data sheet is based on OXEA owned data and public sources deemed valid or acceptable. The absence of data elements required by OSHA, ANSI or Annex II, Regulation 1907/2006/EC indicates, that no data meeting these requirements is available.

Further information for the safety data sheet
Changes against the previous version are marked by ***. Observe national and local legal requirements. For more information, other material safety data sheets or technical data sheets please consult the OXEA homepage (www.oxea.com).

Disclaimer
For industrial use only. The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. OXEA makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.

End of Safety Data Sheet

Operational conditions and risk management measures
Ensure all equipment well maintained
Training for staff on good practice
Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Regular cleaning of equipment and work area
Clear spills immediately
Good standard of general ventilation
Avoid direct contact with the chemical/the product/the preparation by establishing organisational measures
Good standard of personal hygiene
Operate activity away from sources of substance emission or release.
Avoid contact with contaminated tools and objects.
Refer to section 8.2
Ensure control measures are regularly inspected and maintained.
Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediate
Wear suitable coveralls to prevent exposure to skin, where direct contact with substances is possible
Wear protective gloves/clothing and eye/face protection***

1* Industrial use resulting in manufacture of another substance (use of intermediates)***

Number of the ES 1***

Short title of the exposure scenario

Industrial use resulting in manufacture of another substance (use of intermediates)***

Process categories [PROC]

PROC1: Use in closed process, no likelihood of exposure
PROC2: Use in closed, continuous process with occasional controlled exposure
PROC3: Use in closed batch process (synthesis or formulation)
PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises
PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
PROC15: Use as laboratory reagent***

Environmental release categories [ERC]
ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)***

Product characteristics
Refer to attached safety data sheets***

Processes and activities covered by the exposure scenario
Use as an intermediate (not related to Strictly Controlled Conditions). Includes incidental exposures during recycling/ recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (ncluding marine vessel/barge, road/rail car and bulk container).***

Further explanations
Industrial use***

Number of the contributing scenario **1*****
Contributing exposure scenario controlling environmental exposure for ERC 6a***

Further specification

assessment tool used: EUSES V2.1***
Product characteristics
liquid.***
Amounts used
Daily amount per site: 5 to
Annual amount per site: 100 to***
Environment factors not influenced by risk management
River flow rate: 18000 m³/d***
Technical conditions and measures at process level (source) to prevent release
Limit release rate to waste water to (kg/day):
30
Limit release rate to air to (kg/day):
250
Limit release rate to soil to (kg/day):
5***
Organisational measures to prevent/limit release from site
Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.***
Conditions and measures related to municipal sewage treatment plant
Size of municipal sewage system/ treatment plant (m³/d): 2000
Controlled application of sewage sludge to agricultural soil***

Number of the contributing scenario **2*****
Contributing exposure scenario controlling worker exposure for PROC 1***

Further specification
Assessment tool used: ECETOC TRA***
Product characteristics
Liquid
Covers percentage substance in the product: 100 %***
Frequency and duration of use
8 h (full shift)***
Other given operational conditions affecting workers exposure

Indoor use
Assumes use at not more than 20°C above ambient temperature (unless stated differently)***
Technical conditions and measures to control dispersion from source towards the worker
provide a basic standard of general ventilation (1 to 3 air changes per hour).***
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. Wear respiratory protection (Efficiency: 90 %).***
***

Number of the contributing scenario **3*****
Contributing exposure scenario controlling worker exposure for PROC 2***

Further specification
Assessment tool used: ECETOC TRA***
Product characteristics
Covers percentage substance in the product: 100 %***
Frequency and duration of use
8 h (full shift)***
Other given operational conditions affecting workers exposure
Indoor use
Assumes use at not more than 20°C above ambient temperature (unless stated differently)***
Technical conditions and measures to control dispersion from source towards the worker
provide a basic standard of general ventilation (1 to 3 air changes per hour).***
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. Wear respiratory protection (Efficiency: 90 %) Alternatively: Use duration max. 902 h.***
***

Number of the contributing scenario **4*****
Contributing exposure scenario controlling worker exposure for PROC 3***

Further specification
Assessment tool used: ECETOC TRA***
Product characteristics
Liquid
Covers percentage substance in the product: 100 %***
Frequency and duration of use
8 h (full shift)***
Other given operational conditions affecting workers exposure
Indoor use
Assumes use at not more than 20°C above ambient temperature (unless stated differently)***
Technical conditions and measures to control dispersion from source towards the worker
provide a basic standard of general ventilation (1 to 3 air changes per hour).***
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. Wear respiratory protection (Efficiency: 90 %).***
***

Number of the contributing scenario **5*****
Contributing exposure scenario controlling worker exposure for PROC 4***

Further specification
Assessment tool used: ECETOC TRA***
Product characteristics
Liquid
Covers percentage substance in the product: 100 %***
Frequency and duration of use
8 h (full shift)***
Other given operational conditions affecting workers exposure
Indoor use
Assumes use at not more than 20°C above ambient temperature (unless stated differently)***
Technical conditions and measures to control dispersion from source towards the worker
provide a basic standard of general ventilation (1 to 3 air changes per hour).***

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. Wear respiratory protection (Efficiency: 90 %) Alternatively: Use duration max. 902 h.***
***

Number of the contributing scenario **6*****
Contributing exposure scenario controlling worker exposure for PROC 8a***

Further specification
Assessment tool used: ECETOC TRA***
Product characteristics
Liquid
Covers percentage substance in the product: 100 %***
Frequency and duration of use
8 h (full shift)***
Other given operational conditions affecting workers exposure
Indoor use
Assumes use at not more than 20°C above ambient temperature (unless stated differently)***
Technical conditions and measures to control dispersion from source towards the worker
provide a basic standard of general ventilation (1 to 3 air changes per hour).***
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. Wear respiratory protection (Efficiency: 90 %) Alternatively: Use duration max. 902 h.***
***

Number of the contributing scenario **7*****
Contributing exposure scenario controlling worker exposure for PROC 8b***

Further specification
Assessment tool used: ECETOC TRA***
Product characteristics
Liquid
Covers percentage substance in the product: 100 %***
Frequency and duration of use
8 h (full shift)***
Other given operational conditions affecting workers exposure
Indoor use
Assumes use at not more than 20°C above ambient temperature (unless stated differently)***
Technical conditions and measures to control dispersion from source towards the worker
provide a basic standard of general ventilation (1 to 3 air changes per hour).***
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. Wear respiratory protection (Efficiency: 90 %).***
***

Number of the contributing scenario **8*****
Contributing exposure scenario controlling worker exposure for PROC 15***

Further specification
Assessment tool used: ECETOC TRA***
Product characteristics
Liquid
Covers percentage substance in the product: 100 %***
Frequency and duration of use
8 h (full shift)***
Other given operational conditions affecting workers exposure
Indoor use
Assumes use at not more than 20°C above ambient temperature (unless stated differently)***
Technical conditions and measures to control dispersion from source towards the worker
provide a basic standard of general ventilation (1 to 3 air changes per hour).***
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. Wear respiratory protection (Efficiency: 90 %).***

***

Fresh Water (Pelagic)	PEC: 0.189 mg/l; RCR: 0.474***
Fresh Water (Sediment)	PEC: 0.985 mg/kg dw; RCR: 0.474***
Marine Water (Pelagic)	PEC: 0.019 mg/l; RCR: 0.474***
Marine Water (Sediment)	PEC: 0.099 mg/kg dw; RCR: 0.469***
Agricultural Soil	PEC: 0.063 mg/kg dw; RCR: 0.526***
Sewage Treatment Plant (Effluent)	PEC: 1.895 mg/l; RCR: < 0.01***
Man via environment – Inhalation	Concentration in air: 3.81E-3 mg/m³; RCR: < 0.01***
Man via environment – Oral	Exposure via food consumption: 0.014 mg/kg bw/day; RCR: < 0.01***
Proc 1	EE(inhal): 5.42E-3; EE(derm): 6.8E-3***
Proc 2	EE(inhal): 0.542; EE(derm): 0.274***
Proc 3	EE(inhal): 1.627; EE(derm): 0.138***
Proc 4	EE(inhal): 2.712; EE(derm): 1.372***
Proc 8a	EE(inhal): 5.424; EE(derm): 2.742***
Proc 8b	EE(inhal): 2.712; EE(derm): 2.742***
Proc 15	EE(inhal): 2.712; EE(derm): 0.068***
Proc 1	RCR(inhal): < 0.01; RCR(derm): < 0.01***
Proc 2	RCR(inhal): < 0.01; RCR(derm): 0.02***
Proc 3	RCR(inhal): 0.016; RCR(derm): < 0.01***
Proc 4	RCR(inhal): 0.027; RCR(derm): 0.098***
Proc 8a	RCR(inhal): 0.055; RCR(derm): 0.196***
Proc 8b	RCR(inhal): 0.027; RCR(derm): 0.196***
Proc 15	RCR(inhal): 0.027; RCR(derm): < 0.01***

Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Scaling instructions If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.***