

SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830



RENOLIT ALKORPLAN 81038

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

1.1. Product identifier

Product name : RENOLIT ALKORPLAN 81038
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

Professional use
Sealing compound

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

RENOLIT BELGIUM
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B-9700 Oudenaarde
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1.4. Emergency telephone number : +44 1235 239 670 (24/24)

Poison Centre : +32 70 245 245

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.
Carc.	category 2	H351: Suspected of causing cancer.
Eye Dam.	category 1	H318: Causes serious eye damage.
STOT SE	category 3	H335: May cause respiratory irritation.
STOT SE	category 3	H336: May cause drowsiness or dizziness.

2.2. Label elements



Contains: tetrahydrofuran; cyclohexanone.

Signal word Danger

H-statements

H225 Highly flammable liquid and vapour.
H351 Suspected of causing cancer.
H318 Causes serious eye damage.
H335 May cause respiratory 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, protective clothing 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.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard

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1 / 19

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RENOLIT ALKORPLAN 81038

Caution! Substance is absorbed through the skin

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
tetrahydrofuran 01-2119444314-46	109-99-9 203-726-8	C<75 %	Flam. Liq. 2; H225 Carc. 2; H351 Acute Tox. 4; H302 Eye Irrit. 2; H319 STOT SE 3; H335 STOT SE 3; H336	(1)(2)(6)(8)(10)	Constituent
silica, pyrogenic 01-2119379499-16	112945-52-5	C<5 %		(2)	Constituent
cyclohexanone 01-2119453616-35	108-94-1 203-631-1	C<10 %	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Acute Tox. 4; H302 Eye Dam. 1; H318 Skin Irrit. 2; H315	(1)(2)(10)	Constituent
polyvinylchloride	9002-86-2	C<15 %		(2)(V)	Constituent
bis(2-propylheptyl) phthalate 01-2119446694-30	53306-54-0 258-469-4	C<10 %		(2)	Constituent
titanium dioxide 01-2119489379-17	13463-67-7 236-675-5	C<5 %		(2)	Constituent

(1) For H-statements in full: see heading 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

(8) Specific concentration limits, see heading 16

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

(V) Exempted from registration under REACH (Regulation (EC) No 1907/2006, article 2 (9), polymers)

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Rinse with water. Do not apply (chemical) neutralizing agents without medical advice. Take victim to a doctor if irritation persists.

After eye contact:

Rinse immediately with plenty of water for 15 minutes. 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.

After ingestion:

Rinse mouth with water. Do not apply (chemical) neutralizing agents without medical advice. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms

After inhalation:

Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Headache. Nausea. EXPOSURE TO HIGH CONCENTRATIONS: Feeling of weakness. Central nervous system depression. Dizziness. Narcosis. Ringing in the ears. Sensorial disturbances. Disturbances of consciousness. Respiratory difficulties.

After skin contact:

Dry skin. Red skin.

After eye contact:

Corrosion of the eye tissue.

After ingestion:

Dry/sore throat. Symptoms similar to those listed under inhalation.

4.2.2 Delayed symptoms

No effects known.

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Product number: 57008

2 / 19

RENOLIT ALKORPLAN 81038

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 (alcohol-resistant), Water spray if puddle cannot expand.

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

On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, carbon monoxide - carbon dioxide).

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. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective goggles. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

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 heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Protective goggles. Protective clothing.

Suitable protective clothing

See heading 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 a non combustible material e.g.: sand. 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 heading 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

Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Gas/vapour heavier than air at 20°C. Observe strict hygiene. Do not discharge the waste into the drain. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Store in a cool area. Keep container in a well-ventilated place. Fireproof storeroom. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, ignition sources.

7.2.3 Suitable packaging material:

Metal.

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.

RENOLIT ALKORPLAN 81038

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

Cyclohexanone	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	10 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	40.8 mg/m ³
	Short time value (Indicative occupational exposure limit value)	20 ppm
	Short time value (Indicative occupational exposure limit value)	81.6 mg/m ³
Tetrahydrofuran	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)	150 mg/m ³
	Short time value (Indicative occupational exposure limit value)	100 ppm
	Short time value (Indicative occupational exposure limit value)	300 mg/m ³

Belgium

Chlorure de polyvinyle (fraction alvéolaire)	Time-weighted average exposure limit 8 h	1 mg/m ³
Cyclohexanone	Time-weighted average exposure limit 8 h	10 ppm
	Time-weighted average exposure limit 8 h	40.8 mg/m ³
	Short time value	20 ppm
	Short time value	81.6 mg/m ³
Tétrahydrofurane	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	150 mg/m ³
	Short time value	100 ppm
	Short time value	300 mg/m ³
Titane (dioxyde de)	Time-weighted average exposure limit 8 h	10 mg/m ³

The Netherlands

Cyclohexanon	Short time value (Public occupational exposure limit value)	12 ppm
	Short time value (Public occupational exposure limit value)	50 mg/m ³
Tetrahydrofuraan	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	100 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	300 mg/m ³
	Short time value (Public occupational exposure limit value)	200 ppm
	Short time value (Public occupational exposure limit value)	600 mg/m ³

France

Cyclohexanone	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	10 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	40.8 mg/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	20 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	81.6 mg/m ³
Tétrahydrofuranne	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	50 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	150 mg/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	300 mg/m ³
Titane (dioxyde de), en Ti	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	10 mg/m ³

Germany

Cyclohexanon	Time-weighted average exposure limit 8 h (TRGS 900)	20 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	80 mg/m ³
Kieselsäuren, amorphe	Time-weighted average exposure limit 8 h (TRGS 900)	4 mg/m ³
Tetrahydrofuran	Time-weighted average exposure limit 8 h (TRGS 900)	50 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	150 mg/m ³

UK

Cyclohexanone	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 ppm
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RENOLIT ALKORPLAN 81038

Cyclohexanone	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	41 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	20 ppm
	Short time value (Workplace exposure limit (EH40/2005))	82 mg/m ³
Polyvinyl chloride inhalable dust	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m ³
Polyvinyl chloride respirable dust	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	4 mg/m ³
Tetrahydrofuran	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))	150 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	100 ppm
	Short time value (Workplace exposure limit (EH40/2005))	300 mg/m ³
Titanium dioxide respirable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	4 mg/m ³
Titanium dioxide total inhalable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m ³

USA (TLV-ACGIH)

Cyclohexanone	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm
	Short time value (TLV - Adopted Value)	50 ppm
Polyvinyl chloride (PVC)	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	1 mg/m ³ (R)
Tetrahydrofuran	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	50 ppm
	Short time value (TLV - Adopted Value)	100 ppm
Titanium dioxide	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	10 mg/m ³

(R): Respirable fraction

b) National biological limit values

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

Germany

Tetrahydrofuran (Tetrahydrofuran)	Urin: expositionsende, bzw. schichtende	2 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
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UK

Cyclohexanone (cyclohexanol)	Urine: post shift	2 mmol/mol creatinine	
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USA (BEI-ACGIH)

Cyclohexanone (1,2-cyclohexanediol)	urine: end of shift at end of workweek	80 mg/L	
Cyclohexanone (Cyclohexanol)	urine: end of shift	8 mg/L	
Tetrahydrofuran (Tetrahydrofuran)	Urine: end of shift	2 mg/L	

8.1.2 Sampling methods

Product name	Test	Number
Cyclohexanone (Ketones I)	NIOSH	1300
Cyclohexanone (Ketones I)	NIOSH	2555
Cyclohexanone (Volatile Organic compounds)	NIOSH	2549
Cyclohexanone	OSHA	1
fumed (silica, amorphous)	NIOSH	7501
Silica, Amorphous (Respirable)	NIOSH	7501
Tetrafluoroethylene (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
Tetrahydrofuran	NIOSH	1609
Tetrahydrofuran	OSHA	7
TiO ₂	NIOSH	7302
TiO ₂	NIOSH	7304

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

tetrahydrofuran

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	72.4 mg/m ³	
	Acute systemic effects inhalation	96 mg/m ³	
	Long-term local effects inhalation	150 mg/m ³	
	Acute local effects inhalation	300 mg/m ³	
	Long-term systemic effects dermal	12.6 mg/kg bw/day	

silica, pyrogenic

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

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Product number: 57008

5 / 19

RENOLIT ALKORPLAN 81038

cyclohexanone

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	40 mg/m ³	
	Acute systemic effects inhalation	80 mg/m ³	
	Long-term local effects inhalation	40 mg/m ³	
	Acute local effects inhalation	80 mg/m ³	
	Long-term systemic effects dermal	4 mg/kg bw/day	
	Acute systemic effects dermal	4 mg/kg bw/day	

bis(2-propylheptyl) phthalate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	28.8 mg/m ³	
	Long-term local effects inhalation	8.4 mg/m ³	
	Long-term systemic effects dermal	102.08 mg/kg bw/day	

DNEL/DMEL - General population

tetrahydrofuran

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	13 mg/m ³	
	Acute systemic effects inhalation	52 mg/m ³	
	Long-term local effects inhalation	75 mg/m ³	
	Acute local effects inhalation	150 mg/m ³	
	Long-term systemic effects dermal	1.5 mg/kg bw/day	
	Long-term systemic effects oral	1.5 mg/kg bw/day	

cyclohexanone

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	10 mg/m ³	
	Acute systemic effects inhalation	20 mg/m ³	
	Long-term local effects inhalation	20 mg/m ³	
	Acute local effects inhalation	40 mg/m ³	
	Long-term systemic effects dermal	1 mg/kg bw/day	
	Acute systemic effects dermal	1 mg/kg bw/day	
	Long-term systemic effects oral	1.5 mg/kg bw/day	
	Acute systemic effects oral	1.5 mg/kg bw/day	

bis(2-propylheptyl) phthalate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects dermal	61.25 mg/kg bw/day	
	Long-term systemic effects inhalation	8.52 mg/m ³	
	Long-term systemic effects oral	4.9 mg/kg bw/day	
	Long-term local effects inhalation	2.5 mg/m ³	

PNEC

tetrahydrofuran

Compartments	Value	Remark
Fresh water	4.32 mg/l	
Marine water	0.432 mg/l	
Fresh water (intermittent releases)	21.6 mg/l	
STP	4.6 mg/l	
Fresh water sediment	23.3 mg/kg sediment dw	
Marine water sediment	2.33 mg/kg sediment dw	
Soil	2.13 mg/kg soil dw	
Oral	67 mg/kg food	

cyclohexanone

Compartments	Value	Remark
Fresh water	0.033 mg/l	
Marine water	0.003 mg/l	
Fresh water (intermittent releases)	0.329 mg/l	
STP	10 mg/l	
Fresh water sediment	0.095 mg/kg sediment dw	
Soil	0.014 mg/kg soil dw	

bis(2-propylheptyl) phthalate

Compartments	Value	Remark
Soil	10 mg/kg soil dw	

8.1.5 Control banding

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

Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

8.2.2 Individual protection measures, such as personal protective equipment

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Date of revision: 2019-03-07

Revision number: 0100

Product number: 57008

6 / 19

RENOLIT ALKORPLAN 81038

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 (EN374).

c) Eye protection:

Protective goggles.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 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
Colour	No data available on colour
Particle size	Not applicable (liquid)
Explosion limits	No data available
Flammability	Highly flammable liquid and vapour.
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Vapour pressure	No data available
Solubility	No data available
Relative density	No data available
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Flash point	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. Other information

Surface tension	No data available
Absolute density	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

Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, carbon monoxide - carbon dioxide).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

Liquid PVC 81038

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7 / 19

RENOLIT ALKORPLAN 81038

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetrahydrofuran

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		1650 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg bw	24 h	Rat (male / female)	Experimental value	
Inhalation	LC50	Other	> 14.7 mg/l	6 h	Rat (male / female)	Experimental value	

silica, pyrogenic

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		3160 mg/kg		Rat		
Dermal	LD50		> 5000 mg/kg		Rabbit		

cyclohexanone

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	BASF test	1890 mg/kg bw		Rat	Experimental value	Aqueous solution
Dermal						Data waiving	
Dermal			category 4			Annex VI	
Inhalation (vapours)	LC50	BASF test	> 6.2 mg/l air	4 h	Rat (male / female)	Experimental value	

polyvinylchloride

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		> 2000 mg/kg		Rat	Literature study	
Dermal	LD50		> 2000 mg/kg		Rabbit	Literature study	

bis(2-propylheptyl) phthalate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	> 5000 mg/kg		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 2000 mg/kg	24 h	Rabbit (male / female)	Experimental value	
Inhalation (aerosol)	LC50	Equivalent to OECD 403	> 5 mg/l	4 h	Rat (male / female)	Experimental value	

titanium dioxide

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 425	> 5000 mg/kg bw		Rat (female)	Experimental value	
Dermal						Data waiving	
Inhalation (dust)	LC50	Other	> 6.82 mg/l	4 h	Rat (male)	Experimental value	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

Liquid PVC 81038

No (test)data on the mixture available

Classification is based on the relevant ingredients

tetrahydrofuran

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating; category 2					Annex VI	
Inhalation	Irritating; STOT SE cat.3					Annex VI	

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

cyclohexanone

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Not applicable (in vitro test)	Serious eye damage		< 3.5 minutes		Isolated chicken eye	Experimental value	
Skin	Irritating	OECD 404	4 h	3 minutes; 1 hr	Rabbit	Experimental value	

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RENOLIT ALKORPLAN 81038

bis(2-propylheptyl) phthalate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405	24 h	1; 24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating	OECD 404	4 h	1; 24; 48; 72 hours	Rabbit	Experimental value	

titanium dioxide

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		1; 24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating	Equivalent to OECD 404	4 h		Rabbit	Experimental value	

Conclusion

Causes serious eye damage.
May cause respiratory irritation.
Not classified as irritating to the skin

Respiratory or skin sensitisation

Liquid PVC 81038

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

tetrahydrofuran

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

cyclohexanone

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Intradermal	Limited positive test result	Guinea pig maximisation test		24 hours	Guinea pig	Experimental value	

bis(2-propylheptyl) phthalate

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

titanium dioxide

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

Conclusion

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

Specific target organ toxicity

Liquid PVC 81038

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

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (drinking water)	NOAEL	Equivalent to OECD 407	111.3 mg/kg bw/day		No effect	4 week(s)	Rat (female)	Experimental value
Inhalation (vapours)	NOAEC	Subchronic toxicity test	1800 ppm	General	No effect	14 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Inhalation (vapours)	NOEC	EPA OTS 798.6050	1.5 mg/l	Central nervous system	No effect	6 h	Rat (male / female)	Experimental value
Inhalation			STOT SE cat.3		Drowsiness, dizziness			Literature study

cyclohexanone

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (drinking water)	NOAEL	OECD 408	143 mg/kg bw/day		No effect	3 month(s)	Rat (male / female)	Experimental value

Reason for revision: 2;3

Publication date: 2016-02-03

Date of revision: 2019-03-07

RENOLIT ALKORPLAN 81038

bis(2-propylheptyl) phthalate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL	OECD 408	39 mg/kg bw/day		No effect	3 month(s)	Rat (male / female)	Experimental value

titanium dioxide

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOEL	OECD 407	24000 mg/kg bw/day		No effect	29 day(s)	Rat (male)	Experimental value
Dermal								Data waiving
Inhalation (dust)	NOEC	Other	10 mg/m ³ air		No effect	104 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value

Conclusion

May cause drowsiness or dizziness.
Not classified for subchronic toxicity

Mutagenicity (in vitro)

Liquid PVC 81038

No (test)data on the mixture available

tetrahydrofuran

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	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	

cyclohexanone

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

bis(2-propylheptyl) phthalate

Result	Method	Test substrate	Effect	Value determination	Remark
Negative	OECD 473	Chinese hamster lung fibroblasts (V79)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 476	Chinese hamster ovary (CHO)	No effect	Experimental value	

titanium dioxide

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 473	Chinese hamster ovary (CHO)		Experimental value	

Mutagenicity (in vivo)

Liquid PVC 81038

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

RENOLIT ALKORPLAN 81038

tetrahydrofuran

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 474	14 weeks (6h / day, 5 days / week)	Mouse (male / female)	Blood	Experimental value

cyclohexanone

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative		5 days (7h / day)	Rat (male / female)		Experimental value

titanium dioxide

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (stomach tube))	OECD 474		Rat (male / female)		Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

Liquid PVC 81038

No (test)data on the mixture available

Classification is based on the relevant ingredients

tetrahydrofuran

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Carcinogenic toxicity study	1800 ppm	105 weeks (6h / day, 5 days / week)	Rat (male / female)	No carcinogenic effect	Kidney	Experimental value
Unknown			category 2					Annex VI

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

cyclohexanone

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral (drinking water)	LOAEL	Equivalent to OECD 453	13000 ppm	104 week(s)	Mouse (male / female)	Neoplastic effects		Experimental value

titanium dioxide

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (dust)	NOAEC	OECD 453	5 mg/m ³ air	104 weeks (6h / day, 5 days / week)	Rat (male / female)	No carcinogenic effect	Lungs	Experimental value
Oral (diet)	NOEL	Carcinogenic toxicity study	> 50000 ppm	103 weeks (7 days / week)	Rat (male / female)	No carcinogenic effect		Experimental value

Conclusion

Suspected of causing cancer.

Reproductive toxicity

Liquid PVC 81038

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetrahydrofuran

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	Equivalent to OECD 414	1800 ppm	14 days (6h / day)	Rat (male / female)	No effect		Experimental value
Maternal toxicity	NOAEL	Equivalent to OECD 414	1800 ppm	14 days (6h / day)	Rat	No effect		Experimental value
Effects on fertility	NOAEL	OECD 416	9000 ppm	70 days (continuous) - 98 days (continuous)	Rat (male / female)	No effect		Experimental value

cyclohexanone

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	OECD 414	500 mg/kg bw/day	13 day(s)	Rabbit	No effect		Experimental value
Maternal toxicity	NOAEL	OECD 414	250 mg/kg bw/day	13 day(s)	Rabbit	No effect		Experimental value
Effects on fertility	NOAEC	Equivalent to OECD 416	1000 ppm		Rat (male / female)	No effect		Experimental value

Reason for revision: 2;3

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Product number: 57008

11 / 19

RENOLIT ALKORPLAN 81038

bis(2-propylheptyl) phthalate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	OECD 414	200 mg/kg bw/day	20 day(s)	Rat	No effect	Foetus	Experimental value
	NOAEL	OECD 414	1000 mg/kg bw/day	20 day(s)	Rat	No effect		Experimental value
Maternal toxicity	NOAEL	OECD 414	200 mg/kg bw/day	20 day(s)	Rat	No effect		Experimental value
Effects on fertility	NOAEL (P)	OECD 416	600 mg/kg bw/day	126 day(s)	Rat (male / female)	No effect		Experimental value
	NOAEL (F1)	OECD 416	600 mg/kg bw/day	131 day(s)	Rat (male / female)	No effect		Experimental value

titanium dioxide

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 414	1000 mg/kg bw/day	2 weeks (7 days / week)	Rat	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	OECD 414	1000 mg/kg bw/day	2 weeks (7 days / week)	Rat	No effect		Experimental value

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

Liquid PVC 81038

No (test)data on the mixture available

Chronic effects from short and long-term exposure

Liquid PVC 81038

Enlargement/affection of the liver. Affection of the renal tissue. Visual disturbances. Auditory disturbances.

SECTION 12: Ecological information

12.1. Toxicity

Liquid PVC 81038

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetrahydrofuran

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	2160 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; Lethal
Acute toxicity crustacea	LC50	Equivalent to OECD 202	3485 ppm	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	Toxicity threshold	Other	3700 mg/l	8 day(s)	Scenedesmus quadricauda	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish	NOEC	OECD 210	216 mg/l	33 day(s)	Pimephales promelas	Flow-through system	Fresh water	Experimental value
Long-term toxicity aquatic crustacea								Data waiving
Toxicity aquatic micro-organisms	ECO		580 mg/l	168 h	Pseudomonas putida			Literature study
	IC50	Equivalent to OECD 209	460 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value; Nominal concentration

RENOLIT ALKORPLAN 81038

cyclohexanone

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	US EPA	527 mg/l - 732 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value
Acute toxicity crustacea	EC50	OECD 202	> 100 mg/l	48 h	Daphnia magna	Static system	Fresh water	Read-across; GLP
Toxicity algae and other aquatic plants	ErC50	Other	32.9 mg/l	72 h	Chlamydomonas reinhardtii	Static system	Fresh water	Experimental value
Toxicity aquatic micro-organisms	EC50	OECD 209	> 1000 mg/l	30 minutes	Activated sludge	Static system	Fresh water	Experimental value

polyvinylchloride

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		≥ 100 mg/l	96 h	Pisces			Literature study

bis(2-propylheptyl) phthalate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	> 10000 mg/l	96 h	Danio rerio	Static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	EU Method C.2	> 100 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	EU Method C.3	> 100 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Growth rate
	EC50	EU Method C.3	> 100 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Biomass
Long-term toxicity aquatic crustacea	NOEC	OECD 211	> 1 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value
	LOEC	OECD 211	> 1 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value
Toxicity aquatic micro-organisms	EC20	OECD 209	> 1000 mg/l	180 minutes	Activated sludge			Experimental value
	EC50	EU Method C.11	> 1000 mg/l	180 minutes	Activated sludge	Static system	Fresh water	Experimental value; GLP

titanium dioxide

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	> 100 mg/l	96 h	Oncorhynchus mykiss	Static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	LC50	Equivalent to OECD 202	> 500 mg/l	48 h	Daphnia magna	Semi-static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	ErC50	EPA 600/9-78-018	61 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Nominal concentration
Long-term toxicity fish	NOEC	Equivalent to OECD 212	≥ 1000 mg/l	8 day(s)	Danio rerio	Semi-static system	Fresh water	Experimental value; Nominal concentration
Long-term toxicity aquatic crustacea	NOEC	OECD 211	≥ 2.92 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Weight of evidence; GLP

Conclusion

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

12.2. Persistence and degradability

tetrahydrofuran

Biodegradation water

Method	Value	Duration	Value determination
Equivalent or similar to OECD 301D	39 %; Oxygen consumption	28 day(s)	Experimental value

Biodegradation soil

Method	Value	Duration	Value determination
			Data waiving

RENOLIT ALKORPLAN 81038

cyclohexanone

Biodegradation water

Method	Value	Duration	Value determination
OECD 301C: Modified MITI Test (I)	87 %	14 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
	2.5 day(s)	500000 /cm ³	Experimental value

bis(2-propylheptyl) phthalate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301B: CO2 Evolution Test	80 % - 90 %; GLP	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
SRC AOP v1.92	14 h	500000 /cm ³	Calculated value

Conclusion

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

Liquid PVC 81038

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

tetrahydrofuran

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF		3.16			Literature study

Log Kow

Method	Remark	Value	Temperature	Value determination
Equivalent to OECD 107		0.45	25 °C	Experimental value

silica, pyrogenic

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable			

cyclohexanone

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF		2.4			QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 107		0.86	25 °C	Experimental value

polyvinylchloride

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

bis(2-propylheptyl) phthalate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	< 14.4	56 day(s)	Cyprinus carpio	Read-across

Log Kow

Method	Remark	Value	Temperature	Value determination
		10.7		Calculated
		10.6 - 10.8	25 °C	Calculated

titanium dioxide

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

tetrahydrofuran

(log) Koc

Parameter	Method	Value	Value determination
log Koc	Other	1.26 - 1.37	Experimental value

RENOLIT ALKORPLAN 81038

cyclohexanone

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v1.66	1.18	Calculated value

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
1.21 Pa.m ³ /mol	EPI Suite	25 °C		Experimental value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level I	43.6 %	0 %	0.03 %	0.03 %	56.4 %	Calculated value

bis(2-propylheptyl) phthalate

(log) Koc

Parameter	Method	Value	Value determination
log Koc	OECD 121	6.8	Experimental value
	OECD 121	> 5.63	Experimental value
Koc	OECD 121	> 426580	Experimental value

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
3.72 Pa.m ³ /mol	SRC HENRYWIN v3.10	25 °C		Calculated value

Conclusion

Contains component(s) that adsorb(s) into the soil
 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. Other adverse effects

Liquid PVC 81038

Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

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)

tetrahydrofuran

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 04 09* (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants 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

Recycle/reuse. 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. Do not discharge into drains or the environment.

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).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

UN number	2056
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14.2. UN proper shipping name

Proper shipping name	Tetrahydrofuran, mixture
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14.3. Transport hazard class(es)

Hazard identification number	33
Class	3

Reason for revision: 2;3

Publication date: 2016-02-03

Date of revision: 2019-03-07

Revision number: 0100

Product number: 57008

15 / 19

RENOLIT ALKORPLAN 81038

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	
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number	
UN number	2056
14.2. UN proper shipping name	
Proper shipping name	Tetrahydrofuran, mixture
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	
Limited quantities	Combination packagings: not more than 1 liter 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	2056
14.2. UN proper shipping name	
Proper shipping name	Tetrahydrofuran, mixture
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	
Limited quantities	Combination packagings: not more than 1 liter 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	2056
14.2. UN proper shipping name	
Proper shipping name	tetrahydrofuran, mixture
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	
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	
Annex II of MARPOL 73/78	Not applicable, based on available data

Air (ICAO-TI/IATA-DGR)

14.1. UN number	
UN number	2056
14.2. UN proper shipping name	

RENOLIT ALKORPLAN 81038

Proper shipping name	Tetrahydrofuran, mixture
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	
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:

VOC content Directive 2010/75/EU

VOC content	Remark
79 %	

Indicative occupational exposure limit values (Directive 98/24/EC, 2000/39/EC and 2009/161/EU)

Product name	Skin resorption
Cyclohexanone	Skin
Tetrahydrofuran	Skin

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
· tetrahydrofuran · cyclohexanone	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: (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; (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; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — 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: — 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: 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. 6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled H304, intended for supply to the general public. 7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'
· tetrahydrofuran · cyclohexanone	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.	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: — metallic glitter intended mainly for decoration, — artificial snow and frost, — "whoopie" cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams,

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Product number: 57008

17 / 19

RENOLIT ALKORPLAN 81038

- 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:
"For professional users only".
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.

National legislation Belgium

Liquid PVC 81038

No data available

tetrahydrofuran

Résorption peau	Tétrahydrofurane; 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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cyclohexanone

Résorption peau	Cyclohexanone; 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

Liquid PVC 81038

Waterbeveiligheid	B (4); Algemene Beoordelingsmethodiek (ABM)
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tetrahydrofuran

Huidopname (wettelijk)	Tetrahydrofuraan; H
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cyclohexanone

Huidopname (wettelijk)	Cyclohexanon; H
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National legislation France

Liquid PVC 81038

No data available

tetrahydrofuran

Risque de pénétration percutanée	Tétrahydrofurane; PP
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National legislation Germany

Liquid PVC 81038

WGK	1; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017
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tetrahydrofuran

TA-Luft	5.2.5/1
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TRGS900 - Risiko der Fruchtschädigung	Tetrahydrofuran; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
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Hautresorptive Stoffe	Tetrahydrofuran; H; Hautresorptiv
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silica, pyrogenic

TRGS900 - Risiko der Fruchtschädigung	Kieselsäuren, amorphe; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
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cyclohexanone

TA-Luft	5.2.5
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TRGS900 - Risiko der Fruchtschädigung	Cyclohexanon; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
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Hautresorptive Stoffe	Cyclohexanon; H; Hautresorptiv
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polyvinylchloride

TA-Luft	5.2.1
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bis(2-propylheptyl) phthalate

TA-Luft	5.2.5
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titanium dioxide

TA-Luft	5.2.1
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National legislation United Kingdom

Liquid PVC 81038

No data available

tetrahydrofuran

Skin absorption	Tetrahydrofuran; Sk
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cyclohexanone

Skin absorption	Cyclohexanone; Sk
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Other relevant data

Liquid PVC 81038

No data available

Reason for revision: 2;3

Publication date: 2016-02-03

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Revision number: 0100

Product number: 57008

18 / 19

RENOLIT ALKORPLAN 81038

tetrahydrofuran

TLV - Carcinogen	Tetrahydrofuran; A3
IARC - classification	2B; Tetrahydrofuran
Skin absorption	Tetrahydrofuran; Skin; Danger of cutaneous absorption

silica, pyrogenic

IARC - classification	3; Silica
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cyclohexanone

TLV - Carcinogen	Cyclohexanone; A3
IARC - classification	3; Cyclohexanone
Skin absorption	Cyclohexanone; Skin; Danger of cutaneous absorption

polyvinylchloride

TLV - Carcinogen	Polyvinyl chloride (PVC); A4
IARC - classification	3; Vinyl chloride, polyvinyl chloride and vinyl chloride-vinyl acetate copolymers

titanium dioxide

TLV - Carcinogen	Titanium dioxide; A4
IARC - classification	2B; Titanium dioxide

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

tetrahydrofuran

A chemical safety assessment has been performed.

cyclohexanone

A chemical safety assessment has been performed.

SECTION 16: Other information

Full text of any H-statements referred to under heading 3:

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
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 license and liability limiting conditions as stated in your BIG license 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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19 / 19