

SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878

PUC-001 A

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

1.1. Product identifier

Product name : PUC-001 A
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Lacquer/varnish

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Novatio*
Industrielaan 5B
B-2250 Olen
☎ +32 14 25 76 40
☎ +32 14 22 02 66
info@novatio.be
*NOVATIO is a registered trademark of Novatech International N.V.

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
☎ +32 14 85 97 38
info@novatech.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Flam. Liq.	category 2	H225: Highly flammable liquid and vapour.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H336: May cause drowsiness or dizziness.

2.2. Label elements



Contains: n-butyl acetate; acetone; 2-methoxy-1-methylethyl acetate.

Signal word Danger

H-statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

P-statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves and eye protection/face protection.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P403 + P233

Store in a well-ventilated place. Keep container tightly closed.

Supplemental information

EUH066

Repeated exposure may cause skin dryness or cracking.

EUH208

Contains: 2,3-epoxypropyl neodecanoate. May produce an allergic reaction.

2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No List No	Conc. (C)	Classification according to CLP	Note	Remark	M-factors and ATE
n-butyl acetate 01-2119485493-29	123-86-4 204-658-1	C≤20%	Flam. Liq. 3; H226 STOT SE 3; H336 EUH066	(1)(2)(10)	Constituent	
acetone 01-2119471330-49	67-64-1 200-662-2	10% ≤C<15%	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	(1)(2)(10)	Constituent	
2-methoxy-1-methylethyl acetate 01-2119475791-29	108-65-6 203-603-9	2.5% <C<10%	Flam. Liq. 3; H226 STOT SE 3; H336	(1)(2)(10)	Constituent	
hydrocarbons, C9, aromatics 01-2119455851-35	128601-23-0 918-668-5	1%<C<2.5%	Flam. Liq. 3; H226 Asp. Tox. 1; H304 STOT SE 3; H335 STOT SE 3; H336 Aquatic Chronic 2; H411 EUH066	(1)(10)	Constituent	
reaction mass of: N,N'-ethane-1,2-diylbis (hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl) amino]ethyl]octadecanamide/N,N'-ethane- 1,2-diylbis(12-hydroxyoctadecanamide) 01-0000017860-69	432-430-3	C<2.5%	Aquatic Chronic 4; H413	(1)	Constituent	
xylene 01-2119488216-32	1330-20-7 215-535-7	1%<C<2.5%	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Asp. Tox. 1; H304 STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 Aquatic Chronic 3; H412	(1)(2)(6)(10)	Constituent	
2,3-epoxypropyl neodecanoate 01-2119431597-33	26761-45-5 247-979-2	0.1% ≤C<0.25%	Muta. 2; H341 Skin Sens. 1; H317 Aquatic Chronic 2; H411	(1)(10)	Constituent	

(1) For H- and EUH-statements in full: see section 16

(2) Substance with a Community workplace exposure limit

(6) Enumerated in Annex VI of Regulation (EC) No. 1272/2008 but the classification has been adapted after evaluation of available test data

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

Note: numbers 9xx-xxx-x are provisional list numbers assigned by Echa pending an official EC inventory number

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

After inhalation:

Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

After skin contact:

If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

After eye contact:

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist if irritation persists.

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After ingestion:

Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

4.2.1 Acute symptoms

After inhalation:

Dizziness. Drowsiness.

After skin contact:

ON CONTINUOUS EXPOSURE/CONTACT: Dry skin. Cracking of the skin.

After eye contact:

Irritation of the eye tissue.

After ingestion:

No effects known.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.

Major fire: Class B foam (not alcohol-resistant).

5.1.2 Unsuitable extinguishing media:

Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.

Major fire: Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture

Upon combustion: formation of CO, CO2 and small quantities of nitrous vapours.

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Do not move the load if exposed to heat.

5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). Protective goggles (EN 166). Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment.

6.1.1 Protective equipment for non-emergency personnel

See section 8.2

6.1.2 Protective equipment for emergency responders

Gloves (EN 374). Protective goggles (EN 166). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing

See section 8.2

6.2. Environmental precautions

Contain released product. Dam up the liquid spill. Try to reduce evaporation. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into inert absorbent material. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers.

Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See section 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Insufficient ventilation: keep naked flames/sparks away. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: use spark-/explosionproof appliances and lighting system. Gas/vapour heavier than air at 20°C.

Observe strict hygiene. Remove contaminated clothing immediately. Keep container tightly closed. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Store in a cool area. Store in a dry area. Fireproof storeroom. Keep out of direct sunlight. Meet the legal requirements.

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7.2.2 Keep away from:

Heat sources, ignition sources.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

EU

Acetone	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	500 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	1210 mg/m ³
n-Butyl acetate	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	50 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	241 mg/m ³
	Short time value (Indicative occupational exposure limit value)	150 ppm
	Short time value (Indicative occupational exposure limit value)	723 mg/m ³
Xylene, mixed isomers, pure	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	50 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	221 mg/m ³
	Short time value (Indicative occupational exposure limit value)	100 ppm
	Short time value (Indicative occupational exposure limit value)	442 mg/m ³

Belgium

Acétate de 2-(1-méthoxy)propyle	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	275 mg/m ³
	Short time value	100 ppm
	Short time value	550 mg/m ³
Acétate de butyle, tous isomères: n-, iso, sec, tert	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	238 mg/m ³
	Short time value	150 ppm
	Short time value	712 mg/m ³
Acétone	Time-weighted average exposure limit 8 h	246 ppm
	Time-weighted average exposure limit 8 h	594 mg/m ³
	Short time value	492 ppm
	Short time value	1187 mg/m ³
Xylène, isomères mixtes, purs	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	221 mg/m ³
	Short time value	100 ppm
	Short time value	442 mg/m ³

The Netherlands

1-Methoxy-2-propylacetaat	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	100 ppm
1-methoxy-2-propylacetaat	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	550 mg/m ³
Aceton	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	500 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	1210 mg/m ³
	Short time value (Public occupational exposure limit value)	1002 ppm
	Short time value (Public occupational exposure limit value)	2420 mg/m ³
n-Butylacetaat	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	50 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	241 mg/m ³
	Short time value (Public occupational exposure limit value)	150 ppm
	Short time value (Public occupational exposure limit value)	723 mg/m ³

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Xyleen, o-, m-, p-isomeren	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	48 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	210 mg/m ³
	Short time value (Public occupational exposure limit value)	100 ppm
	Short time value (Public occupational exposure limit value)	442 mg/m ³

France

Acétate de 2-méthoxy-1-méthyléthyle	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	50 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	275 mg/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	550 mg/m ³
Acétate de n-butyle	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	150 ppm
	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	710 mg/m ³
	Short time value (VL: Valeur non réglementaire indicative)	200 ppm
	Short time value (VL: Valeur non réglementaire indicative)	940 mg/m ³
Acétone	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	500 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	1210 mg/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	1000 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	2420 mg/m ³
Xylènes, isomères mixtes, purs	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	50 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	221 mg/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	442 mg/m ³

Germany

2-Methoxy-1-methylethylacetat	Time-weighted average exposure limit 8 h (TRGS 900)	50 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	270 mg/m ³
Aceton	Time-weighted average exposure limit 8 h (TRGS 900)	500 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	1200 mg/m ³
n-Butylacetat	Time-weighted average exposure limit 8 h (TRGS 900)	62 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	300 mg/m ³
Xylol (alle Isomeren)	Time-weighted average exposure limit 8 h (TRGS 900)	50 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	220 mg/m ³

Austria

1-Methoxypropylacetat-2	Tagesmittelwert (MAK)	50 ppm
	Tagesmittelwert (MAK)	275 mg/m ³
	Kurzzeitwert 5(Mow) 8x (MAK)	100 ppm
	Kurzzeitwert 5(Mow) 8x (MAK)	550 mg/m ³
Aceton	Tagesmittelwert (MAK)	500 ppm
	Tagesmittelwert (MAK)	1200 mg/m ³
	Kurzzeitwert 15(Miw) 4x (MAK)	2000 ppm
	Kurzzeitwert 15(Miw) 4x (MAK)	4800 mg/m ³
Butylacetat alle Isomere (außer tert-Butylacetat): Isobutylacetat n-Butylacetat sec-Butylacetat	Tagesmittelwert (MAK)	50 ppm
	Tagesmittelwert (MAK)	241 mg/m ³
	Kurzzeitwert Mow (MAK)	100 ppm
	Kurzzeitwert Mow (MAK)	480 mg/m ³
Xylol (alle Isomeren): o-Xylol,m-Xylol p-Xylol	Tagesmittelwert (MAK)	50 ppm
	Tagesmittelwert (MAK)	221 mg/m ³
	Kurzzeitwert 15(Miw) 4x (MAK)	100 ppm
	Kurzzeitwert 15(Miw) 4x (MAK)	442 mg/m ³

UK

1-Methoxypropyl acetate	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	50 ppm
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1-Methoxypropyl acetate	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	274 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	100 ppm
	Short time value (Workplace exposure limit (EH40/2005))	548 mg/m ³
Acetone	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	500 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	1210 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	1500 ppm
	Short time value (Workplace exposure limit (EH40/2005))	3620 mg/m ³
Butyl acetate	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	150 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	724 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	200 ppm
	Short time value (Workplace exposure limit (EH40/2005))	966 mg/m ³
Xylene, o-,m-,p- or mixed isomers	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	50 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	220 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	100 ppm
	Short time value (Workplace exposure limit (EH40/2005))	441 mg/m ³

USA (TLV-ACGIH)

Acetone	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	250 ppm
	Short time value (TLV - Adopted Value)	500 ppm
Butyl acetates, all isomers	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	50 ppm
	Short time value (TLV - Adopted Value)	150 ppm
Xylene (all isomers)	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm

b) National biological limit values

If limit values are applicable and available these will be listed below.

Germany

Aceton (Aceton)	Urin: expositionsende, bzw. schichtende	80 mg/l	
Xylol (alle isomeren) (Methylhippur- (Tolur-) säure (alle isomere))	Urin: expositionsende, bzw. schichtende	2000 mg/l	

UK

Xylene, o-, m-, p- or mixed isomers (methyl hippuric acid)	Urine: post shift	650 mmol/mol creatinine	
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USA (BEI-ACGIH)

Acetone (Acetone)	Urine: end of shift	25 mg/L	Nonspecific
Xylenes (technical or commercial grade) (Methylhippuric acids)	Urine: end of shift	1,5 g/g creatinine	

8.1.2 Sampling methods

Product name	Test	Number
1-Methoxy-2-Propyl Acetate	OSHA	99
Acetone (ketones 1)	NIOSH	1300
Acetone (ketones I)	NIOSH	2555
Acetone (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
Acetone (Volatile Organic compounds)	NIOSH	2549
ACETONE and METHYL ETHYL KETONE in urine	NIOSH	8319
Acetone	OSHA	69
Butyl acetate (Volatile Organic compounds)	NIOSH	2549
n-Butyl Acetate (Esters I)	NIOSH	1450
n-Butyl Acetate	OSHA	1009
Propylene glycol monomethyl ether acetate (glycol ethers)	NIOSH	2554
Xylene (Hydrocarbons, aromatic)	NIOSH	1501
Xylene (Volatile Organic compounds)	NIOSH	2549

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 Threshold values

DNEL/DMEL - Workers

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n-butyl acetate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	300 mg/m ³	
	Acute systemic effects inhalation	600 mg/m ³	
	Long-term local effects inhalation	300 mg/m ³	
	Acute local effects inhalation	600 mg/m ³	
	Long-term systemic effects dermal	11 mg/kg bw/day	
	Acute systemic effects dermal	11 mg/kg bw/day	

acetone

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	1210 mg/m ³	
	Acute local effects inhalation	2420 mg/m ³	
	Long-term systemic effects dermal	186 mg/kg bw/day	

2-methoxy-1-methylethyl acetate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	275 mg/m ³	
	Acute local effects inhalation	550 mg/m ³	
	Long-term systemic effects dermal	796 mg/kg bw	

hydrocarbons, C9, aromatics

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	150 mg/m ³	
	Long-term systemic effects dermal	25 mg/kg bw/day	

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxihexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	35.24 mg/m ³	
	Long-term systemic effects dermal	10 mg/kg bw/day	

xylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	221 mg/m ³	
	Acute systemic effects inhalation	442 mg/m ³	
	Long-term local effects inhalation	221 mg/m ³	
	Acute local effects inhalation	442 mg/m ³	
	Long-term systemic effects dermal	212 mg/kg bw/day	

2,3-epoxypropyl neodecanoate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	5.88 mg/m ³	
	Acute systemic effects inhalation	11.76 mg/m ³	
	Long-term systemic effects dermal	4.2 mg/kg bw/day	

DNEL/DMEL - General population

n-butyl acetate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	35.7 mg/m ³	
	Acute systemic effects inhalation	300 mg/m ³	
	Long-term local effects inhalation	35.7 mg/m ³	
	Acute local effects inhalation	300 mg/m ³	
	Long-term systemic effects dermal	6 mg/kg bw/day	
	Acute systemic effects dermal	6 mg/kg bw/day	
	Long-term systemic effects oral	2 mg/kg bw/day	
	Acute systemic effects oral	2 mg/kg bw/day	

acetone

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	200 mg/m ³	
	Long-term systemic effects dermal	62 mg/kg bw/day	
	Long-term systemic effects oral	62 mg/kg bw/day	

2-methoxy-1-methylethyl acetate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	33 mg/m ³	
	Long-term local effects inhalation	33 mg/m ³	
	Long-term systemic effects dermal	320 mg/kg bw	
	Long-term systemic effects oral	36 mg/kg bw	

hydrocarbons, C9, aromatics

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	32 mg/m ³	
	Long-term systemic effects dermal	11 mg/kg bw/day	
	Long-term systemic effects oral	11 mg/kg bw/day	

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxihexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects oral	5 mg/kg bw/day	

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xylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	65.3 mg/m ³	
	Acute systemic effects inhalation	260 mg/m ³	
	Long-term local effects inhalation	65.3 mg/m ³	
	Acute local effects inhalation	260 mg/m ³	
	Long-term systemic effects dermal	125 mg/kg bw/day	
	Long-term systemic effects oral	12.5 mg/kg bw/day	

2,3-epoxypropyl neodecanoate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	4 mg/m ³	
	Long-term systemic effects dermal	2.5 mg/kg bw/day	

PNEC

n-butyl acetate

Compartments	Value	Remark
Fresh water	0.18 mg/l	
Marine water	0.018 mg/l	
Fresh water (intermittent releases)	0.36 mg/l	
STP	35.6 mg/l	
Fresh water sediment	0.981 mg/kg sediment dw	
Marine water sediment	0.098 mg/kg sediment dw	
Soil	0.09 mg/kg soil dw	

acetone

Compartments	Value	Remark
Fresh water	10.6 mg/l	
Marine water	1.06 mg/l	
Fresh water (intermittent releases)	21 mg/l	
STP	100 mg/l	
Fresh water sediment	30.4 mg/kg sediment dw	
Marine water sediment	3.04 mg/kg sediment dw	
Soil	29.5 mg/kg soil dw	

2-methoxy-1-methylethyl acetate

Compartments	Value	Remark
Fresh water	0.635 mg/l	
Marine water	0.064 mg/l	
Aqua (intermittent releases)	6.35 mg/l	
STP	100 mg/l	
Fresh water sediment	3.29 mg/kg sediment dw	
Marine water sediment	0.329 mg/kg sediment dw	
Soil	0.29 mg/kg soil dw	

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Compartments	Value	Remark
Fresh water	0.009 mg/l	
Marine water	0.001 mg/l	
Fresh water (intermittent releases)	3.7 mg/l	
STP	100 mg/l	
Fresh water sediment	384 mg/kg sediment dw	
Marine water sediment	38.4 mg/kg sediment dw	
Soil	52.1 mg/kg soil dw	
Oral	222.2 mg/kg food	

xylene

Compartments	Value	Remark
Fresh water	0.327 mg/l	
Marine water	0.327 mg/l	
Fresh water (intermittent releases)	0.327 mg/l	
STP	6.58 mg/l	
Fresh water sediment	12.46 mg/kg sediment dw	
Marine water sediment	12.46 mg/kg sediment dw	
Soil	2.31 mg/kg soil dw	

2,3-epoxypropyl neodecanoate

Compartments	Value	Remark
Fresh water	0.001 mg/l	
Marine water	0.12 µg/l	
Fresh water (intermittent releases)	12 µg/l	
STP	50 mg/l	
Fresh water sediment	0.012 mg/kg sediment dw	
Marine water sediment	0.002 mg/kg sediment dw	

8.1.5 Control banding

Reason for revision: 3.2, 4, 8, 12

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If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Insufficient ventilation: keep naked flames/sparks away. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: use spark-/explosionproof appliances and lighting system. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

8.2.2 Individual protection measures, such as personal protective equipment

Observe strict hygiene. Do not eat, drink or smoke during work.

a) Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit.

b) Hand protection:

Protective gloves against chemicals (EN 374).

c) Eye protection:

Protective goggles (EN 166).

d) Skin protection:

Head/neck protection. Protective clothing (EN 14605 or EN 13034).

8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Liquid
Odour	Characteristic odour
Odour threshold	No data available in the literature
Colour	Black
Particle size	Not applicable (liquid)
Explosion limits	1.2 - 13 vol %
Flammability	Highly flammable liquid and vapour.
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available in the literature
Kinematic viscosity	No data available in the literature
Melting point	No data available in the literature
Boiling point	56 °C
Relative vapour density	No data available in the literature
Vapour pressure	233 hPa ; 20 °C
Solubility	Water ; insoluble
Relative density	1.16 ; 20 °C
Absolute density	1159 kg/m ³ ; 20 °C
Decomposition temperature	No data available in the literature
Auto-ignition temperature	315 °C ; DIN 51794
Flash point	-17 °C ; ISO 1523
pH	No data available in the literature

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat. Insufficient ventilation: keep naked flames/sparks away. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: use spark-/explosionproof appliances and lighting system.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

Upon combustion: formation of CO, CO₂ and small quantities of nitrous vapours.

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SECTION 11: Toxicological information

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

11.1.1 Test results

Acute toxicity

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

n-butyl acetate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 423	10760 mg/kg bw - 12789 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 14112 mg/kg bw		Rabbit (male / female)	Experimental value	
Inhalation (aerosol)	LC50	OECD 403	0.74 mg/l	4 h	Rat (male / female)	Experimental value	

acetone

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		5800 mg/kg		Rat (female)	Experimental value	
Dermal	LD50		> 15800 mg/kg bw	24 h	Rabbit (male)	Experimental value	
Inhalation (vapours)	LC50		76 mg/l	4 h	Rat (female)	Weight of evidence	
					(male)		

2-methoxy-1-methylethyl acetate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	6190 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 5000 mg/kg bw	24 h	Rabbit (male / female)	Experimental value	
Inhalation	LC0	Equivalent to OECD 403	10.8 mg/l	3 h	Rat (male)	Experimental value	

hydrocarbons, C9, aromatics

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		> 6984 mg/kg bw		Rat (male)	Experimental value	
Oral	LD50		3492 mg/kg bw		Rat (female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 3160 mg/kg bw	24 h	Rabbit (male / female)	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 6.19 mg/l air	4 h	Rat (male / female)	Experimental value	(maximum achievable concentration)

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 423	> 2000 mg/kg		Rat (male / female)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg		Rat (male / female)	Experimental value	
Inhalation						Data waiving	

xylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to EU Method B.1	3523 mg/kg bw		Rat (male)	Experimental value	
Oral	LD50	EU Method B.1	> 4000 mg/kg bw		Rat (female)	Experimental value	
Dermal	LD50		> 4200 mg/kg bw	4 h	Rabbit (male)	Weight of evidence	
Dermal			category 4			Annex VI	
Inhalation (vapours)	LC50	Equivalent to EU Method B.2	29.09 mg/l	4 h	Rat (male)	Experimental value	
Inhalation (vapours)			category 4			Annex VI	

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2,3-epoxypropyl neodecanoate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 420	> 2000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg bw	24 h	Rat (male / female)	Experimental value	
Inhalation (saturated vapour)	LC50		> 0.24 mg/l	4 h	Rat	Expert judgement	(maximum achievable concentration)

Conclusion

Not classified for acute toxicity

Corrosion/irritation

PUC-001 A

No (test) data on the mixture available

Classification is based on the relevant ingredients

n-butyl acetate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single treatment without rinsing
Dermal	Not irritating	Equivalent to OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	

acetone

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	OECD 405	24 h	24; 72 hours	Rabbit	Experimental value	Single treatment with rinsing
Skin	Not irritating		3 day(s)	24; 48; 72 hrs; 4 days	Guinea pig	Experimental value	
Inhalation	Slightly irritating	Human observation study	20 minutes		Human	Literature study	

2-methoxy-1-methylethyl acetate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single treatment
Skin	Not irritating	Equivalent to OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	

hydrocarbons, C9, aromatics

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405		1; 24; 48; 72 hours	Rabbit	Experimental value	
Skin	Slightly irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	
Inhalation (vapours)	Irritating; STOT SE cat.3					Literature study	

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxyhexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405			Rabbit	Experimental value	
Skin	Not irritating	OECD 404			Rabbit	Experimental value	

Reason for revision: 3.2, 4, 8, 12

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xylene

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Moderately irritating			24; 48; 72 hours	Rabbit	Experimental value	Single treatment
Eye	Irritating; category 2					Annex VI	
Skin	Moderately irritating		24 h	24; 72 hours	Rabbit	Experimental value	
Skin	Irritating; category 2					Annex VI	
Inhalation (vapours)	Irritating		4 h		Human	Read-across	
Inhalation (vapours)	Irritating; STOT SE cat.3					Annex VI	

2,3-epoxypropyl neodecanoate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		72 hours	Rabbit	Experimental value	
Skin	Not irritating	OECD 404	4 h	72 hours	Rabbit	Experimental value	

Conclusion

Causes serious eye irritation.
 Not classified as irritating to the respiratory system
 Not classified as irritating to the skin

Respiratory or skin sensitisation

PUC-001 A

No (test) data on the mixture available
 Judgement is based on the relevant ingredients
n-butyl acetate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406			Guinea pig	Experimental value	

acetone

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Guinea pig maximisation test			Guinea pig (female)	Experimental value	
Skin	Not sensitizing	Human observation			Human	Experimental value	

2-methoxy-1-methylethyl acetate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406		24; 48 hours	Guinea pig (male / female)	Experimental value	

hydrocarbons, C9, aromatics

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406			Guinea pig (female)	Experimental value	

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Dermal (on the ears)	Not sensitizing	OECD 429			Mouse	Experimental value	

xylene

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 429			Mouse	Experimental value	

2,3-epoxypropyl neodecanoate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 406		24 hours	Guinea pig (male / female)	Experimental value	
Inhalation						Data waiving	

Conclusion

Reason for revision: 3.2, 4, 8, 12

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Not classified as sensitizing for skin
Not classified as sensitizing for inhalation

Specific target organ toxicity

PUC-001 A

No (test) data on the mixture available

Classification is based on the relevant ingredients
n-butyl acetate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	Subchronic toxicity test	125 mg/kg bw/day		No effect	13 week(s)	Rat (male / female)	Read-across
Oral (stomach tube)	LOAEL	Subchronic toxicity test	500 mg/kg bw/day	Central nervous system	Central nervous system depression	13 day(s)	Rat (male / female)	Read-across
Inhalation (vapours)	NOAEC	EPA OTS 798.2450	500 ppm		No adverse systemic effects	13 weeks (daily, 5 days / week)	Rat (male / female)	Experimental value

acetone

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (drinking water)	NOAEL	Equivalent to OECD 408	4.86 mg/kg bw/day - 5.95 mg/kg bw/day		No effect	13 week(s)	Mouse (male / female)	Experimental value
Oral (drinking water)	LOAEL	Equivalent to OECD 408	11.3 mg/kg bw/day	Liver	Histopathology		Mouse (female)	Experimental value
Dermal								Data waiving
Inhalation (vapours)	NOAEC	Subchronic toxicity test	19000 ppm		No effect	8 weeks (5 days / week)	Rat (male)	Experimental value
Inhalation (vapours)	Dose level	Human observation study	361 ppm	Central nervous system	neurotoxic effects	2 day(s)	Human	Epidemiological study

2-methoxy-1-methylethyl acetate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 422	≥ 1000 mg/kg		No effect	41 day(s) - 45 day(s)	Rat (male / female)	Experimental value
Dermal	NOAEL	Equivalent to OECD 410	> 1000 mg/kg bw/day		No effect	3 weeks (5 days / week)	Rabbit (male / female)	Read-across
Inhalation (vapours)	NOEL	OECD 453	300 ppm		No effect	104 weeks (6h / day, 5 days / week)	Rat (male / female)	Read-across
			STOT SE cat.3		Drowsiness, dizziness			Literature study

hydrocarbons, C9, aromatics

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	Equivalent to OECD 408	600 mg/kg bw/day		No effect	13 weeks (daily)	Rat (male / female)	Read-across
Dermal								Data waiving
Inhalation (vapours)	NOAEC	Equivalent to OECD 452	1800 mg/m ³ air		No effect	52 weeks (6h / day, 5 days / week)	Rat (male)	Read-across
Inhalation (vapours)	NOAEC	Equivalent to OECD 452	900 mg/m ³ air		No effect	52 weeks (6h / day, 5 days / week)	Rat (female)	Read-across
Inhalation (vapours)			STOT SE cat.3		Drowsiness, dizziness			Literature study

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxyhexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 408	1000 mg/kg bw/day		No effect	28 day(s)	Rat	Experimental value
Dermal								Data waiving
Inhalation								Data waiving

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xylene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	LOAEL	Equivalent to OECD 408	150 mg/kg bw/day	Liver	Weight gain	90 day(s)	Rat (male)	Experimental value
Oral (stomach tube)	NOAEL	Equivalent to OECD 408	150 mg/kg bw/day		No effect	90 day(s)	Rat (female)	Experimental value
Inhalation (vapours)	NOAEC	Subchronic toxicity test	≥ 3515 mg/m ³		No effect	13 weeks (6h / day, 5 days / week)	Rat (male)	Experimental value

2,3-epoxypropyl neodecanoate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (diet)	NOAEL	Equivalent to OECD 407	5000 ppm		No effect	5 weeks (daily)	Rat (male / female)	Experimental value
Dermal								Data waiving
Inhalation								Data waiving

Conclusion

May cause drowsiness or dizziness.
Not classified for subchronic toxicity

Mutagenicity (in vitro)

PUC-001 A

No (test) data on the mixture available
Judgement is based on the relevant ingredients

n-butyl acetate

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value	

acetone

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 473	Chinese hamster ovary (CHO)	No effect	Experimental value	

2-methoxy-1-methylethyl acetate

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
Negative	OECD 473	Chinese hamster ovary (CHO)		Experimental value	

hydrocarbons, C9, aromatics

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Chinese hamster ovary (CHO)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 473	Chinese hamster ovary (CHO)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	

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reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)		Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value	

xylene

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to EU Method B.19	Chinese hamster ovary (CHO)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	

2,3-epoxypropyl neodecanoate

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 473	Chinese hamster ovary (CHO)	No effect	Experimental value	
Positive with metabolic activation	OECD 471	Bacteria (S.typhimurium)		Experimental value	

Mutagenicity (in vivo)

PUC-001 A

No (test)data on the mixture available

Judgement is based on the relevant ingredients

n-butyl acetate

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (stomach tube))	OECD 474		Mouse (male / female)		Read-across

acetone

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (drinking water))	Micronucleus test	13 week(s)	Mouse (male / female)		Literature study

hydrocarbons, C9, aromatics

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Inhalation (vapours))	Equivalent to OECD 475	5 days (6h / day)	Rat (male)	Bone marrow	Experimental value

xylene

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Subcutaneous)	Equivalent to OECD 478		Mouse (male / female)		Experimental value

2,3-epoxypropyl neodecanoate

Result	Method	Exposure time	Test substrate	Organ	Value determination
Positive (Inhalation)	OECD 488	42 days (1x / day)	Mouse (male / female)		Experimental value
Negative (Inhalation)	OECD 486		Rat (male)	Liver	Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

PUC-001 A

No (test)data on the mixture available

Judgement is based on the relevant ingredients

acetone

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Dermal	NOEL	Carcinogenic toxicity study	79 mg		Mouse (female)	No carcinogenic effect		Literature study

2-methoxy-1-methylethyl acetate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOEL	OECD 453	≥ 11.07 mg/l air	104 weeks (6h / day, 5 days / week)	Mouse (male / female)	No carcinogenic effect		Read-across

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hydrocarbons, C9, aromatics

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Unknown								Data waiving

xylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral	Dose level	Equivalent to EU Method B.32	500 mg/kg bw/day	103 weeks (5 days / week)	Rat (male / female)	No carcinogenic effect		Experimental value

2,3-epoxypropyl neodecanoate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation								Data waiving
Dermal								Data waiving
Oral								Data waiving

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

PUC-001 A

No (test) data on the mixture available

Judgement is based on the relevant ingredients

n-butyl acetate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (vapours))	LOAEC	Equivalent to OECD 414	1500 ppm		Rat	Fetotoxicity		Experimental value
Maternal toxicity (Inhalation (vapours))	LOAEC	Equivalent to OECD 414	1500 ppm		Rat	Maternal toxicity		Experimental value
Effects on fertility (Inhalation (vapours))	NOAEC	OECD 416	2000 ppm	> 90 day(s)	Rat (male / female)	No effect		Experimental value

acetone

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (aerosol))	NOAEC	Equivalent to OECD 414	2200 ppm	14 days (gestation, daily)	Rat	No effect	Foetus	Experimental value
	LOAEC	Equivalent to OECD 414	11000 mg/kg bw/day	14 days (gestation, daily)	Rat	Fetotoxicity	Foetus	Experimental value
Maternal toxicity (Inhalation (aerosol))	NOAEC	Equivalent to OECD 414	2200 ppm	14 days (gestation, daily)	Rat	No effect		Experimental value
	LOAEC	Equivalent to OECD 414	11000 ppm	14 days (gestation, daily)	Rat	Maternal toxicity		Experimental value
Effects on fertility (Oral (drinking water))	NOAEL		900 mg/kg bw/day	13 week(s)	Rat (male)	No effect		Experimental value
	LOAEL		3400 mg/kg bw/day	13 week(s)	Rat (male)	Adverse effects on fertility	Male reproductive organ	Experimental value

2-methoxy-1-methylethyl acetate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation)	NOAEL	OECD 414	> 4000 ppm	6 days (gestation, 6h / day) - 15 days (gestation, 6h / day)	Rat	No effect	Foetus	Experimental value
	NOAEL	OECD 414	3000 ppm	6 days (gestation, 6h / day) - 18 days (gestation, 6h / day)	Rabbit	No effect	Foetus	Read-across
Maternal toxicity (Inhalation)	NOAEL	OECD 414	500 ppm	10 days (gestation, 6h / day)	Rat	No effect		Experimental value
	NOAEL	OECD 414	1500 ppm	6 days (gestation, 6h / day) - 18 days (gestation, 6h / day)	Rabbit	No effect		Experimental value
Effects on fertility (Inhalation (vapours))	NOEL	OECD 416	1000 ppm		Rat (male / female)	No effect		Read-across

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hydrocarbons, C9, aromatics

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (vapours))	NOAEC	Developmental toxicity study	100 ppm	10 days (6h / day)	Mouse	No effect		Experimental value
	LOAEC	Developmental toxicity study	500 ppm	10 days (6h / day)	Mouse	Reduced fetal bodyweights	Foetus	Experimental value
Maternal toxicity (Inhalation (vapours))	NOAEC	Developmental toxicity study	100 ppm	10 day(s)	Mouse	No effect		Experimental value
	LOAEC	Developmental toxicity study	500 ppm	10 day(s)	Mouse	Body weight reduction	General	Experimental value
Effects on fertility (Inhalation (vapours))	NOAEC	3 generation study	7500 mg/m ³		Rat (male / female)	No effect		Experimental value

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxyhexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Maternal toxicity (Oral (stomach tube))	NOAEL	Developmental toxicity study	1000 mg/kg bw/day		Rat	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL	OECD 415	1000 mg/kg bw/day		Rat (male / female)	No effect		Experimental value

xylene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (vapours))	BMCL10	Equivalent to OECD 414	1082 ppm	15 days (gestation, daily)	Rat	No effect		Experimental value
Maternal toxicity (Inhalation (vapours))	BMCL10	Equivalent to OECD 414	887 ppm	15 days (gestation, daily)	Rat	No effect		Experimental value
Effects on fertility (Inhalation (vapours))	NOAEC		500 ppm		Rat (male / female)	No effect		Experimental value

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

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Classification is based on the relevant ingredients
n-butyl acetate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
	NOEC	EPA OTS 798.6050	1500 ppm		Hypoactivity	6 h	Rat (male / female)	Experimental value
	NOAEC	EPA OTS 798.6050	500 ppm		no neurotoxic effects	13 week(s)	Rat (male / female)	Experimental value

acetone

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Skin				Skin	Skin dryness or cracking			Literature study

hydrocarbons, C9, aromatics

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
				Skin	Skin dryness or cracking			Literature study

Conclusion

Repeated exposure may cause skin dryness or cracking.

Chronic effects from short and long-term exposure

PUC-001 A

Skin rash/inflammation.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

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No (test)data on the mixture available
Judgement of the mixture is based on the relevant ingredients

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n-butyl acetate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	18 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; Lethal
Acute toxicity crustacea	EC50	Equivalent to OECD 202	44 mg/l	48 h	Daphnia sp.	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	ErC50	OECD 201	397 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Read-across; GLP
	NOEC	OECD 201	196 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Read-across; Growth rate
Long-term toxicity aquatic crustacea	NOEC	OECD 211	23.2 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Read-across; Reproduction
Toxicity aquatic micro-organisms	IC50	TETRATOX assay	356 mg/l	40 h	Tetrahymena pyriformis	Static system	Fresh water	Experimental value; Growth

	Parameter	Method	Value	Duration	Species	Value determination
Toxicity terrestrial plants	EC50	Equivalent to OECD 208	> 1000 mg/kg soil dw	14 day(s)	Lactuca sativa	Experimental value

acetone

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	6210 mg/l - 8120 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; Measured concentration
Acute toxicity crustacea	LC50		8800 mg/l	48 h	Daphnia pulex	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	NOEC		530 mg/l		Algae		Fresh water	
Long-term toxicity aquatic crustacea	NOEC	Equivalent to OECD 211	2212 mg/l	28 day(s)	Daphnia magna	Flow-through system	Fresh water	Experimental value
Toxicity aquatic micro-organisms	EC50	Equivalent to OECD 209	61.15 g/l	30 minutes	Activated sludge	Static system	Fresh water	Experimental value
	EC50		1700 mg/l		Pseudomonas putida			Literature study; Inhibition

2-methoxy-1-methylethyl acetate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	100 mg/l - 180 mg/l	96 h	Oncorhynchus mykiss	Static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	EU Method C.2	> 500 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	NOEC	OECD 201	≥ 1000 mg/l	96 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Nominal concentration
	EC50	OECD 201	> 1000 mg/l	96 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Nominal concentration
Long-term toxicity fish	NOEC	OECD 204	47.5 mg/l	14 day(s)	Oryzias latipes	Flow-through system	Fresh water	Experimental value; GLP
Long-term toxicity aquatic crustacea	NOEC	OECD 211	≥ 100 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	EC10	Equivalent to OECD 209	> 1000 mg/l	30 minutes	Activated sludge	Static system	Fresh water	Experimental value

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hydrocarbons, C9, aromatics

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LL50	OECD 203	9.2 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EL50	OECD 202	3.2 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	EL50	OECD 201	2.9 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
	NOEC	OECD 201	0.07 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish	NOELR		1.228 mg/l	28 day(s)	Oncorhynchus mykiss		Fresh water	QSAR
Long-term toxicity aquatic crustacea	NOELR		2.144 mg/l	21 day(s)	Daphnia magna		Fresh water	QSAR

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	> 1000 mg/l	96 h	Oncorhynchus mykiss	Static system	Fresh water	Read-across; Nominal concentration
Acute toxicity crustacea	EC50	OECD 202	> 1000 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	EL50	OECD 201	370 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Growth rate
	NOELR	OECD 201	125 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Growth rate
Toxicity aquatic micro-organisms	EC50	OECD 209	> 1000 mg/l	3 h	Activated sludge			Experimental value; Nominal concentration

xylene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	2.6 mg/l	96 h	Oncorhynchus mykiss	Static system	Fresh water	Read-across; Lethal
Toxicity algae and other aquatic plants	ErC50	OECD 201	4.36 mg/l	73 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Read-across; GLP
	NOEC	OECD 201	0.44 mg/l	73 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Read-across; GLP
Long-term toxicity aquatic crustacea	NOEC	EPA 600/4-91-003	0.96 mg/l	7 day(s)	Ceriodaphnia dubia	Daily renewal	Fresh water	Read-across; Reproduction
Toxicity aquatic micro-organisms	EC50	OECD 209	> 157 mg/l	3 h	Activated sludge	Static system	Fresh water	Read-across; GLP

2,3-epoxypropyl neodecanoate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	5 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	OECD 202	4.8 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	ErC50	OECD 201	2.9 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea								Data waiving
Toxicity aquatic micro-organisms	IC50		> 100 mg/l		Bacteria			Literature study
	NOEC	OECD 209	500 mg/l	3 h	Activated sludge	Static system		Experimental value; Nominal concentration

Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

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12.2. Persistence and degradability

n-butyl acetate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301D	83 %; Oxygen consumption	28 day(s)	Experimental value

acetone

Biodegradation water

Method	Value	Duration	Value determination
OECD 301B	90.9 %	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	52.431 day(s)	1.5E6 /cm ³	Calculated value

2-methoxy-1-methylethyl acetate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F	83 %; GLP	28 day(s)	Experimental value

Biodegradation soil

Method	Value	Duration	Value determination
Equivalent to OECD 304A	> 57 %	1 day(s)	Experimental value

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
OECD 111	> 10 day(s); pH < 7	Primary degradation	Experimental value
OECD 111	> 10 day(s); pH = 7	Primary degradation	Experimental value
OECD 111	8.1 day(s); pH > 7	Primary degradation	Experimental value

hydrocarbons, C9, aromatics

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F	78 %	28 day(s)	Experimental value

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Biodegradation water

Method	Value	Duration	Value determination
OECD 301B	20 %	28 day(s)	Experimental value

xylene

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F	98 %; GLP	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
	23.2 h	5E5 /cm ³	Read-across

Biodegradation soil

Method	Value	Duration	Value determination
Equivalent to OECD 304A	50 %	23 day(s)	Experimental value

2,3-epoxypropyl neodecanoate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301D	7 % - 8 %; GLP	28 day(s)	Experimental value

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
OECD 111	8.8 day(s) - 9.8 day(s); GLP	Primary degradation	Experimental value

Conclusion

Water

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

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Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

n-butyl acetate

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		2.3	25 °C	Experimental value

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acetone

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		0.69		Pisces	Literature study

Log Kow

Method	Remark	Value	Temperature	Value determination
		-0.23		Test data

2-methoxy-1-methylethyl acetate

Log Kow

Method	Remark	Value	Temperature	Value determination
Equivalent to OECD 117		1.2	20 °C	Experimental value

hydrocarbons, C9, aromatics

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFBAF v3.01	39.8 l/kg - 177.8 l/kg; Fresh weight		Pisces	QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
KOWWIN		2.92 - 3.59	20 °C	QSAR

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Log Kow

Method	Remark	Value	Temperature	Value determination
		> 6.2	40 °C	Experimental value

xylene

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		25.9	56 day(s)	Oncorhynchus mykiss	Read-across

Log Kow

Method	Remark	Value	Temperature	Value determination
		3.12 - 3.2	20 °C	Read-across

2,3-epoxypropyl neodecanoate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFBAF v3.00	371.6 l/kg			QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 107		4.4	25 °C	Experimental value

Conclusion

Contains bioaccumulative component(s)

12.4. Mobility in soil

n-butyl acetate

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	1.268 - 1.844	Calculated value

acetone

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	0.374 - 0.988	Calculated value

2-methoxy-1-methylethyl acetate

(log) Koc

Parameter	Method	Value	Value determination
log Koc		0.264	QSAR

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	10.22 %	0 %	0.02 %	0.03 %	89.73 %	Calculated value

hydrocarbons, C9, aromatics

(log) Koc

Parameter	Method	Value	Value determination
log Koc		2.68 - 3.32	QSAR

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

(log) Koc

Parameter	Method	Value	Value determination
log Koc	OECD 121	2.28 - 5.63	Experimental value

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xylene

(log) Koc

Parameter	Method	Value	Value determination
log Koc	Equivalent to OECD 121	2.73	Read-across

2,3-epoxypropyl neodecanoate

(log) Koc

Parameter	Method	Value	Value determination
log Koc	OECD 121	2.16	Experimental value

Conclusion

Contains component(s) with potential for mobility in the soil

12.5. Results of PBT and vPvB assessment

Due to insufficient data no statement can be made whether the component(s) fulfil(s) the criteria of PBT and vPvB according to Annex XIII of Regulation (EC) No 1907/2006.

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

12.7. Other adverse effects

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Greenhouse gases

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

Groundwater

Groundwater pollutant

n-butyl acetate

Groundwater

Groundwater pollutant

acetone

Groundwater

Groundwater pollutant

2-methoxy-1-methylethyl acetate

Groundwater

Groundwater pollutant

Water ecotoxicity pH

pH shift

hydrocarbons, C9, aromatics

Groundwater

Groundwater pollutant

reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxihexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Groundwater

Groundwater pollutant

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

08 01 11* (wastes from MFSU and removal of paint and varnish: waste paint and varnish containing organic solvents or other hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste.

Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Should not be landfilled with household waste. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

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SECTION 14: Transport information

Road (ADR)

14.1. UN number	UN number	1263
14.2. UN proper shipping name	Proper shipping name	paint
14.3. Transport hazard class(es)	Hazard identification number	33
	Class	3
	Classification code	F1
14.4. Packing group	Packing group	II
	Labels	3
14.5. Environmental hazards	Environmentally hazardous substance mark	no
14.6. Special precautions for user	Special provisions	163
	Special provisions	367
	Special provisions	640D
	Special provisions	650
	Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number	UN number	1263
14.2. UN proper shipping name	Proper shipping name	paint
14.3. Transport hazard class(es)	Hazard identification number	33
	Class	3
	Classification code	F1
14.4. Packing group	Packing group	II
	Labels	3
14.5. Environmental hazards	Environmentally hazardous substance mark	no
14.6. Special precautions for user	Special provisions	163
	Special provisions	367
	Special provisions	640D
	Special provisions	650
	Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number	UN number	1263
14.2. UN proper shipping name	Proper shipping name	paint
14.3. Transport hazard class(es)	Class	3
	Classification code	F1
14.4. Packing group	Packing group	II
	Labels	3
14.5. Environmental hazards	Environmentally hazardous substance mark	no
14.6. Special precautions for user	Special provisions	163
	Special provisions	367
	Special provisions	640D
	Special provisions	650
	Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1. UN number	UN number	1263
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14.2. UN proper shipping name	Proper shipping name	paint
14.3. Transport hazard class(es)	Class	3
14.4. Packing group	Packing group	II
	Labels	3
14.5. Environmental hazards	Marine pollutant	-
	Environmentally hazardous substance mark	no
14.6. Special precautions for user	Special provisions	163
	Special provisions	367
	Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)
14.7. Maritime transport in bulk according to IMO instruments	Annex II of MARPOL 73/78	Not applicable, based on available data

Air (ICAO-TI/IATA-DGR)

14.1. UN number	UN number	1263
14.2. UN proper shipping name	Proper shipping name	paint
14.3. Transport hazard class(es)	Class	3
14.4. Packing group	Packing group	II
	Labels	3
14.5. Environmental hazards	Environmentally hazardous substance mark	no
14.6. Special precautions for user	Special provisions	A192
	Special provisions	A3
	Special provisions	A72
Passenger and cargo transport	Limited quantities: maximum net quantity per packaging	1 L

SECTION 15: Regulatory information

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

European legislation:

Explosives precursors

Due to the presence of one or more components in this mixture, acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

VOC content Directive 2010/75/EU

VOC content	Remark
42.10 %	
487.94 g/l	

Indicative occupational exposure limit values (Directive 98/24/EC, 2000/39/EC, 2004/37/EC and amendments)

xylene

Product name	Skin resorption
Xylene, mixed isomers, pure	Skin

Directive 2012/18/EU (Seveso III)

Threshold values under special circumstances

Substance or category	Special circumstances	Low tier (tonnes)	Top tier (tonnes)	Group	For this substance or mixture the summation rule has to be applied for:
P5b FLAMMABLE LIQUIDS	Particular processing conditions, such as high pressure or high temperature, may create major-accident hazards	50	200	None	Flammability
P5a FLAMMABLE LIQUIDS	Maintained at a temperature above the boiling point	10	50	None	Flammability

Threshold values under normal circumstances

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Substance or category	Low tier (tonnes)	Top tier (tonnes)	Group	For this substance or mixture the summation rule has to be applied for:
P5c FLAMMABLE LIQUIDS	5000	50000	None	Flammability

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
<ul style="list-style-type: none"> · n-butyl acetate · acetone · 2-methoxy-1-methylethyl acetate · hydrocarbons, C9, aromatics · xylene · 2,3-epoxypropyl neodecanoate 	<p>Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008:</p> <p>(a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;</p> <p>(b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;</p> <p>(c) hazard class 4.1;</p> <p>(d) hazard class 5.1.</p>	<ol style="list-style-type: none"> 1. Shall not be used in: <ul style="list-style-type: none"> — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: <ul style="list-style-type: none"> — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304, 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN). 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: <ol style="list-style-type: none"> a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: “Keep lamps filled with this liquid out of the reach of children”; and, by 1 December 2010, “Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life- threatening lung damage”; b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: “Just a sip of grill lighter may lead to life threatening lung damage”; c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
<ul style="list-style-type: none"> · n-butyl acetate · acetone · 2-methoxy-1-methylethyl acetate · hydrocarbons, C9, aromatics · xylene 	<p>Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.</p>	<ol style="list-style-type: none"> 1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: <ul style="list-style-type: none"> — metallic glitter intended mainly for decoration, — artificial snow and frost, — “whoopee” cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs. 2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: <p>“For professional users only”.</p> 3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC. 4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.
<ul style="list-style-type: none"> · acetone · xylene 	<p>Substances falling within one or more of the following points:</p> <p>(a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008:</p> <ul style="list-style-type: none"> — carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — skin sensitiser category 1, 1A or 1B — skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 — serious eye damage category 1 or eye irritant category 2 <p>(b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council</p> <p>(c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a</p>	<p>Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081</p>

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condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex.
The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.

National legislation Belgium

PUC-001 A

No data available

2-methoxy-1-methylethyl acetate

Résorption peau	Acétate de 2-(1-méthoxy)propyle; D; La mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air.
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xylene

Résorption peau	Xylène, isomères mixtes, purs; D; La mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air.
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National legislation The Netherlands

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Waterbezwaarlijkheid	B (3); Algemene Beoordelingsmethodiek (ABM)
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xylene

Huidopname (wettelijk)	Xyleen, o-, m-, p-isomeren; H
SZW - Lijst van voor de voortplanting giftige stoffen (ontwikkeling)	xyleen; Opgenomen in SZW-lijst van voor de voortplanting giftige stoffen (ontwikkeling); 2

National legislation France

PUC-001 A

No data available

2-methoxy-1-methylethyl acetate

Risque de pénétration percutanée	Acétate de 2-méthoxy-1-méthyléthyle; Risque de pénétration percutanée
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xylene

Risque de pénétration percutanée	Xylènes, isomères mixtes, purs; Risque de pénétration percutanée
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National legislation Germany

PUC-001 A

Lagerklasse (TRGS510)	3: Entzündbare Flüssigkeiten
WGK	1; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017

n-butyl acetate

TA-Luft	5.2.5/I
TRGS900 - Risiko der Fruchtschädigung	n-Butylacetat; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

acetone

TA-Luft	5.2.5
TRGS900 - Risiko der Fruchtschädigung	Aceton; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

2-methoxy-1-methylethyl acetate

TA-Luft	5.2.5
TRGS900 - Risiko der Fruchtschädigung	2-Methoxy-1-methylethylacetat; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

hydrocarbons, C9, aromatics

TA-Luft	5.2.5/I
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reaction mass of: N,N'-ethane-1,2-diylbis(hexanamide)/12-hydroxy-N-[2-[(1-oxohexyl)amino]ethyl]octadecanamide/N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

TA-Luft	5.2.5/I
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xylene

TA-Luft	5.2.5/I
Hautresorptive Stoffe	Xylol (alle Isomeren); H; Hautresorptiv

2,3-epoxypropyl neodecanoate

TA-Luft	5.2.5/I
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National legislation Austria

PUC-001 A

No data available

2-methoxy-1-methylethyl acetate

besondere Gefahr der Hautresorption	1-Methoxypropylacetat-2; H
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National legislation United Kingdom

PUC-001 A

No data available

2-methoxy-1-methylethyl acetate

Skin absorption	1-Methoxypropyl acetate; Sk
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xylene

Skin absorption	Xylene, o-,m-,p- or mixed isomers; Sk
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Other relevant data

PUC-001 A

No data available

acetone

TLV - Carcinogen	Acetone; A4
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xylene

IARC - classification	3; Xylenes
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TLV - Carcinogen	Xylene (all isomers); A4
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15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information

Full text of any H- and EUH-statements referred to under section 3:

- 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.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H341 Suspected of causing genetic defects if swallowed.
- H373 May cause damage to organs (central nervous system, liver, kidneys) through prolonged or repeated exposure if swallowed.
- H373 May cause damage to organs (central nervous system, liver, kidneys) through prolonged or repeated exposure if inhaled.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.
- H413 May cause long lasting harmful effects to aquatic life.
- EUH066 Repeated exposure may cause skin dryness or cracking.
- EUH208 Contains a sensitising substance. May produce an allergic reaction.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
ATE	Acute Toxicity Estimate
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
Erc50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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