



SAFETY DATA SHEET
XIAMETER PMX 0246 CYCLOHEXASILOXANE

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

1.1. Product identifier

Product name	XIAMETER PMX 0246 CYCLOHEXASILOXANE
Product number	12264
Synonyms; trade names	XIAMETER PMX-0246
REACH registration number	01-2119517435-42-XXXX
CAS number	540-97-6
EC number	208-762-8

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

Identified uses	Personal Care Cosmetics perfumery Fragrance Chemical Intermediate For further information, see attached Exposure Scenario.
-----------------	--

1.3. Details of the supplier of the safety data sheet

Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com
----------	---

1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	12264

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Aquatic Chronic 3 - H412

2.2. Label elements

EC number	208-762-8
Hazard statements	H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P273 Avoid release to the environment. P501 Dispose of contents/ container in accordance with local regulations.

2.3. Other hazards

XIAMETER PMX 0246 CYCLOHEXASILOXANE

This product contains a substance classified as vPvB. This product contains a substance classified as PBT. The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1. Substances

DODECAMETHYLCYCLOHEXASILOXANE

>= 94.0 - <= 98.0 %

CAS number: 540-97-6

EC number: 208-762-8

REACH registration number: 01-2119517435-42-XXXX

ATE: Acute Toxicity Estimate.Oral> 2000 mg/kg

ATE: Acute Toxicity Estimate.Dermal> 2000 mg/kg

Classification

Not Classified

DECAMETHYLCYCLOPENTASILOXANE

>= 1.0 - <= 5.0 %

CAS number: 541-02-6

EC number: 208-764-9

REACH registration number: 01-2119511367-43-XXXX

ATE: Acute Toxicity Estimate.Oral> 24134 mg/kg

ATE: Acute Toxicity Estimate.Inhalation8.67 mg/l4 hoursDust/Mist

ATE: Acute Toxicity Estimate.Dermal> 2000 mg/kg

Classification

Not Classified

OCTAMETHYLCYCLOTETRASILOXANE

<= 0.099 %

CAS number: 556-67-2

EC number: 209-136-7

M factor (Chronic) = 10

Acute Toxicity Estimate (oral):> 4800 mg/kg

Acute Toxicity Estimate (inhalation):36 mg/l4 hoursDust/Mist

Acute Toxicity Estimate (dermal):> 2400 mg/kg

Classification

Flam. Liq. 3 - H226

Repr. 2 - H361f

Aquatic Chronic 1 - H410

The full text for all hazard statements is displayed in Section 16.

Product name XIAMETER PMX 0246 CYCLOHEXASILOXANE

REACH registration number 01-2119517435-42-XXXX

CAS number 540-97-6

EC number 208-762-8

Composition comments The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

XIAMETER PMX 0246 CYCLOHEXASILOXANE

General information	Wear protective clothing as described in Section 8 of this safety data sheet.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues.
Skin contact	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

Eye contact	May cause temporary eye irritation.
--------------------	-------------------------------------

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

Notes for the doctor	Treat symptomatically. If in doubt, get medical attention promptly.
-----------------------------	---

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	When heated and in case of fire, toxic vapours/gases may be formed. The product increases the risk of fire and may accelerate combustion.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Formaldehyde Oxides of the following substances: Silicon. Carbon.

5.3. Advice for firefighters

Protective actions during firefighting	No action shall be taken without appropriate training or involving any personal risk. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Do not use water jet as an extinguisher, as this will spread the fire. Contain and collect extinguishing water. Control run-off water by containing and keeping it out of sewers and watercourses. Evacuate area.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Eliminate all sources of ignition.
-----------------------------	--

6.2. Environmental precautions

Environmental precautions	Harmful to aquatic life with long lasting effects. Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
----------------------------------	---

XIAMETER PMX 0246 CYCLOHEXASILOXANE

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if safe to do so. Absorb spillage with inert, damp, non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Avoid spilling. Avoid release to the environment. Observe good chemical hygiene practices. Product residues retained in emptied containers can be hazardous.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Only store in correctly labelled containers. Store away from the following materials: Strong oxidising agents.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

DECAMETHYLCYCLOPENTASILOXANE

Long-term exposure limit (8-hour TWA): SUP 10 ppm

OCTAMETHYLCYCLOTETRAASILOXANE

Long-term exposure limit (8-hour TWA): SUP 10 ppm

Ingredient comments Observe any occupational exposure limits for the product or ingredients.

DDODECAMETHYLCYCLOHEXASILOXANE (CAS: 540-97-6)

DNEL	Workers - Inhalation; Long term systemic effects: 11 mg/m ³
	Workers - Inhalation; Short term local effects: 6.1 mg/m ³
	Workers - Inhalation; Long term local effects: 1.22 mg/m ³
	Consumer - Oral; Short term systemic effects: 1.7 mg/kg/day
	Consumer - Inhalation; Short term local effects: 1.5 mg/m ³
	Consumer - Inhalation; Long term systemic effects: 2.7 mg/m ³
	Consumer - Oral; Long term systemic effects: 1.7 mg/kg/day
	Consumer - Inhalation; Long term local effects: 0.3 mg/m ³
PNEC	- Sediment (Freshwater); 2.826 mg/kg
	- Sediment (Marinewater); 0.282 mg/kg
	- Soil; 3.336 mg/kg
	- STP; >1.0 mg/l

DECAMETHYLCYCLOPENTASILOXANE (CAS: 541-02-6)

XIAMETER PMX 0246 CYCLOHEXASILOXANE

DNEL

Workers - Inhalation; Short term systemic effects: 97.3 mg/m³
 Workers - Inhalation; Short term local effects: 24.2 mg/m³
 Workers - Inhalation; Long term systemic effects: 97.3 mg/m³
 Workers - Inhalation; Long term local effects: 24.2 mg/m³
 Consumer - Inhalation; Short term systemic effects: 17.3 mg/m³
 Consumer - Inhalation; Short term local effects: 4.3 mg/m³
 Consumer - Inhalation; Long term systemic effects: 17.3 mg/m³
 Consumer - Inhalation; Long term local effects: 4.3 mg/m³
 Consumer - Oral; Short term systemic effects: 5 mg/kg/day
 Consumer - Oral; Long term systemic effects: 5 mg/kg/day

PNEC

- Fresh water; >0.0012 mg/l
 - marine water; >0.00012 mg/l
 - Sediment (Freshwater); 2.4 mg/kg
 - Sediment (Marinewater); 0.24 mg/kg
 - Soil; 1.1 mg/kg
 - STP; >10 mg/l

OCTAMETHYLCYCLOTETRASILOXANE (CAS: 556-67-2)

DNEL

Workers - Inhalation; Long term systemic effects: 73 mg/m³
 Workers - Inhalation; Long term local effects: 73 mg/m³
 Consumer - Inhalation; Long term systemic effects: 13 mg/m³
 Consumer - Oral; Long term systemic effects: 3.7 mg/kg/day
 Consumer - Inhalation; Long term local effects: 13 mg/m³

PNEC

- Fresh water; 0.0015 mg/l
 - marine water; 0.00015 mg/l
 - Sediment (Freshwater); 3 mg/kg
 - Sediment (Marinewater); 0.3 mg/kg
 - Soil; 0.54 mg/kg
 - STP; 10 mg/l

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear appropriate clothing to prevent repeated or prolonged skin contact.

XIAMETER PMX 0246 CYCLOHEXASILOXANE

Hygiene measures	Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Eye wash facilities and emergency shower must be available when handling this product.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. Organic vapour filter. Gas filter, type A EN 136/140/141/145/143/149

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Odourless.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Pour Point	No information available.
Freezing Point	No information available.
Initial boiling point and range	245°C @ 760 mm Hg
Flash point	100°C Pensky-Martens closed cup.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	0.96
Bulk density	No information available.
Solubility(ies)	No information available.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	6.8 cSt @ 25°C
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No information available.

XIAMETER PMX 0246 CYCLOHEXASILOXANE

Oxidising properties Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information No information available.

Refractive index No information available.

Particle size Not applicable.

Molecular weight No information available.

Volatility No information available.

Saturation concentration No information available.

Critical temperature No information available.

Volatile organic compound No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions The following materials may react with the product: Strong oxidising agents.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Formaldehyde Oxides of the following substances: Carbon. Silicon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) This product has low toxicity. Not determined. This information is based on test data from similar products LD₅₀ > 5000 mg/kg, Oral, Rat Estimated value.

Acute toxicity - dermal

Notes (dermal LD₅₀) Not determined. This information is based on test data from similar products LD₅₀ > 2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Not determined.

Skin corrosion/irritation

Skin corrosion/irritation This information is based on test data from similar products Not irritating.

Serious eye damage/irritation

XIAMETER PMX 0246 CYCLOHEXASILOXANE

Serious eye damage/irritation This information is based on test data from similar products May cause temporary eye irritation.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation This information is based on test data from similar products Not sensitising. Human

Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Toxicokinetics

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Inhalation

Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion

May cause discomfort if swallowed.

Skin contact

Skin irritation should not occur when used as recommended.

Eye contact

May cause temporary eye irritation.

Toxicological information on ingredients.

DODECAMETHYLCYCLOHEXASILOXANE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Not determined.

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation May cause temporary eye irritation.

XIAMETER PMX 0246 CYCLOHEXASILOXANE

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising. Guinea pig

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties. Negative.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met. Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Toxicokinetics

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion May cause discomfort if swallowed.

Skin contact Skin irritation should not occur when used as recommended.

Eye contact May cause temporary eye irritation.

DECAMETHYLCYCLOPENTASILOXANE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 24134 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 8.67

Species Rat

Notes (inhalation LC₅₀) LC₅₀ 8.67 mg/l, 4 hours, Dust/Mist Rat

XIAMETER PMX 0246 CYCLOHEXASILOXANE

ATE inhalation (dusts/mists mg/l)	8.67
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Not irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Not irritating.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising. Mouse
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	This substance has no evidence of mutagenic properties. Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	Results from a 2 year repeated vapour inhalation exposure study to rats of decamethylcyclotrisiloxane (D5) indicate effects (uterine endometrial tumors) in female animals. This finding occurred at the highest exposure dose (160 ppm) only. Studies to date have not demonstrated if this effect occurs through a pathway that is relevant to humans.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No evidence of reproductive toxicity in animal studies.
Reproductive toxicity - development	No evidence of reproductive toxicity in animal studies.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met. Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met.
Toxicokinetics	
	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Inhalation	Gas or vapour in high concentrations may irritate the respiratory system.
Ingestion	May cause discomfort if swallowed.
Skin contact	Skin irritation should not occur when used as recommended.
Eye contact	May cause temporary eye irritation.

XIAMETER PMX 0246 CYCLOHEXASILOXANE

OCTAMETHYLCYCLOTETRASILOXANE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 4800 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2400 mg/kg, Dermal, Rat

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ 36 mg/l, 4 hours, Dust/Mist Rat OECD 403

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising. Guinea pig

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties. Negative.

Carcinogenicity

Carcinogenicity Results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

Reproductive toxicity

Reproductive toxicity - fertility Suspected of damaging fertility. Two-generation study - , Inhalation, Vapour, Rat

Reproductive toxicity - development Teratogenicity: Based on available data the classification criteria are not met.
Developmental toxicity: - : , Inhalation, Vapour, Rabbit

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure. No adverse effects known., Dose level: <= 100 mg/kg, Oral, Rat No adverse effects known., Dose level: <= 1mg/l/6h/d , Inhalation, Vapour, No adverse effects known., Dose level: <= 200 mg/kg, Dermal,

Aspiration hazard

Aspiration hazard May be harmful if swallowed and enters airways.

XIAMETER PMX 0246 CYCLOHEXASILOXANE

Toxicokinetics	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Inhalation	Gas or vapour in high concentrations may irritate the respiratory system.
Ingestion	May be harmful if swallowed and enters airways.
Skin contact	Skin irritation should not occur when used as recommended.
Eye contact	May cause temporary eye irritation.
Medical considerations	Octamethylcyclotetrasiloxane administered to rats by inhalation at concentrations of 500 and 700 ppm resulted in statistically significant decreases in the number of pups born and the live litter size in both the first and second generations. Prolonged estrous cycles, and decreased mating and fertility indices were observed following 700 ppm exposure in the second generation only. There were also increases in the incidence of deliveries of offspring extending over an unusually long time period (dystocia). Results from a 2 year repeated vapor inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Based on the available information on its potential to cause harm to human health, Health Canada, in a 2008 screening assessment, has concluded that octamethylcyclotetrasiloxane is not entering the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health (http://www.ec.gc.ca/substances/ese/eng/challenge/batch2/batch2_556-67-2.cfm). Repeated exposure in rats to D4 resulted in what appears to be protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

SECTION 12: Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

DODECAMETHYLCYCLOHEXASILOXANE

Ecotoxicity The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.

DECAMETHYLCYCLOPENTASILOXANE

Ecotoxicity The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.

OCTAMETHYLCYCLOTETRAASILOXANE

Ecotoxicity Very toxic to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity Harmful to aquatic life with long lasting effects.

XIAMETER PMX 0246 CYCLOHEXASILOXANE

Ecological information on ingredients.

DODECAMETHYLCYCLOHEXASILOXANE

Toxicity	Not considered toxic to fish.
<u>Acute aquatic toxicity</u>	
Acute toxicity - aquatic plants	ErC50, 72 hour: > 0.002 mg/l, Pseudokirchneriella subcapitata Not toxic at limit of water solubility.
<u>Chronic aquatic toxicity</u>	
Chronic toxicity - aquatic invertebrates	NOEC, 21 day: 0.0046 mg/l, Daphnia magna Not toxic at limit of water solubility.

DECAMETHYLCYCLOPENTASILOXANE

Toxicity	Not toxic at limit of water solubility.
<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	Not toxic at limit of water solubility. LC ₅₀ , 96 hours: >16 µg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	Not toxic at limit of water solubility. EC ₅₀ , 48 hours: >2.9 mg/l, Daphnia magna
Acute toxicity - aquatic plants	Not toxic at limit of water solubility. ErC50, 96 hours: > 0.012 mg/l, Pseudokirchneriella subcapitata Not toxic at limit of water solubility. NOEC, 96 hours: 0.012 mg/l, Pseudokirchneriella subcapitata
Acute toxicity - terrestrial	NOEC, : >= 76 mg/kg, Eisenia Fetida (Earthworm)
<u>Chronic aquatic toxicity</u>	
Chronic toxicity - fish early life stage	Not toxic at limit of water solubility. LC ₅₀ , 14 day: >16 mg/l, Oncorhynchus mykiss (Rainbow trout) Not toxic at limit of water solubility. NOEC, 45 day: >= 0.017 mg/l, Oncorhynchus mykiss (Rainbow trout) Not toxic at limit of water solubility. NOEC, 90 day: >= 0.014 mg/l, Oncorhynchus mykiss (Rainbow trout)
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 0.015 mg/l, Daphnia magna

OCTAMETHYLCYCLOTETRAILOXANE

Toxicity	Very toxic to aquatic life with long lasting effects.
<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	Not toxic at limit of water solubility. LC ₅₀ , 96 hour: > 0.022 mg/l, Oncorhynchus mykiss (Rainbow trout) Not toxic at limit of water solubility. LC ₅₀ , 14 days: > 0.0063 mg/l, Cyprinodon variegatus (Sheepshead minnow)

XIAMETER PMX 0246 CYCLOHEXASILOXANE

Acute toxicity - aquatic invertebrates	Not toxic at limit of water solubility. EC ₅₀ , 96 hours: > 0.0091 mg/l, Mysisopsis bahia (opossum shrimp) Not toxic at limit of water solubility. EC ₅₀ , 48 hours: > 0.015 mg/l, Daphnia magna
Acute toxicity - aquatic plants	Not toxic at limit of water solubility. ErC ₅₀ , 96 hours: > 0.022 mg/l, Pseudokirchneriella subcapitata Not toxic at limit of water solubility. EC ₁₀ , 96 hours: >= 0.022 mg/l, Pseudokirchneriella subcapitata
<u>Chronic aquatic toxicity</u>	
NOEC	0.001 < NOEC ≤ 0.01
Degradability	Non-rapidly degradable
M factor (Chronic)	10
Chronic toxicity - fish early life stage	Not toxic at limit of water solubility. NOEC, 93 days: >= 0.0044 mg/l, Oncorhynchus mykiss (Rainbow trout)
Chronic toxicity - aquatic invertebrates	Not toxic at limit of water solubility. NOEC, 21 days: 0.0079 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

Ecological information on ingredients.

DODECAMETHYLCYCLOHEXASILOXANE

Persistence and degradability	The product is not readily biodegradable.
Biodegradation	- Degradation 4.5%: 28 days OECD 301B

DECAMETHYLCYCLOPENTASILOXANE

Persistence and degradability	The product is expected to be slowly biodegradable.
Biodegradation	- Degradation 0.14%: 28 days (OECD 310)

OCTAMETHYLCYCLOTETRAASILOXANE

Persistence and degradability	The product is expected to be slowly biodegradable.
Stability (hydrolysis)	pH7 - Half-life, DT ₅₀ : 3.9 day @ 25°C OECD 111
Biodegradation	- Degradation 3.7%: 28 day OECD 310

12.3. Bioaccumulative potential

Bioaccumulative potential	No data available on bioaccumulation.
Partition coefficient	No information available.

XIAMETER PMX 0246 CYCLOHEXASILOXANE

Ecological information on ingredients.

DODECAMETHYLCYCLOHEXASILOXANE

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 8.87

DECAMETHYLCYCLOPENTASILOXANE

Bioaccumulative potential BCF: 2010, Fish Estimated value.

Partition coefficient log Pow: 5.2

OCTAMETHYLCYCLOTETRAISILOXANE

Bioaccumulative potential Potentially bioaccumulating.
BCF: 12400, Pimephales promelas (Fat-head Minnow)

Partition coefficient log Pow: 6.49

12.4. Mobility in soil

Mobility No information available.

Ecological information on ingredients.

DODECAMETHYLCYCLOHEXASILOXANE

Mobility Mobile.

DECAMETHYLCYCLOPENTASILOXANE

Mobility Not considered mobile.

Adsorption/desorption coefficient - Koc: > 5000 @ 20°C Estimated value.

OCTAMETHYLCYCLOTETRAISILOXANE

Mobility Not considered mobile.

Adsorption/desorption coefficient - Koc: 16596 @ 20°C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product contains a substance classified as vPvB. This product contains a substance classified as PBT.

Ecological information on ingredients.

DODECAMETHYLCYCLOHEXASILOXANE

Results of PBT and vPvB assessment Dodecamethyl cyclohexasiloxane (D6) meets the current REACh Annex XIII criteria for vPvB. However, D6 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D6 is not biomagnifying in aquatic and terrestrial food webs. D6 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D6 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.

XIAMETER PMX 0246 CYCLOHEXASILOXANE

DECAMETHYLCYCLOPENTASILOXANE

Results of PBT and vPvB assessment

Decamethylcyclopentasiloxane (D5) meets the current REACH Annex XIII criteria for vPvB. However, D5 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D5 is not biomagnifying in aquatic and terrestrial food webs. D5 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D5 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms. Based on an independent scientific panel of experts, the Canadian Minister of the Environment has concluded that "D5 is not entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity, or that constitute or may constitute a danger to the environment on which life depends".

OCTAMETHYLCYCLOTETRASILOXANE

Results of PBT and vPvB assessment

This substance is classified as PBT. This substance is classified as vPvB. Octamethylcyclotetrasiloxane (D4) meets the current REACH Annex XIII criteria for PBT and vPvB. In Canada, D4 has been assessed and deemed to meet the PiT criteria. However, D4 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D4 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.

12.6. Other adverse effects

Other adverse effects

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Ecological information on ingredients.

DODECAMETHYLCYCLOHEXASILOXANE

Other adverse effects

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

DECAMETHYLCYCLOPENTASILOXANE

Other adverse effects

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

OCTAMETHYLCYCLOTETRASILOXANE

Other adverse effects

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 13: Disposal considerations

XIAMETER PMX 0246 CYCLOHEXASILOXANE

13.1. Waste treatment methods

General information	Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).
----------------	--

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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

EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). COMMISSION REGULATION (EU) 2020/878 of 18 June 2020
Restrictions (Annex XVII Regulation 1907/2006)	CAUTION - Chemical may be subject to REACH RESTRICTIONS - see Annex XVII. This product is/contains a substance that is included in REGULATION (EC) No 1907/2006 (REACH) ANNEX XVII - RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES. Entry number: 70 Entry number: 3

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

XIAMETER PMX 0246 CYCLOHEXASILOXANE

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

Canada - DSL/NDSL

All the ingredients are listed or exempt.
DSL

US - TSCA

All the ingredients are listed or exempt.

Australia - AICS

All the ingredients are listed or exempt.

Japan - ENCS

All the ingredients are listed or exempt.

Korea - KECI

All the ingredients are listed or exempt.

China - IECSC

All the ingredients are listed or exempt.

Philippines – PICCS

All the ingredients are listed or exempt.

New Zealand - NZIOC

All the ingredients are listed or exempt.

Taiwan - TCSI

All the ingredients are listed or exempt.

SECTION 16: Other information

XIAMETER PMX 0246 CYCLOHEXASILOXANE

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

23/11/2022

Version number

8.000

Supersedes date

21/08/2022

SDS number

12264

XIAMETER PMX 0246 CYCLOHEXASILOXANE

SDS status	Approved.
Hazard statements in full	H226 Flammable liquid and vapour. H361f Suspected of damaging fertility. H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.
Signature	Lisa Bland

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



Exposure scenario Use as an intermediate

Identification

Product name	DODECAMETHYLCYCLOHEXASILOXANE
REACH registration number	01-2119517435-42-XXXX
CAS number	540-97-6
EC number	208-762-8
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use as an intermediate
Process scope	Use of substance as an intermediate (not related to Strictly Controlled Conditions). Includes recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).

Environment

Environmental release category	ERC6a Use of intermediate
--------------------------------	---------------------------

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
------------------	---

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Concentration details	Covers concentrations up to 100 %.
-----------------------	------------------------------------

Amounts used

Annual amount per site: 50000 kg

Frequency and duration of use

Use as an intermediate

Continuous release.
Emission days: 10 days/year

Environmental factors not influenced by risk management measures

Dilution Receiving surface water flow: 390000 m³/day
Local freshwater dilution factor: 40

Risk management measures

STP type Onsite STP. , or: Municipal STP.
STP details Assumed onsite sewage treatment plant flow: 1300 m³/day
Assumed domestic sewage treatment plant flow: 1300 m³/day

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air Exhaust air scrubber.
Water Central biological waste water treatment No discharge of substance into waste water.
Soil Not applicable - no direct release to soil.

Conditions and measures related to external treatment of waste for disposal

Sludge treatment Sewage sludge incineration. , or: Landfill.
Waste treatment All contaminated waste water must be processed in an industrial or municipal wastewater treatment plant that incorporates both primary and secondary treatments.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid
Vapour pressure Vapour pressure < 0.5 kPa at STP.
Concentration details Covers concentrations up to 100 %.

Amounts used

Daily amount per site: 5000 kg

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Locate bulk storage outdoors.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Ensure operatives are trained to minimise exposures. Ensure control measures are regularly inspected and maintained. Ensure a permit to work system is in place.

Use as an intermediate

Risk management measures

Use suitable eye protection.
Prolonged or repeated contact:
Wear suitable respiratory protection.

3. Exposure estimation (Environment 1)

Assessment method	Used EUSES model.
Environmental exposure	freshwater sediment: Exposure 0.469 mg/kg, PNEC 2.826 mg/kg, RCR 0.166 marine sediment: Exposure 0.15 mg/kg, PNEC 0.282 mg/kg, RCR 0.531 Soil: Exposure 0.0000166 mg/kg, PNEC 3.336 mg/kg, RCR <0.01

4. Guidance to check compliance with the exposure scenario (Environment 1)

ECHA guidance for downstream users

3. Exposure estimation (Health 1)

Assessment method	ECETOC TRA v2.0 Worker
Exposure	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions Worker - inhalation, long-term - systemic: Exposure 0.185 mg/m³, DNEL 11 mg/m³, RCR 0.017 Worker - inhalation, long-term - local: Exposure 0.185 mg/m³, DNEL 1.22 mg/m³, RCR 0.152 Worker - inhalation, short-term - local: Exposure 0.742 mg/m³, DNEL 6.1 mg/m³, RCR 0.122 PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Worker - inhalation, long-term - systemic: Exposure 0.779 mg/m³, DNEL 11 mg/m³, RCR 0.071 Worker - inhalation, long-term - local: Exposure 0.779 mg/m³, DNEL 1.22 mg/m³, RCR 0.638 Worker - inhalation, short-term - local: Exposure 0.519 mg/m³, DNEL 6.1 mg/m³, RCR 0.085 PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Worker - inhalation, long-term - systemic: Exposure 0.779 mg/m³, DNEL 11 mg/m³, RCR 0.071 Worker - inhalation, long-term - local: Exposure 0.779 mg/m³, DNEL 1.22 mg/m³, RCR 0.638 Worker - inhalation, short-term - local: Exposure 1.557 mg/m³, DNEL 6.1 mg/m³, RCR 0.255 PROC4 Chemical production where opportunity for exposure arises Worker - inhalation, long-term - systemic: Exposure 0.649 mg/m³, DNEL 11 mg/m³, RCR 0.059 Worker - inhalation, long-term - local: Exposure 0.649 mg/m³, DNEL 1.22 mg/m³, RCR 0.532 Worker - inhalation, short-term - local: Exposure 2.595 mg/m³, DNEL 6.1 mg/m³, RCR 0.426 PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities Worker - inhalation, long-term - systemic: Exposure 0.649 mg/m³, DNEL 11 mg/m³, RCR 0.059 Worker - inhalation, long-term - local: Exposure 0.649 mg/m³, DNEL 1.22 mg/m³, RCR 0.532 Worker - inhalation, short-term - local: Exposure 1.298 mg/m³, DNEL 6.1 mg/m³, RCR 0.213

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.