Carsystem Uniflex PU weiß

Version		Revision Date:	Date of last issue: 13.02.2020
1.2	GB / EN	14.09.2021	Date of first issue: 04.11.2019

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

1.1 Product identifier

Trade name : Carsystem Uniflex PU weiß

Product code : 148.923

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

Use of the Substance/Mixture : Adhesives and/or sealants

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company : Vosschemie GmbH
Esinger Steinweg 50
25436 Uetersen
Germany

info@vosschemie.de

Telephone : 04122 717 0
Telefax : 04122 717158

Responsible Department : Laboratory

04122 717 0
sds@vosschemie.de

Distributor in New Zealand:
RA Johnstone & Co Ltd
33 Ha Crescent, Wiri, Auckland 2104
P: 09 25000 90
sales@raj.co.nz
www.raj.co.nz

1.4 Emergency telephone number

Telephone : Giftinformationszentrum (GIZ)-Nord,
Göttingen, Deutschland
0551 19240

24HRS EMERGENCY ASSISTANCE IN NEW ZEALAND
NATIONAL POISON CONTROL CENTRE: 0800 POISON [764 766]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements :

Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P284 Wear respiratory protection.

Response:

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

Diphenylmethanediisocyanate, isomeres and homologues
4,4'-methylenediphenyl diisocyanate

Additional Labelling

EUH204	Contains isocyanates. May produce an allergic reaction.
EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: 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.

Toxicological information: 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.

Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mixture

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
xylene	1330-20-7 215-535-7 601-022-00-9 01-2119488216-32	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 (Central nervous system, Liver, Kidney) Asp. Tox. 1; H304 Aquatic Chronic 3; H412 Acute toxicity estimate Acute inhalation toxicity: 11 mg/l	>= 2.5 - < 10
Titanium dioxide	13463-67-7 236-675-5 01-2119489379-17	Carc. 2; H351	>= 1 - < 5
ethyl acetate	141-78-6 205-500-4 607-022-00-5 01-2119475103-46	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 (Central nervous	>= 1 - < 5

		system) EUH066	
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1B; H334 Skin Sens. 1B; H317 Carc. 2; H351 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 (Lungs) Acute toxicity estimate Acute inhalation toxicity: 11 mg/l	>= 0.1 - < 1
4,4'-methylenediphenyl diisocyanate	101-68-8 202-966-0 615-005-00-9 01-2119457014-47	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 specific concentration limit Eye Irrit. 2; H319 >= 5 % STOT SE 3; H335 >= 5 % Skin Irrit. 2; H315 >= 5 % Resp. Sens. 1; H334 >= 0.1 % Acute toxicity estimate Acute inhalation toxicity: 1.5 mg/l	>= 0.1 - < 1

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	:	First aider needs to protect himself. Remove from exposure, lie down. Victim to lie down in the recovery position, cover and keep him warm. Take off all contaminated clothing immediately.
If inhaled	:	Remove person to fresh air. If signs/symptoms continue, get medical attention.
In case of skin contact	:	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
In case of eye contact	:	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.
If swallowed	:	Do NOT induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Risks	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Carbon dioxide (CO_2) Dry powder Water spray jet Alcohol-resistant foam
Unsuitable extinguishing media	:	High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting	:	Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Avoid inhalation of vapour or mist.

6.2 Environmental precautions

Environmental precautions	:	Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labelled containers. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13., For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Local/Total ventilation	:	Use only with adequate ventilation.
Advice on safe handling	:	Keep container closed when not in use. Avoid contact with eyes. Avoid breathing vapours, mist or gas. Provide sufficient air exchange and/or exhaust in work rooms. Do not get on skin or clothing. Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates.
Advice on protection against fire and explosion	:	Keep away from open flames, hot surfaces and sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container. Keep in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep away from direct sunlight.

Advice on common storage : Keep away from food and drink.

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
xylene	1330-20-7	TWA	50 ppm 221 mg/m3	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	100 ppm 442 mg/m3	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	50 ppm 220 mg/m3	GB EH40
	Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	100 ppm 441 mg/m3	GB EH40
	Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
Titanium dioxide	13463-67-7	TWA (inhalable dust)	10 mg/m3	GB EH40
		TWA (Respirable dust)	4 mg/m3	GB EH40
ethyl acetate	141-78-6	STEL	400 ppm 1,468 mg/m3	2017/164/EU
	Further information: Indicative			
		TWA	200 ppm 734 mg/m3	2017/164/EU
	Further information: Indicative			
		TWA	200 ppm 734 mg/m3	GB EH40
		STEL	400 ppm 1,468 mg/m3	GB EH40
Diphenylme-	9016-87-9	TWA	0.02 mg/m3	GB EH40

thanediisocyanate, isomeres and homologues			(NCO)	
	Further information: Capable of causing occupational asthma.			
		STEL	0.07 mg/m3 (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			
4,4'-methylenediphenyl diisocyanate	101-68-8	TWA	0.02 mg/m3 (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			
		STEL	0.07 mg/m3 (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
xylene	1330-20-7	methyl hippuric acid: 650 Millimoles per mole Creatinine (Urine)	After shift	GB EH40 BAT
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	isocyanate-derived diamine (Isocyanates): 1 µmol/mol creatinine (Urine)	At the end of the period of exposure	GB EH40 BAT
4,4'-methylenediphenyl diisocyanate	101-68-8	isocyanate-derived diamine (Isocyanates): 1 µmol/mol creatinine (Urine)	At the end of the period of exposure	GB EH40 BAT

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
xylene	Workers	Inhalation	Acute systemic effects	289 mg/m3
	Workers	Inhalation	Acute local effects	289 mg/m3
	Workers	Skin contact	Long-term systemic effects	180 mg/kg
	Workers	Inhalation	Long-term systemic effects	77 mg/m3
	Consumers	Inhalation	Acute systemic effects	174 mg/m3
	Consumers	Inhalation	Acute local effects	174 mg/m3
	Consumers	Skin contact	Long-term systemic effects	108 mg/kg
	Consumers	Inhalation	Long-term systemic effects	14.8 mg/m3
ethyl acetate	Workers	Inhalation	Long-term systemic effects, Long-term local effects	734 mg/m3 200 ppm

	Workers	Inhalation	Acute systemic effects, Acute local effects	1468 mg/m3 400 ppm
	Workers	Skin contact	Long-term systemic effects	63 mg/kg
	Consumers	Inhalation	Long-term systemic effects, Long-term local effects	367 mg/m3
	Consumers	Inhalation	Acute systemic effects, Acute local effects	734 mg/m3 200 ppm
	Consumers	Skin contact	Long-term systemic effects	37 mg/kg
	Consumers	Ingestion	Long-term exposure	4.5 mg/kg
4,4'-methylenediphenyl diisocyanate	Workers	Inhalation	Long-term local effects	0.05 mg/m3
	Workers	Inhalation	Acute local effects	0.1 mg/m3
	Consumers	Inhalation	Long-term local effects	0.025 mg/m3
	Consumers	Inhalation	Acute local effects	0.05 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
xylene	Fresh water	0.327 mg/l
	Marine water	0.327 mg/l
	Fresh water sediment	12.46 mg/l
	Marine sediment	12.46 mg/l
	Soil	2.31 mg/l
ethyl acetate	Fresh water	0.24 mg/l
	Marine water	0.024 mg/l
	Intermittent use/release	1.65 mg/l
	Sewage treatment plant	650 mg/l
	Fresh water sediment	1.15 mg/kg
	Marine sediment	0.115 mg/kg
	Soil	0.148 mg/kg
	Oral (Secondary Poisoning)	200 mg/kg
4,4'-methylenediphenyl diisocyanate	Fresh water	1 mg/l
	Marine water	0.1 mg/l
	Sewage treatment plant	1 mg/l
	Soil	1 mg/kg
	Intermittent use/release	10 mg/l

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166

Hand protection
- Material : butyl-rubber
- Break through time : > 480 min
- Glove thickness : >= 0.4 mm

Directive	:	DIN EN 374
Protective index	:	Class 6
Remarks	:	Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Preventive skin protection
Skin and body protection	:	Please wear suitable protective clothing, e.g. made of cotton or heat-resistant synthetic fibres. Long sleeved clothing
Respiratory protection	:	This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.
Protective measures	:	Ensure that eye flushing systems and safety showers are located close to the working place. Avoid contact with the skin and the eyes. Wear suitable protective equipment. Follow the skin protection plan.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	paste
Colour	:	white
Odour	:	characteristic
Melting point/range	:	not determined
Boiling point/boiling range	:	not determined
Flammability	:	does not ignite
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	Not applicable
pH	:	Not applicable substance/mixture reacts with water
Viscosity		

Viscosity, dynamic	:	60,000 - 150,000 mPa.s
Viscosity, kinematic	:	not determined
Solubility(ies)		
Water solubility	:	immiscible
Partition coefficient: n-octanol/water	:	not determined
Vapour pressure	:	not determined
Density	:	ca. 1.3 g/cm3 (20 °C)

9.2 Other information

Explosives	:	Not explosive In use, may form flammable/explosive vapour-air mixture.
Self-ignition	:	not auto-flammable

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if used as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid	:	Alkali metals Aldehydes nitro compounds Sulphur compounds Peroxides Strong acids

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.
Hazardous decomposition products formed under fire conditions.

SECTION 11: Toxicological information

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

Acute toxicity

Not classified based on available information.

Product:

Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method

Components:

xylene:

Acute oral toxicity	:	LD50 Oral (Rat): > 2,000 mg/kg
Acute inhalation toxicity	:	Acute toxicity estimate: 11 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Expert judgement LC50 (Rat): 21.7 mg/l Exposure time: 4 h Test atmosphere: vapour
Acute dermal toxicity	:	LD50 (Rabbit): > 1,700 mg/kg

Titanium dioxide:

Acute oral toxicity	:	LD50 Oral (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LD50 (Rat): > 6.8 mg/l Exposure time: 4 h

ethyl acetate:

Acute oral toxicity	:	LD50 Oral (Rat): 5,620 mg/kg
Acute inhalation toxicity	:	LC0 (Rat): 22.5 mg/l, > 6000 ppm Exposure time: 6 h Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 20,000 mg/kg

Diphenylmethanediisocyanate, isomeres and homologues:

Acute oral toxicity	:	LD50 Oral (Rat): 49,000 mg/kg

Acute inhalation toxicity	:	Acute toxicity estimate: 11 mg/l Test atmosphere: vapour Method: Expert judgement
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 9,400 mg/kg Method: OECD Test Guideline 402

4,4'-methylenediphenyl diisocyanate:

Acute oral toxicity	:	LD50 Oral (Rat): > 2,000 mg/kg
Acute inhalation toxicity	:	Acute toxicity estimate: 1.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Expert judgement LC50 (Rat): 0.368 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 9,400 mg/kg Method: OECD Test Guideline 402

Skin corrosion/irritation

Not classified based on available information.

Components:

xylene:

Result	:	Skin irritation

Titanium dioxide:

Remarks	:	No skin irritation

Diphenylmethanediisocyanate, isomeres and homologues:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

xylene:

Result	:	Moderate eye irritation

Titanium dioxide:

Remarks	:	Dust contact with the eyes can lead to mechanical irritation.

Diphenylmethanediisocyanate, isomeres and homologues:

Result : Moderate eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:

Titanium dioxide:

Remarks : No known sensitising effect.

Diphenylmethanediisocyanate, isomeres and homologues:

Test Type : Local lymph node assay (LLNA)
Exposure routes : Dermal
Species : Mouse
Assessment : The product is a skin sensitiser, sub-category 1B.
Method : OECD Test Guideline 429
Result : positive

Exposure routes : inhalation (dust/mist/fume)
Species : Rat
Assessment : The product is a respiratory sensitiser, sub-category 1B.
Result : positive

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

Diphenylmethanediisocyanate, isomeres and homologues:

Carcinogenicity - Assessment : Limited evidence of a carcinogenic effect.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Components:

xylene:

Assessment : May cause respiratory irritation.

Diphenylmethanediisocyanate, isomeres and homologues:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:

xylene:

Target Organs : Central nervous system, Liver, Kidney
Assessment : May cause damage to organs through prolonged or repeated exposure.

Diphenylmethanediisocyanate, isomeres and homologues:

Exposure routes : Inhalation
Target Organs : Lungs
Assessment : May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Not classified based on available information.

Components:

xylene:

May be fatal if swallowed and enters airways.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : 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 12: Ecological information

12.1 Toxicity

Components:

xylene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 7.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 3.82 mg/l Exposure time: 48 h Test Type: Immobilization Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 2.2 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201
Toxicity to microorganisms	:	NOEC (Bacteria): 157 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	:	NOEC: > 1.3 mg/l Exposure time: 56 d Species: Oncorhynchus mykiss (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 1.17 mg/l Exposure time: 7 d Species: Daphnia dubia (water flea) Method: Regulation (EC) No. 440/2008, Annex, C.20

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Chronic aquatic toxicity	:	Harmful to aquatic life with long lasting effects.

Titanium dioxide:

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h

ethyl acetate:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 230 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 610 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	NOEC (Pseudomonas putida): 650 mg/l Exposure time: 16 h
Toxicity to fish (Chronic toxicity)	:	NOEC: > 75.6 mg/l Exposure time: 32 d Species: Pimephales promelas (fathead minnow) Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 2.4 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

Method: OECD Test Guideline 211

Diphenylmethanediisocyanate, isomeres and homologues:

Toxicity to fish	:	LC0 (Fish): > 1,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC0 (Daphnia (water flea)): > 500 mg/l Exposure time: 24 h
Toxicity to algae/aquatic plants	:	EC0 (Scenedesmus subspicatus): 1,640 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (Bacteria): > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: > 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

4,4'-methylenediphenyl diisocyanate:

Toxicity to fish	:	LC0 (Oryzias latipes (Orange-red killifish)): > 3,000 mg/l End point: mortality Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 1,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): 1,640 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (Bacteria): > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

12.2 Persistence and degradability

Components:

xylene:

Biodegradability	:	Biodegradation: 87.8 % Exposure time: 28 d Method: OECD Test Guideline 301

Diphenylmethanediisocyanate, isomeres and homologues:

Biodegradability : Result: According to the results of tests of biodegradability this product is not readily biodegradable.
Biodegradation: < 10 %
Exposure time: 28 d

4,4'-methylenediphenyl diisocyanate:

Biodegradability : Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C

12.3 Bioaccumulative potential

Components:

xylene:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 25.9

Partition coefficient: n-octanol/water : log Pow: 3.16 (20 °C)

ethyl acetate:

Partition coefficient: n-octanol/water : log Pow: 0.68 (25 °C)

Diphenylmethanediisocyanate, isomeres and homologues:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Exposure time: 42 d
Concentration: 0.2 mg/l
Bioconcentration factor (BCF): < 14
Method: OECD Test Guideline 305C
Accumulation in aquatic organisms is unlikely.

Partition coefficient: n-octanol/water : log Pow: 4.51 (22 °C)
pH: 7

4,4'-methylenediphenyl diisocyanate:

Bioaccumulation : Bioconcentration factor (BCF): 200
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 4.51 (20 °C)

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Endocrine disrupting properties

Product:

Assessment : 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.

12.7 Other adverse effects

Product:

Additional ecological information : No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
Send to a licensed waste management company.

Contaminated packaging : Packaging that is not properly emptied must be disposed of as the unused product.
Dispose of in accordance with local regulations.

Waste Code : The following Waste Codes are only suggestions:
07 02 08, other still bottoms and reaction residues

SECTION 14: Transport information

14.1 UN number or ID number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3 Diphenylmethanediisocyanate, isomeres and homologues (Number on list 56) 4,4'-methylenediphenyl diisocyanate (Number on list 56)
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.		Not applicable

NEW ZEALAND:
Class 6.5A
Respiratory Sensitization

HSR002670 Surface Coatings & Colourants – Subsidiary Hazard

Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

15.2 Chemical safety assessment

A chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has not been carried out for this product.

SECTION 16: Other information

Full text of H-Statements

H225	:	Highly flammable liquid and vapour.
H226	:	Flammable liquid and vapour.
H304	:	May be fatal if swallowed and enters airways.
H312	:	Harmful in contact with skin.
H315	:	Causes skin irritation.

H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H332	:	Harmful if inhaled.
H334	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	:	May cause respiratory irritation.
H336	:	May cause drowsiness or dizziness.
H351	:	Suspected of causing cancer.
H351	:	Suspected of causing cancer if inhaled.
H373	:	May cause damage to organs through prolonged or repeated exposure if inhaled.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H412	:	Harmful to aquatic life with long lasting effects.
EUH066	:	Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Carc.	:	Carcinogenicity
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Resp. Sens.	:	Respiratory sensitisation
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2017/164/EU	:	Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 BAT	:	UK. Biological monitoring guidance values
2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
2017/164/EU / STEL	:	Short term exposure limit
2017/164/EU / TWA	:	Limit Value - eight hours
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

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; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO

- International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the 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; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Resp. Sens. 1	H334	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

Carsystem Uniflex PU schwarz

Version		Revision Date:	Date of last issue: 04.11.2019
1.1	GB / EN	13.02.2020	Date of first issue: 04.11.2019

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

1.1 Product identifier

Trade name : Carsystem Uniflex PU schwarz

Product code : 148.924

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

Use of the Sub-stance/Mixture : Adhesives and/or sealants

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company : Vosschemie GmbH
Esinger Steinweg 50
25436 Uetersen
Germany

info@vosschemie.de

Telephone : 04122 717 0
Telefax : 04122 717158

Responsible Department : Laboratory

04122 717 0
sds@vosschemie.de

Distributor in New Zealand:
RA Johnstone & Co Ltd
33 Ha Crescent, Wiri, Auckland 2104
P: 09 25000 90
sales@raj.co.nz
www.raj.co.nz

1.4 Emergency telephone number

Telephone : Giftinformationszentrum (GIZ)-Nord,
Göttingen, Deutschland
0551 19240

24HRS EMERGENCY ASSISTANCE IN NEW ZEALAND
NATIONAL POISON CONTROL CENTRE: 0800 POISON [764 766]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements :

Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P284 In case of inadequate ventilation wear respiratory protection.

Response:

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

Diphenylmethanediisocyanate, isomeres and homologues
4,4'-methylenediphenyl diisocyanate

Additional Labelling

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mixture

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
xylene	1330-20-7 215-535-7 601-022-00-9 01-2119488216-32	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Chronic 3; H412	>= 5 - < 10
ethyl acetate	141-78-6 205-500-4 607-022-00-5 01-2119475103-46	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	>= 1 - < 5
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1B; H334 Skin Sens. 1B; H317 Carc. 2; H351 STOT SE 3; H335 STOT RE 2; H373	>= 0.1 - < 1
4,4'-methylenediphenyl diisocyanate	101-68-8 202-966-0 615-005-00-9 01-2119457014-47	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 STOT RE 2; H373	>= 0.1 - < 1

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : First aider needs to protect himself.
Remove from exposure, lie down.

Victim to lie down in the recovery position, cover and keep him warm.
Take off all contaminated clothing immediately.

If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.

In case of skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
If symptoms persist, call a physician.

In case of eye contact : Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.

If swallowed : Do NOT induce vomiting.
Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Risks : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO2)
Dry powder
Water spray jet
Alcohol-resistant foam

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Ensure adequate ventilation, especially in confined areas.
Avoid contact with skin, eyes and clothing.
Use personal protective equipment.
Avoid inhalation of vapour or mist.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Pick up and transfer to properly labelled containers.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13., For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Keep container closed when not in use.
Avoid contact with eyes.
Avoid breathing vapours, mist or gas.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not get on skin or clothing.

Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates.

Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container.
Keep in a dry, cool and well-ventilated place.
Keep away from heat and sources of ignition.
Keep away from direct sunlight.

Advice on common storage : Keep away from food and drink.

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
xylene	1330-20-7	STEL	100 ppm 441 mg/m3	GB EH40
Further information	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		TWA	50 ppm 220 mg/m3	GB EH40
Further information	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		TWA	50 ppm 221 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	100 ppm 442 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
ethyl acetate	141-78-6	STEL	400 ppm 1,468 mg/m3	2017/164/EU
Further information	Indicative			
		TWA	200 ppm 734 mg/m3	2017/164/EU
Further information	Indicative			
		TWA	200 ppm 734 mg/m3	GB EH40
		STEL	400 ppm 1,468 mg/m3	GB EH40
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	TWA	0.02 mg/m3 (NCO)	GB EH40
Further information	Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even in tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre- existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified as			

	asthmagens or respiratory sensitisers. Further information can be found in the HSE publication Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced to as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categories shown in Table 1. It should be remembered that other substances not in these tables may cause occupational asthma. HSE's asthma web pages (www.hse.gov.uk/asthma) provide further information.			
		STEL	0.07 mg/m3 (NCO)	GB EH40
Further information	Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even in tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre- existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified as asthmagens or respiratory sensitisers. Further information can be found in the HSE publication Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced to as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categories shown in Table 1. It should be remembered that other substances not in these tables may cause occupational asthma. HSE's asthma web pages (www.hse.gov.uk/asthma) provide further information.			
4,4'-methylenediphenyl	101-68-8	TWA	0.02 mg/m3 (NCO)	GB EH40

diisocyanate				
Further information	Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even in tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre- existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified as asthmagens or respiratory sensitisers. Further information can be found in the HSE publication Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced to as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categories shown in Table 1. It should be remembered that other substances not in these tables may cause occupational asthma. HSE's asthma web pages (www.hse.gov.uk/asthma) provide further information.			
		STEL	0.07 mg/m3 (NCO)	GB EH40
Further information	Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even in tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre- existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified as asthmagens or respiratory sensitisers. Further information can be found in the HSE publication Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced to as low as is reasonably practicable. Activities giving rise to			

	short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categories shown in Table 1. It should be remembered that other substances not in these tables may cause occupational asthma. HSE's asthma web pages (www.hse.gov.uk/asthma) provide further information.

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
xylene	1330-20-7	methyl hippuric acid: 650 Millimoles per mole Creatinine (Urine)	After shift	GB EH40 BAT
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	isocyanate-derived diamine (Isocyanates): 1 µmol/mol creatinine (Urine)	At the end of the period of exposure	GB EH40 BAT
4,4'-methylenediphenyl diisocyanate	101-68-8	isocyanate-derived diamine (Isocyanates): 1 µmol/mol creatinine (Urine)	At the end of the period of exposure	GB EH40 BAT

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
xylene	Workers	Inhalation	Acute systemic effects	289 mg/m3
	Workers	Inhalation	Acute local effects	289 mg/m3
	Workers	Skin contact	Long-term systemic effects	180 mg/kg
	Workers	Inhalation	Long-term systemic effects	77 mg/m3
	Consumers	Inhalation	Acute systemic effects	174 mg/m3
	Consumers	Inhalation	Acute local effects	174 mg/m3
	Consumers	Skin contact	Long-term systemic effects	108 mg/kg
	Consumers	Inhalation	Long-term systemic effects	14.8 mg/m3
ethyl acetate	Workers	Inhalation	Long-term systemic effects, Long-term local effects	734 mg/m3 200 ppm
	Workers	Inhalation	Acute systemic effects, Acute local effects	1468 mg/m3 400 ppm
	Workers	Skin contact	Long-term systemic	63 mg/kg

			effects	
	Consumers	Inhalation	Long-term systemic effects, Long-term local effects	367 mg/m3
	Consumers	Inhalation	Acute systemic effects, Acute local effects	734 mg/m3 200 ppm
	Consumers	Skin contact	Long-term systemic effects	37 mg/kg
	Consumers	Ingestion	Long-term exposure	4.5 mg/kg
4,4'-methylenediphenyl diisocyanate	Workers	Inhalation	Long-term local effects	0.05 mg/m3
	Workers	Inhalation	Acute local effects	0.1 mg/m3
	Consumers	Inhalation	Long-term local effects	0.025 mg/m3
	Consumers	Inhalation	Acute local effects	0.05 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
xylene	Fresh water	0.327 mg/l
	Marine water	0.327 mg/l
	Fresh water sediment	12.46 mg/l
	Marine sediment	12.46 mg/l
	Soil	2.31 mg/l
ethyl acetate	Fresh water	0.24 mg/l
	Marine water	0.024 mg/l
	Intermittent use/release	1.65 mg/l
	Sewage treatment plant	650 mg/l
	Fresh water sediment	1.15 mg/kg
	Marine sediment	0.115 mg/kg
	Soil	0.148 mg/kg
	Oral (Secondary Poisoning)	200 mg/kg
4,4'-methylenediphenyl diisocyanate	Fresh water	1 mg/l
	Marine water	0.1 mg/l
	Sewage treatment plant	1 mg/l
	Soil	1 mg/kg
	Intermittent use/release	10 mg/l

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166

Hand protection

Material : butyl-rubber

Break through time : > 480 min

Glove thickness : >= 0.4 mm

Directive : DIN EN 374

Protective index	:	Class 6
Remarks	:	Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Preventive skin protection
Skin and body protection	:	Please wear suitable protective clothing, e.g. made of cotton or heat-resistant synthetic fibres. Long sleeved clothing
Respiratory protection	:	This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.
Protective measures	:	Ensure that eye flushing systems and safety showers are located close to the working place. Avoid contact with the skin and the eyes. Wear suitable protective equipment. Follow the skin protection plan. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	paste
Colour	:	black
Odour	:	characteristic
pH	:	Not applicable
Melting point/range	:	not determined
Boiling point/boiling range	:	not determined
Flash point	:	Not applicable
Flammability (solid, gas)	:	does not ignite
Upper explosion limit / Upper flammability limit	:	No data available

Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	not determined
Density	:	ca. 1.3 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	immiscible
Partition coefficient: n-octanol/water	:	not determined
Viscosity		
Viscosity, dynamic	:	60,000 - 150,000 mPa.s
Viscosity, kinematic	:	not determined
Explosive properties	:	Not explosive In use, may form flammable/explosive vapour-air mixture.

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if used as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Alkali metals
Aldehydes
nitro compounds
Sulphur compounds
Peroxides
Strong acids

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.
Hazardous decomposition products formed under fire conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not classified based on available information.

Product:

Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method

Components:

xylene:

Acute oral toxicity	:	LD50 Oral (Rat): > 2,000 mg/kg
Acute inhalation toxicity	:	Acute toxicity estimate: 11 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Expert judgement LC50 (Rat): 21.7 mg/l Exposure time: 4 h Test atmosphere: vapour
Acute dermal toxicity	:	LD50 (Rabbit): > 1,700 mg/kg

ethyl acetate:

Acute oral toxicity	:	LD50 Oral (Rat): 5,620 mg/kg
Acute inhalation toxicity	:	LC0 (Rat): 22.5 mg/l, > 6000 ppm Exposure time: 6 h Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 20,000 mg/kg

Diphenylmethanediisocyanate, isomeres and homologues:

Acute oral toxicity	:	LD50 Oral (Rat): 49,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 0.493 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.

Acute dermal toxicity : LD50 Dermal (Rabbit): > 9,400 mg/kg
Method: OECD Test Guideline 402

4,4'-methylenediphenyl diisocyanate:

Acute oral toxicity : LD50 Oral (Rat): > 2,000 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement

LC50 (Rat): 0.368 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 Dermal (Rabbit): > 9,400 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Not classified based on available information.

Components:

xylene:

Result : Skin irritation

Diphenylmethanediisocyanate, isomeres and homologues:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

xylene:

Result : Moderate eye irritation

Diphenylmethanediisocyanate, isomeres and homologues:

Result : Moderate eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:

Diphenylmethanediisocyanate, isomeres and homologues:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Dermal
Species	:	Mouse
Assessment	:	The product is a skin sensitiser, sub-category 1B.
Method	:	OECD Test Guideline 429
Result	:	positive
Exposure routes	:	inhalation (dust/mist/fume)
Species	:	Rat
Assessment	:	The product is a respiratory sensitiser, sub-category 1B.
Result	:	positive

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

Diphenylmethanediisocyanate, isomeres and homologues:

Carcinogenicity - Assessment	:	Limited evidence of a carcinogenic effect.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Components:

xylene:

Assessment	:	May cause respiratory irritation.

Diphenylmethanediisocyanate, isomeres and homologues:

Assessment	:	May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:

xylene:

Target Organs	:	Central nervous system, Liver, Kidney
Assessment	:	May cause damage to organs through prolonged or repeated exposure.

Diphenylmethanediisocyanate, isomeres and homologues:

Exposure routes	:	Inhalation
Target Organs	:	Lungs
Assessment	:	May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Not classified based on available information.

Components:

xylene:

May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1 Toxicity

Components:

xylene:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 7.6 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 3.82 mg/l Exposure time: 48 h Test Type: Immobilization Method: OECD Test Guideline 202
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 2.2 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201
Toxicity to microorganisms	:	NOEC (Bacteria): 157 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	:	NOEC: > 1.3 mg/l Exposure time: 56 d Species: Oncorhynchus mykiss (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 1.17 mg/l Exposure time: 7 d Species: Daphnia dubia (water flea) Method: Regulation (EC) No. 440/2008, Annex, C.20

Ecotoxicology Assessment

Chronic aquatic toxicity	:	Harmful to aquatic life with long lasting effects.

ethyl acetate:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 230 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 610 mg/l Exposure time: 48 h
Toxicity to algae	:	NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	NOEC (Pseudomonas putida): 650 mg/l Exposure time: 16 h
Toxicity to fish (Chronic toxicity)	:	NOEC: > 75.6 mg/l Exposure time: 32 d Species: Pimephales promelas (fathead minnow) Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 2.4 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

Diphenylmethanediisocyanate, isomeres and homologues:

Toxicity to fish	:	LC0 (Fish): > 1,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC0 (Daphnia (water flea)): > 500 mg/l Exposure time: 24 h
Toxicity to algae	:	EC0 (Scenedesmus subspicatus): 1,640 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (Bacteria): > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: > 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

4,4'-methylenediphenyl diisocyanate:

Toxicity to fish	:	LC0 (Oryzias latipes (Orange-red killifish)): > 3,000 mg/l End point: mortality Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 1,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202

Toxicity to algae	:	EC50 (Desmodesmus subspicatus (green algae)): 1,640 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (Bacteria): > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

12.2 Persistence and degradability

Components:

xylene:

Biodegradability	:	Biodegradation: 87.8 % Exposure time: 28 d Method: OECD Test Guideline 301

Diphenylmethanediisocyanate, isomeres and homologues:

Biodegradability	:	Result: According to the results of tests of biodegradability this product is not readily biodegradable. Biodegradation: < 10 % Exposure time: 28 d

4,4'-methylenediphenyl diisocyanate:

Biodegradability	:	Biodegradation: 0 % Exposure time: 28 d Method: OECD Test Guideline 302C

12.3 Bioaccumulative potential

Components:

xylene:

Bioaccumulation	:	Species: Oncorhynchus mykiss (rainbow trout) Bioconcentration factor (BCF): 25.9
Partition coefficient: n-octanol/water	:	log Pow: 3.16 (20 °C)

ethyl acetate:

Partition coefficient: n-octanol/water	:	log Pow: 0.68 (25 °C)

Diphenylmethanediisocyanate, isomeres and homologues:

Bioaccumulation	:	Species: Cyprinus carpio (Carp) Exposure time: 42 d

Concentration: 0.2 mg/l
Bioconcentration factor (BCF): < 14
Method: OECD Test Guideline 305C
Accumulation in aquatic organisms is unlikely.

Partition coefficient: n-octanol/water : log Pow: 4.51 (22 °C)
pH: 7

4,4'-methylenediphenyl diisocyanate:

Bioaccumulation : Bioconcentration factor (BCF): 200
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 4.51 (20 °C)

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Product:

Additional ecological information : No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
Send to a licensed waste management company.

Contaminated packaging : Packaging that is not properly emptied must be disposed of as the unused product.
Dispose of in accordance with local regulations.

Waste Code : The following Waste Codes are only suggestions:
07 02 08, other still bottoms and reaction residues

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants	:	Not applicable
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3 4,4'-methylenediphenyl diisocyanate (Number on list 56)

NEW ZEALAND:

Class 6.5A	Respiratory Sensitiser
HSR002670	Surface Coatings & Colourants – Subsidiary Hazard

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical safety assessment

A chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has not been carried out for this product.

SECTION 16: Other information

Full text of H-Statements

H225	:	Highly flammable liquid and vapour.
H226	:	Flammable liquid and vapour.
H304	:	May be fatal if swallowed and enters airways.
H312	:	Harmful in contact with skin.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H332	:	Harmful if inhaled.
H334	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	:	May cause respiratory irritation.
H336	:	May cause drowsiness or dizziness.
H351	:	Suspected of causing cancer.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H373	:	May cause damage to organs through prolonged or repeated exposure if inhaled.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Carc.	:	Carcinogenicity
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Resp. Sens.	:	Respiratory sensitisation
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2017/164/EU	:	Commission Directive (EU) 2017/164 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 BAT	:	UK. Biological monitoring guidance values
2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
2017/164/EU / STEL	:	Short term exposure limit
2017/164/EU / TWA	:	Limit Value - eight hours
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

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; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the 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; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Resp. Sens. 1	H334	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.