SAFETY DATA SHEET

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

TRANSFIX

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

1.1. Product identifier

Product name : TRANSFIX
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

Adhesive

1.2.2 Uses advised against

No uses advised against

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
Carc.	category 2	H351: Suspected of causing cancer.
Skin Sens.	category 1	H317: May cause an allergic skin reaction.
Skin Irrit.	category 2	H315: Causes skin irritation.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H336: May cause drowsiness or dizziness.
Aquatic Chronic	category 2	H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements

Contains: tetrachloroethylene.

Signal word Warning

H-statements

H351 Suspected of causing cancer.
H317 May cause an allergic skin reaction.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

P-statements

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.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER/doctor if you feel unwell.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

Odour threshold is well above one of the exposure limits
Produces effects on the nervous system
Odour tolerance may develop

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	M-factors and ATE
tetrachloroethylene	127-18-4 204-825-9	60% <C<100%	Carc. 2; H351 Skin Sens. 1B; H317 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H336 Aquatic Chronic 2; H411	(1)(2)(6)(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

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. If irritation persists, consult a doctor/medical service.

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:
EXPOSURE TO HIGH CONCENTRATIONS: Dizziness. Drowsiness.

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

5.3. Advice for firefighters
5.3.1 Instructions:
Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:
Gloves (EN 374). Face shield (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
No naked flames.

6.1.1 Protective equipment for non-emergency personnel
See section 8.2

6.1.2 Protective equipment for emergency responders
Gloves (EN 374). Face shield (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 solid spill. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up
Solid spill: cover with absorbent material. Scoop solid spill 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. Gas/vapour heavier than air at 20°C. Observe very strict hygiene - avoid contact. 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:
Meet the legal requirements. Store in a dry area. Keep container in a well-ventilated place. Keep locked up.

7.2.2 Keep away from:
Heat 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

Tetrachloroethylene	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	138 mg/m³
	Short time value (Indicative occupational exposure limit value)	40 ppm

Tetrachloroethylene	Short time value (Indicative occupational exposure limit value)	275 mg/m³

Belgium

Perchloroéthylène	Time-weighted average exposure limit 8 h	20 ppm
	Time-weighted average exposure limit 8 h	138 mg/m³
	Short time value	40 ppm
	Short time value	275 mg/m³

The Netherlands

Tetrachloorethyleen (PER)	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	138 mg/m³
	Short time value (Public occupational exposure limit value)	40 ppm
	Short time value (Public occupational exposure limit value)	275 mg/m³

France

Perchloroéthylène	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	20 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	138 mg/m³
	Short time value (VRC: Valeur réglementaire contraignante)	40 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	275 mg/m³

Germany

Tetrachlorethen (Per)	Time-weighted average exposure limit 8 h (TRGS 900)	10 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	69 mg/m³

Austria

Tetrachlorethen	Tagesmittelwert (MAK)	20 ppm
	Tagesmittelwert (MAK)	138 mg/m³
	Kurzzeitwert 15(Miw) 4x (MAK)	40 ppm
	Kurzzeitwert 15(Miw) 4x (MAK)	275 mg/m³

UK

Tetrachloroethylene	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	20 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	138 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	40 ppm
	Short time value (Workplace exposure limit (EH40/2005))	275 mg/m³

USA (TLV-ACGIH)

Tetrachloroethylene	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	25 ppm
	Short time value (TLV - Adopted Value)	100 ppm

b) National biological limit values

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

Germany

Tetrachlorethylen (Tetrachlorethen) (Tetrachlorethylen (Tetrachlorethen))	Vollblut: nach expositionsende: stunden (16 h)	200 µg/l	

USA (BEI-ACGIH)

Tetrachloroethylene (Tetrachloroethylene)	Blood: prior to shift	0,5 mg/L	
Tetrachloroethylene (Tetrachloroethylene)	end-exhaled air: prior to shift	3 ppm	

8.1.2 Sampling methods

Product name	Test	Number
Perchloroethylene (air)	NIOSH	3704
Perchloroethylene (Hydrocarbons, halogenated)	NIOSH	1003
Perchloroethylene (Volatile Organic compounds)	NIOSH	2549
Perchloroethylene	OSHA	1001
Tetrachloroethylene (Hydrocarbons, halogenated)	NIOSH	1003

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

tetrachloroethylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	138 mg/m³	
	Acute systemic effects inhalation	275 mg/m³	
	Long-term systemic effects dermal	39.4 mg/kg bw/day	

DNEL/DMEL - General population

tetrachloroethylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	0.25 mg/m³	
	Acute systemic effects inhalation	1.38 mg/m³	
	Long-term systemic effects dermal	0.167 mg/kg bw/day	
	Long-term systemic effects oral	1.3 mg/kg bw/day	

PNEC

tetrachloroethylene

Compartments	Value	Remark
Fresh water	0.051 mg/l	
Marine water	0.005 mg/l	
Fresh water (intermittent releases)	0.036 mg/l	
STP	11.2 mg/l	
Fresh water sediment	0.903 mg/kg sediment dw	
Marine water sediment	0.09 mg/kg sediment dw	
Air	8.2 µg/m³	
Soil	0.01 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

Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe very strict hygiene - avoid contact. 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).

Materials	Remark
polyethylene/ethylenevinylalcohol	Excellent resistance
PVA	Excellent resistance
viton	Excellent resistance
butyl rubber	Good resistance

c) Eye protection:

Safety glasses (EN 166).

d) Skin 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	Paste
Viscosity	Viscous
Odour	Ether-like odour
Odour threshold	No data available in the literature
Colour	No data available on colour
Particle size	No data available in the literature
Explosion limits	No data available in the literature
Flammability	Not classified as flammable
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	121 °C
Relative vapour density	> 1
Vapour pressure	17 hPa ; 20 °C

Solubility	Water ; insoluble
Relative density	1.37
Absolute density	1370 kg/m³
Decomposition temperature	No data available in the literature
Auto-ignition temperature	No data available in the literature
Flash point	No data available in the literature
pH	Not applicable (non-soluble in water)

9.2. Other information

Evaporation rate	< 1 ; Butyl acetate

SECTION 10: Stability and reactivity

10.1. Reactivity

Heating increases the fire 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.

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

11.1.1 Test results

Acute toxicity

TRANSFIX

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetrachloroethylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	3005 mg/kg bw		Rat (female)	Experimental value	
Dermal	LD50		> 10000 mg/kg bw	24 h	Rabbit	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	26.09 mg/l	4 h	Rat (male / female)	Experimental value	Converted value
Inhalation (vapours)	LC50	Equivalent to OECD 403	3786 ppm	4 h	Rat (male / female)	Experimental value	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

TRANSFIX

No (test)data on the mixture available

Classification is based on the relevant ingredients

tetrachloroethylene

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating		2 h - 7 h		Rabbit	Experimental value	
Skin	Irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	
Inhalation	Not irritating		25 minutes		Rat	Experimental value	Single exposure

Conclusion

Causes skin irritation.

Causes serious eye irritation.

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

TRANSFIX

No (test)data on the mixture available

Classification of the mixture is based on the relevant ingredients

tetrachloroethylene

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Dermal (on the ears)	Sensitizing	OECD 429			Mouse (female)	Experimental value	
Inhalation						Data waiving	

Conclusion

May cause an allergic skin reaction.

Not classified as sensitizing for inhalation

Specific target organ toxicity

TRANSFIX

No (test)data on the mixture available

Classification is based on the relevant ingredients

tetrachloroethylene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	LOAEL		390 mg/kg bw/day	Kidney	Affection of the renal tissue	78 weeks (5 days / week)	Mouse (female)	Experimental value
Oral (stomach tube)	LOAEL		540 mg/kg bw/day	Kidney	Affection of the renal tissue	78 weeks (5 days / week)	Mouse (male)	Experimental value
Dermal								Data waiving
Inhalation (vapours)	LOAEC		100 ppm	Liver; kidney	Organ damage	103 weeks (6h / day, 5 days / week)	Mouse (male / female)	Experimental value
Inhalation (vapours)	Dose level	Human observation	≥ 216 ppm		neurotoxic effects	2 h	Human	Experimental value

Conclusion

May cause drowsiness or dizziness.

Not classified for subchronic toxicity

Mutagenicity (in vitro)

TRANSFIX

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetrachloroethylene

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	

Mutagenicity (in vivo)

TRANSFIX

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetrachloroethylene

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Intraperitoneal)	Equivalent to OECD 474		Mouse (male)	Blood	Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

TRANSFIX

No (test)data on the mixture available

Classification is based on the relevant ingredients

tetrachloroethylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	LOAEC	Carcinogenic toxicity study	200 ppm	103 weeks (6h / day, 5 days / week)	Rat (male / female)	Carcinogenicity	Kidney	Experimental value

Conclusion

Suspected of causing cancer.

Reproductive toxicity

TRANSFIX

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetrachloroethylene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (vapours))	NOEC	OECD 414	250 ppm	2 weeks (6h / day, 7 days / week)	Rat	No effect	Foetus	Experimental value
Maternal toxicity (Inhalation (vapours))	NOEC	OECD 414	250 ppm	2 weeks (6h / day, 7 days / week)	Rat	No effect		Experimental value
Effects on fertility (Inhalation (vapours))	NOAEL (P)	EPA OTS 798.4700	1000 ppm		Rat (male / female)	No effect		Experimental value

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

TRANSFIX

No (test)data on the mixture available

Chronic effects from short and long-term exposure

TRANSFIX

Skin rash/inflammation. Enlargement/affection of the liver. Affection of the renal tissue. Possible bladder tumours.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

TRANSFIX

No (test)data on the mixture available

Classification is based on the relevant ingredients

tetrachloroethylene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		5 mg/l	96 h	Oncorhynchus mykiss	Flow-through system	Fresh water	Experimental value; Locomotor effect
Acute toxicity crustacea	EC50	ASTM	8.5 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	EC50		3.64 mg/l	72 h	Chlamydomonas reinhardtii		Fresh water	Experimental value; Growth rate
	EC10		1.77 mg/l	72 h	Chlamydomonas reinhardtii		Fresh water	Experimental value; Growth rate
Long-term toxicity fish	NOEC		2.34 mg/l	28 day(s)	Jordanella floridae	Flow-through system	Fresh water	Experimental value; Lethal
Long-term toxicity aquatic crustacea	NOEC	ASTM	510 µg/l	28 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; Reproduction
Toxicity aquatic micro-organisms	IC50		112 mg/l	24 h	Nitrosomonas			Experimental value; Methanogenesis

Conclusion

Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

tetrachloroethylene

Biodegradation water

Method	Value	Duration	Value determination
Equivalent to OECD 301D	0 %	21 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.91	50 day(s)	1.5E6 /cm³	QSAR

Biodegradation soil

Method	Value	Duration	Value determination
	> 99 %	332 day(s)	Experimental value

Conclusion

Water

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

TRANSFIX

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

tetrachloroethylene

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		49; Fresh weight	21 day(s)	Lepomis macrochirus	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
Equivalent to OECD 107		2.53	23 °C	Experimental value

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

tetrachloroethylene

(log) Koc

Parameter	Method	Value	Value determination
log Koc		2.15	Experimental value

Conclusion

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

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

12.7. Other adverse effects

TRANSFIX

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)

tetrachloroethylene

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

Refer to manufacturer/supplier for information on recovery/ recycling. 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. Dispose of at authorized waste collection point. Do not discharge into surface water (Directive 2000/60/EC, Council Decision 2455/2001/EC).

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	1897

14.2. UN proper shipping name

Proper shipping name	tetrachloroethylene, mixture

14.3. Transport hazard class(es)

Hazard identification number	60
Class	6.1
Classification code	T1

14.4. Packing group

Packing group	III
Labels	6.1

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	
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	1897

14.2. UN proper shipping name

Proper shipping name	tetrachloroethylene, mixture

14.3. Transport hazard class(es)

Hazard identification number	60
Class	6.1
Classification code	T1

14.4. Packing group

Packing group	III
Labels	6.1

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	
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	1897

14.2. UN proper shipping name

Proper shipping name	tetrachloroethylene, mixture

14.3. Transport hazard class(es)

Class	6.1
Classification code	T1

14.4. Packing group

Packing group	III
Labels	6.1

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	802
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	1897

14.2. UN proper shipping name

Proper shipping name	tetrachloroethylene, mixture

14.3. Transport hazard class(es)

Class	6.1

14.4. Packing group

Packing group	III
Labels	6.1

14.5. Environmental hazards

Marine pollutant	P
Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	
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	1897

14.2. UN proper shipping name

Proper shipping name	tetrachloroethylene, mixture

14.3. Transport hazard class(es)

Class	6.1

14.4. Packing group

Packing group	III
Labels	6.1

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	

Passenger and cargo transport

Limited quantities: maximum net quantity per packaging	2 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
60 % - 100 %	

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

tetrachloroethylene

Product name	Skin resorption
Tetrachloroethylene	Skin

Directive 2012/18/EU (Seveso III)

Threshold values under normal circumstances

Substance or category	Low tier (tonnes)	Top tier (tonnes)	Group	For this substance or mixture the summation rule has to be applied for:
E2 Hazardous to the Aquatic Environment in Category Chronic 2	200	500	None	Eco-toxicity

European drinking water standards (98/83/EC and 2020/2184)

tetrachloroethylene

Parameter	Parametric value	Note	Reference
Tetrachloroethene and Trichloroethene	10 µg/l		Listed in Annex I, Part B, of Directive (EU) 2020/2184 on the quality of water intended for human consumption.

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
· tetrachloroethylene	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	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

	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.	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.

National legislation Belgium

TRANSFIX

No data available

tetrachloroethylene

Résorption peau	Perchloroéthylène; 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.

National legislation The Netherlands

TRANSFIX

Waterbezwaarlijkheid	Z (1); Algemene Beoordelingsmethodiek (ABM)

tetrachloroethylene

Huidopname (wettelijk)	Tetrachloorethyleen (PER); H
SZW - Lijst van voor de voortplanting giftige stoffen (ontwikkeling)	tetrachloorethyleen; PER; Opgenomen in SZW-lijst van voor de voortplanting giftige stoffen (ontwikkeling); 2

National legislation France

TRANSFIX

No data available

tetrachloroethylene

Catégorie cancérogène	Perchloroéthylène; C2
Risque de pénétration percutanée	Perchloroéthylène; Risque de pénétration percutanée

National legislation Germany

TRANSFIX

Lagerklasse (TRGS510)	6.1C: Brennbare, akut toxische Kat. 3 / giftige oder chronisch wirkende Gefahrstoffe
WGK	3; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017

tetrachloroethylene

TA-Luft	5.2.5/I
TRGS900 - Risiko der Fruchtschädigung	Tetrachlorethen (Per); Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
TRGS905 - Krebserzeugend	Tetrachlorethylen; 2
TRGS905 - Erbgutverändernd	Tetrachlorethylen; -
TRGS905 - Fruchtbarkeitsgefährdend	Tetrachlorethylen; -
TRGS905 - Fruchtschädigend	Tetrachlorethylen; 2
Hautresorptive Stoffe	Tetrachlorethen (Per); H; Hautresorptiv

National legislation Austria

TRANSFIX

No data available

tetrachloroethylene

Krebserzeugend	Tetrachlorethen; III B
Fortpflanzungsgefährdend [fruchtschädigend (entwicklungsschädigend)]	Tetrachlorethen; d
besondere Gefahr der Hautresorption	Tetrachlorethen; H

National legislation United Kingdom

TRANSFIX

No data available

tetrachloroethylene

Skin absorption	Tetrachloroethylene; Sk

Other relevant data

TRANSFIX

No data available

tetrachloroethylene

IARC - classification	2A; Tetrachloroethylene (Perchloroethylene)
TLV - Carcinogen	Tetrachloroethylene; A3

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:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.

(*)	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.