

# 601 Purgable Halocarbons Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 02/06/2018

Revision date: \_\_\_\_\_

Version: 1.0

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : 601 Purgable Halocarbons Mix  
Product code : AL0-101713  
Product group : Trade product

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

##### 1.2.1. Relevant identified uses

Main use category : Laboratory Use  
Industrial/Professional use spec : Industrial  
For professional use only  
Use of the substance/mixture : Certified reference material for laboratory use only

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Phenova  
6390 Joyce Dr. Suite 100  
80403 Golden, CO - United States  
T 1-866-942-2978 - F 1-866-283-0269  
[info@phenova.com](mailto:info@phenova.com) - [www.phenova.com](http://www.phenova.com)

#### 1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924  
ChemTel Assistance (International) +1 813-248-0585

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 1	H224
Acute Tox. 3 (Oral)	H301
Acute Tox. 3 (Dermal)	H311
Carc. 1B	H350
STOT SE 1	H370
STOT RE 2	H373
Aquatic Chronic 3	H412
Ozone 1	H420

##### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.2; R45  
F+; R12  
T; R23/24/25  
T; R39/23/24/25  
Xn; R48/20  
N; R59  
R52/53

Full text of R-phrases: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H224 - Extremely flammable liquid and vapor  
H301+H311 - Toxic if swallowed or in contact with skin  
H350 - May cause cancer  
H370 - Causes damage to organs  
H373 - May cause damage to organs through prolonged or repeated exposure  
H412 - Harmful to aquatic life with long lasting effects  
H420 - Harms public health and the environment by destroying ozone in the upper atmosphere

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P270 - Do not eat, drink or smoke when using this product  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301+P330+P331+P310 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse  
P370+P378 - In case of fire: Use media other than water to extinguish  
P403+P235 - Store in a well-ventilated place. Keep cool  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

EUH phrases :

EUH208 - Contains 1,3-dichloropropene, trans-(10061-02-6), 1,3-dichloropropene, (Z)-(10061-01-5). May produce an allergic reaction

No labeling applicable

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
methanol (Component)	(CAS No) 67-56-1 (EC-No.) 200-659-6 (EC index no) 603-001-00-X	96.6	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
bromodichloromethane (Component)	(CAS No) 75-27-4 (EC-No.) 200-856-7	0.2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335
bromoform (Component)	(CAS No) 75-25-2 (EC-No.) 200-854-6 (EC index no) 602-007-00-X	0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411
carbon tetrachloride (Component)	(CAS No) 56-23-5 (EC-No.) 200-262-8 (EC index no) 602-008-00-5	0.2	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Carc. 2, H351 STOT RE 1, H372 Aquatic Chronic 3, H412 Ozone 1, H420

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,2-dichlorobenzene (Component)	(CAS No) 95-50-1 (EC-No.) 202-425-9 (EC index no) 602-034-00-7	0.2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1,3-dichlorobenzene (Component)	(CAS No) 541-73-1 (EC-No.) 208-792-1 (EC index no) 602-067-00-7	0.2	Acute Tox. 4 (Oral), H302 Aquatic Chronic 2, H411
1,4-dichlorobenzene (Component)	(CAS No) 106-46-7 (EC-No.) 203-400-5 (EC index no) 602-035-00-2	0.2	Eye Irrit. 2, H319 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
chlorobenzene (Component)	(CAS No) 108-90-7 (EC-No.) 203-628-5 (EC index no) 602-033-00-1	0.2	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
chloroform (Component)	(CAS No) 67-66-3 (EC-No.) 200-663-8 (EC index no) 602-006-00-4	0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361d STOT RE 1, H372
1,1,2,2-tetrachloroethane (Component)	(CAS No) 79-34-5 (EC-No.) 201-197-8 (EC index no) 602-015-00-3	0.2	Acute Tox. 3 (Oral), H301 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Aquatic Chronic 2, H411
1,3-dichloropropene, trans- (Component)	(CAS No) 10061-02-6	0.2	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335
cis-1,3-Dichloropropene (Component)	(CAS No) 10061-01-5 (EC-No.) 233-195-8 (EC index no) 602-030-00-5	0.2	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Methylene Chloride (Component)	(CAS No) 75-09-2 (EC-No.) 200-838-9 (EC index no) 602-004-00-3	0.2	Carc. 2, H351
1,1,1-trichloroethane (Component)	(CAS No) 71-55-6 (EC-No.) 200-756-3 (EC index no) 602-013-00-2	0.2	Acute Tox. 4 (Inhalation), H332 Ozone 1, H420
1,1,2-trichloroethane (Component)	(CAS No) 79-00-5 (EC-No.) 201-166-9 (EC index no) 602-014-00-8	0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Carc. 2, H351
tetrachloroethylene (Component)	(CAS No) 127-18-4 (EC-No.) 204-825-9 (EC index no) 602-028-00-4	0.2	Carc. 2, H351 Aquatic Chronic 2, H411
1,2-dichloroethane (Component) substance listed as REACH Candidate substance listed in REACH Annex XIV (1,2-dichloroethane (EDC))	(CAS No) 107-06-2 (EC-No.) 203-458-1 (EC index no) 602-012-00-7	0.2	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 1B, H350 STOT SE 3, H335
1,1-dichloroethene (Component)	(CAS No) 75-35-4 (EC-No.) 200-864-0 (EC index no) 602-025-00-8	0.2	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Carc. 2, H351
1,1-dichloroethane (Component) substance with a Community workplace exposure limit	(CAS No) 75-34-3 (EC-No.) 200-863-5 (EC index no) 602-011-00-1	0.2	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 3, H412

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
trichloroethylene (Component) substance listed as REACH Candidate substance listed in REACH Annex XIV	(CAS No.) 79-01-6 (EC-No.) 201-167-4 (EC index no) 602-027-00-9	0.2	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H336 Aquatic Chronic 3, H412
Name	Product identifier	Specific concentration limits	
methanol (Component)	(CAS No.) 67-56-1 (EC-No.) 200-659-6 (EC index no) 603-001-00-X	( 3 =<C < 10) STOT SE 2, H371 (C >= 10) STOT SE 1, H370	
carbon tetrachloride (Component)	(CAS No.) 56-23-5 (EC-No.) 200-262-8 (EC index no) 602-008-00-5	( 0.2 =<C < 1) STOT RE 2, H373 (C >= 1) STOT RE 1, H372	

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician. IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a poison center or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Immediately call a poison center or doctor/physician.

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

Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin.
Symptoms/effects after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Extremely flammable liquid and vapor.
Explosion hazard	: May form flammable/explosive vapor-air mixture.

#### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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##### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapors/spray.
Emergency procedures	: Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up in absorbent material. Collect spillage.
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#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Do not eat, drink or smoke when using this product. Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Keep in fireproof place. Keep container tightly closed. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.
- Incompatible materials : Direct sunlight. Heat sources.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

bromoform (75-25-2)		
Belgium	Limit value (mg/m <sup>3</sup> )	5.3 mg/m <sup>3</sup> (Bromoforme; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	0.5 ppm (Bromoforme; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Tribromométhane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	0.5 ppm (Tribromométhane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	0.5 ppm (Bromoform; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
carbon tetrachloride (56-23-5)		
Belgium	Limit value (mg/m <sup>3</sup> )	31 mg/m <sup>3</sup> (Tétrachlorométhane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	5 ppm (Tétrachlorométhane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m <sup>3</sup> )	64 mg/m <sup>3</sup> (Tétrachlorométhane; Belgium; Short time value)
Belgium	Short time value (ppm)	10 ppm (Tétrachlorométhane; Belgium; Short time value)
France	VLE (mg/m <sup>3</sup> )	60 mg/m <sup>3</sup> (Tétrachlorométhane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	10 ppm (Tétrachlorométhane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m <sup>3</sup> )	12 mg/m <sup>3</sup> (Tétrachlorométhane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	2 ppm (Tétrachlorométhane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	5 ppm (Carbon tetrachloride; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	10 ppm (Carbon tetrachloride; USA; Short time value; TLV - Adopted Value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	13 mg/m <sup>3</sup> Carbon tetrachloride; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	2 ppm Carbon tetrachloride; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)

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<b>chlorobenzene (108-90-7)</b>		
EU	IOELV TWA (mg/m <sup>3</sup> )	23 mg/m <sup>3</sup> (Monochlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	5 ppm (Monochlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV STEL (mg/m <sup>3</sup> )	70 mg/m <sup>3</sup> (Monochlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	15 ppm (Monochlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m <sup>3</sup> )	23 mg/m <sup>3</sup> (Chlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	5 ppm (Chlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m <sup>3</sup> )	70 mg/m <sup>3</sup> (Chlorobenzène; Belgium; Short time value)
Belgium	Short time value (ppm)	15 ppm (Chlorobenzène; Belgium; Short time value)
France	VLE (mg/m <sup>3</sup> )	70 mg/m <sup>3</sup> (Chlorobenzène; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	15 ppm (Chlorobenzène; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VME (mg/m <sup>3</sup> )	23 mg/m <sup>3</sup> (Chlorobenzène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	5 ppm (Chlorobenzène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10 ppm (Chlorobenzene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	350 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	75 mppcf
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	23 mg/m <sup>3</sup> (Chloorbenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	4.9 ppm (Chloorbenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	70 mg/m <sup>3</sup> (Chloorbenzeen; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	15 ppm (Chloorbenzeen; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	4.7 mg/m <sup>3</sup> Chlorobenzene; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	1 ppm Chlorobenzene; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	14 mg/m <sup>3</sup> Chlorobenzene; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	3 ppm Chlorobenzene; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
<b>chloroform (67-66-3)</b>		
EU	IOELV TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (Chloroform; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	2 ppm (Chloroform; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (Chloroforme; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	2 ppm (Chloroforme; Belgium; Time-weighted average exposure limit 8 h)
France	VLE (mg/m <sup>3</sup> )	250 mg/m <sup>3</sup> (Trichlorométhane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	50 ppm (Trichlorométhane; France; Short time value; VL: Valeur non réglementaire indicative)

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<b>chloroform (67-66-3)</b>		
France	VME (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (Trichlorométhane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	2 ppm (Trichlorométhane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10 ppm (Chloroform; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Chloroform; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	1 ppm (Chloroform; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup> (Chloroform; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	5 ppm (Chloroform; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	9.9 mg/m <sup>3</sup> Chloroform; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	2 ppm Chloroform; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
<b>1,2-dichlorobenzene (95-50-1)</b>		
EU	IOELV TWA (mg/m <sup>3</sup> )	122 mg/m <sup>3</sup> (1,2-Dichlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	20 ppm (1,2-Dichlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV STEL (mg/m <sup>3</sup> )	306 mg/m <sup>3</sup> (1,2-Dichlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	50 ppm (1,2-Dichlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m <sup>3</sup> )	122 mg/m <sup>3</sup> (1,2-Dichlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	20 ppm (1,2-Dichlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m <sup>3</sup> )	306 mg/m <sup>3</sup> (1,2-Dichlorobenzène; Belgium; Short time value)
Belgium	Short time value (ppm)	50 ppm (1,2-Dichlorobenzène; Belgium; Short time value)
France	VLE (mg/m <sup>3</sup> )	306 mg/m <sup>3</sup> (1,2-Dichlorobenzène; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	50 ppm (1,2-Dichlorobenzène; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VME (mg/m <sup>3</sup> )	122 mg/m <sup>3</sup> (1,2-Dichlorobenzène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	20 ppm (1,2-Dichlorobenzène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	25 ppm (o-Dichlorobenzene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	50 ppm (o-Dichlorobenzene; USA; Short time value; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	122 mg/m <sup>3</sup> (1,2-Dichloorbenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	20 ppm (1,2-Dichloorbenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	300 mg/m <sup>3</sup> (1,2-Dichloorbenzeen; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	49 ppm (1,2-Dichloorbenzeen; Netherlands; Short time value; Public occupational exposure limit value)

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<b>1,2-dichlorobenzene (95-50-1)</b>		
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	153 mg/m <sup>3</sup> 1,2-dichlorobenzene (ortho-dichlorobenzene); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	25 ppm 1,2-dichlorobenzene (ortho-dichlorobenzene); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	306 mg/m <sup>3</sup> 1,2-dichlorobenzene (ortho-dichlorobenzene); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	50 ppm 1,2-dichlorobenzene (ortho-dichlorobenzene); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
<b>1,4-dichlorobenzene (106-46-7)</b>		
EU	IOELV TWA (mg/m <sup>3</sup> )	122 mg/m <sup>3</sup> (1,4-Dichlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	20 ppm (1,4-Dichlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV STEL (mg/m <sup>3</sup> )	306 mg/m <sup>3</sup> (1,4-Dichlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	50 ppm (1,4-Dichlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m <sup>3</sup> )	61 mg/m <sup>3</sup> (1,4-Dichlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	10 ppm (1,4-Dichlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m <sup>3</sup> )	306 mg/m <sup>3</sup> (1,4-Dichlorobenzène; Belgium; Short time value)
Belgium	Short time value (ppm)	50 ppm (1,4-Dichlorobenzène; Belgium; Short time value)
France	VLE (mg/m <sup>3</sup> )	306 mg/m <sup>3</sup> (1,4-Dichlorobenzène; France; Short time value; VRI: Valeur réglementaire indicative)
France	VLE (ppm)	50 ppm (1,4-Dichlorobenzène; France; Short time value; VRI: Valeur réglementaire indicative)
France	VME (mg/m <sup>3</sup> )	4.5 mg/m <sup>3</sup> (1,4-Dichlorobenzène; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
France	VME (ppm)	0.75 ppm (1,4-Dichlorobenzène; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10 ppm (p-Dichlorobenzene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	450 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	75 ppm
USA OSHA	OSHA PEL (STEL) (mg/m <sup>3</sup> )	675 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (STEL) (ppm)	110 ppm
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	150 mg/m <sup>3</sup> (1,4-Dichloorbenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	25 ppm (1,4-Dichloorbenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	300 mg/m <sup>3</sup> (1,4-Dichloorbenzeen; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	49 ppm (1,4-Dichloorbenzeen; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	153 mg/m <sup>3</sup> 1,4-Dichlorobenzene (para-dichlorobenzene); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	25 ppm 1,4-Dichlorobenzene (para-dichlorobenzene); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)



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<b>1,4-dichlorobenzene (106-46-7)</b>		
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	306 mg/m <sup>3</sup> 1,4-Dichlorobenzene (para-dichlorobenzene); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	50 ppm 1,4-Dichlorobenzene (para-dichlorobenzene); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
<b>1,1-dichloroethane (75-34-3)</b>		
EU	IOELV TWA (mg/m <sup>3</sup> )	412 mg/m <sup>3</sup> (1,1-Dichloroethane; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	100 ppm (1,1-Dichloroethane; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m <sup>3</sup> )	412 mg/m <sup>3</sup> (1,1-Dichloroéthane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	100 ppm (1,1-Dichloroéthane; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m <sup>3</sup> )	412 mg/m <sup>3</sup> (1,1-Dichloroéthane; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
France	VME (ppm)	100 ppm (1,1-Dichloroéthane; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	100 ppm (1,1-Dichloroethane; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	400 mg/m <sup>3</sup> (1,1-Dichloorethaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	97 ppm (1,1-Dichloorethaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	800 mg/m <sup>3</sup> (1,1-Dichloorethaan; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	194 ppm (1,1-Dichloorethaan; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (ppm)	100 ppm 1,1-Dichloroethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
<b>1,2-dichloroethane (107-06-2)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	41 mg/m <sup>3</sup> (Chlorure d'éthylène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	10 ppm (Chlorure d'éthylène; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m <sup>3</sup> )	40 mg/m <sup>3</sup> (1,2-Dichloroéthane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	10 ppm (1,2-Dichloroéthane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10 ppm (Ethylene dichloride; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup> (1,2-Dichloorethaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	1.7 ppm (1,2-Dichloorethaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	21 mg/m <sup>3</sup> 1,2-Dichloroethane (Ethylene dichloride); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	5 ppm 1,2-Dichloroethane (Ethylene dichloride); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
<b>cis-1,3-Dichloropropene (10061-01-5)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	4.6 mg/m <sup>3</sup> (1,3-Dichloropropène; Belgium; Time-weighted average exposure limit 8 h)

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<b>cis-1,3-Dichloropropene (10061-01-5)</b>		
Belgium	Limit value (ppm)	1 ppm (1,3-Dichloropropène; Belgium; Time-weighted average exposure limit 8 h)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1 ppm (1,3-Dichloropropene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
<b>1,3-dichloropropene, trans- (10061-02-6)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	4.6 mg/m <sup>3</sup> (1,3-Dichloropropène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	1 ppm (1,3-Dichloropropène; Belgium; Time-weighted average exposure limit 8 h)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1 ppm (1,3-Dichloropropene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
<b>Methylene Chloride (75-09-2)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	177 mg/m <sup>3</sup> (Chlorure de méthylène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	50 ppm (Chlorure de méthylène; Belgium; Time-weighted average exposure limit 8 h)
France	VLE (mg/m <sup>3</sup> )	356 mg/m <sup>3</sup> (Dichlorométhane; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	100 ppm (Dichlorométhane; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VME (mg/m <sup>3</sup> )	178 mg/m <sup>3</sup> (Dichlorométhane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	50 ppm (Dichlorométhane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	50 ppm (Dichloromethane (Methylene chloride); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	350 mg/m <sup>3</sup> Dichloromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	100 ppm Dichloromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	1060 mg/m <sup>3</sup> Dichloromethane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	300 ppm Dichloromethane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
<b>1,1,2,2-tetrachloroethane (79-34-5)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup> (1,1,2,2-Tétrachloroéthane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	1 ppm (1,1,2,2-Tétrachloroéthane; Belgium; Time-weighted average exposure limit 8 h)
France	VLE (mg/m <sup>3</sup> )	35 mg/m <sup>3</sup> (1,1,2,2-Tétrachloroéthane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	5 ppm (1,1,2,2-Tétrachloroéthane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup> (1,1,2,2-Tétrachloroéthane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	1 ppm (1,1,2,2-Tétrachloroéthane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1 ppm (1,1,2,2-Tetrachloroethane; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
<b>tetrachloroethylene (127-18-4)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	172 mg/m <sup>3</sup> (Perchloroéthylène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	25 ppm (Perchloroéthylène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m <sup>3</sup> )	695 mg/m <sup>3</sup> (Perchloroéthylène; Belgium; Short time value)
Belgium	Short time value (ppm)	100 ppm (Perchloroéthylène; Belgium; Short time value)

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<b>tetrachloroethylene (127-18-4)</b>		
France	VLE (mg/m <sup>3</sup> )	275 mg/m <sup>3</sup> (Perchloroéthylène; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	40 ppm (Perchloroéthylène; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VME (mg/m <sup>3</sup> )	138 mg/m <sup>3</sup> (Perchloroéthylène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	20 ppm (Perchloroéthylène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	25 ppm (Tetrachloroethylene (Perchloroethylene); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	100 ppm (Tetrachloroethylene (Perchloroethylene); USA; Short time value; TLV - Adopted Value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	345 mg/m <sup>3</sup> Tetrachloroethylene; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	50 ppm Tetrachloroethylene; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	689 mg/m <sup>3</sup> Tetrachloroethylene; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	100 ppm Tetrachloroethylene; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
<b>1,1,2-trichloroethane (79-00-5)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	56 mg/m <sup>3</sup> (1,1,2-Trichloroéthane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	10 ppm (1,1,2-Trichloroéthane; Belgium; Time-weighted average exposure limit 8 h)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10 ppm (1,1,2-Trichloroethane; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
<b>trichloroethylene (79-01-6)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	55 mg/m <sup>3</sup> (Trichloroéthylène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	10 ppm (Trichloroéthylène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m <sup>3</sup> )	137 mg/m <sup>3</sup> (Trichloroéthylène; Belgium; Short time value)
Belgium	Short time value (ppm)	25 ppm (Trichloroéthylène; Belgium; Short time value)
France	VLE (mg/m <sup>3</sup> )	1080 mg/m <sup>3</sup> (Trichloroéthylène; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	200 ppm (Trichloroéthylène; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m <sup>3</sup> )	405 mg/m <sup>3</sup> (Trichloroéthylène; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	75 ppm (Trichloroéthylène; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10 ppm (Trichloroethylene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	25 ppm (Trichloroethylene; USA; Short time value; TLV - Adopted Value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	550 mg/m <sup>3</sup> Trichloroethylene; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	100 ppm Trichloroethylene; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	820 mg/m <sup>3</sup> Trichloroethylene; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	150 ppm Trichloroethylene; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)

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methanol (67-56-1)		
EU	IOELV TWA (mg/m <sup>3</sup> )	260 mg/m <sup>3</sup> (Methanol; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	200 ppm (Methanol; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m <sup>3</sup> )	266 mg/m <sup>3</sup> (Alcool méthylique; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	200 ppm (Alcool méthylique; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m <sup>3</sup> )	333 mg/m <sup>3</sup> (Alcool méthylique; Belgium; Short time value)
Belgium	Short time value (ppm)	250 ppm (Alcool méthylique; Belgium; Short time value)
France	VLE (mg/m <sup>3</sup> )	1300 mg/m <sup>3</sup> (Methanol; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	1000 ppm (Methanol; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m <sup>3</sup> )	260 mg/m <sup>3</sup> (Methanol; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	200 ppm (Methanol; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200 ppm (Methanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	250 ppm (Methanol; USA; Short time value; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	133 mg/m <sup>3</sup> (Methanol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	100 ppm (Methanol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	266 mg/m <sup>3</sup> Methanol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	200 ppm Methanol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	333 mg/m <sup>3</sup> Methanol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	250 ppm Methanol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)

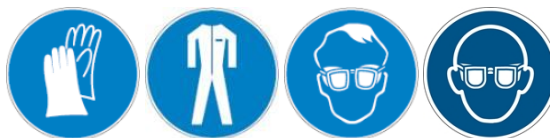
### 8.2. Exposure controls

Appropriate engineering controls

: Either local exhaust or general room ventilation is usually required.

Personal protective equipment

: Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.



Hand protection

: Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration.

Eye protection

: Chemical goggles or safety glasses. Safety glasses.

Skin and body protection

: Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.

Respiratory protection

: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

Other information

: Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state

: Liquid

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Color	: Colorless.
Odor	: characteristic.
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Extremely flammable liquid and vapor
Relative density	: No data available
Solubility	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Extremely flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Sparks. Heat. Overheating. Open flame.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Toxic in contact with skin.

<b>601 Purgable Halocarbons Mix</b>	
ATE CLP (oral)	102.796 mg/kg body weight
ATE CLP (dermal)	275.229 mg/kg body weight
<b>bromodichloromethane (75-27-4)</b>	
LD50 oral rat	916 mg/kg (Rat)
ATE CLP (oral)	916 mg/kg body weight
<b>bromoform (75-25-2)</b>	
LD50 oral rat	933 mg/kg (Rat)
ATE CLP (oral)	933 mg/kg body weight
ATE CLP (gases)	700 ppmV/4h
ATE CLP (vapors)	3 mg/l/4h
ATE CLP (dust, mist)	0.5 mg/l/4h
<b>carbon tetrachloride (56-23-5)</b>	
ATE CLP (oral)	100 mg/kg body weight
ATE CLP (dermal)	300 mg/kg body weight
ATE CLP (gases)	700 ppmV/4h
ATE CLP (vapors)	3 mg/l/4h
ATE CLP (dust, mist)	0.5 mg/l/4h
<b>chlorobenzene (108-90-7)</b>	
LD50 oral rat	> 1427 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value; >2000 mg/kg bodyweight; Rat)
LD50 dermal rat	> 2000 mg/kg (Rat; Literature study)

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<b>chlorobenzene (108-90-7)</b>	
LD50 dermal rabbit	> 2200 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	17 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	3630 ppm/4h (Rat)
ATE CLP (gases)	3630 ppmV/4h
ATE CLP (vapors)	17 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h
<b>chloroform (67-66-3)</b>	
LD50 oral rat	695 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 908 mg/kg bodyweight; Rat; OECD 401: Acute Oral Toxicity; Experimental value; 1117 mg/kg bodyweight; Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit; No reliable data available; >3980 mg/kg bodyweight; Rabbit)
ATE CLP (oral)	695 mg/kg body weight
ATE CLP (gases)	700 ppmV/4h
ATE CLP (vapors)	3 mg/l/4h
ATE CLP (dust, mist)	0.5 mg/l/4h
<b>1,2-dichlorobenzene (95-50-1)</b>	
LD50 oral rat	500 mg/kg (Rat)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	9.5 mg/l/4h (Rat)
ATE CLP (oral)	500 mg/kg body weight
ATE CLP (vapors)	9.5 mg/l/4h
ATE CLP (dust, mist)	9.5 mg/l/4h
<b>1,3-dichlorobenzene (541-73-1)</b>	
LD50 oral rat	580 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LC50 inhalation rat (mg/l)	> 17.6 mg/l/4h (Rat; Literature study)
ATE CLP (oral)	580 mg/kg body weight
<b>1,4-dichlorobenzene (106-46-7)</b>	
LD50 dermal rat	> 6000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5 mg/l/4h (Rat)
<b>1,1-dichloroethane (75-34-3)</b>	
LD50 oral rat	725 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2348 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	54 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	13000 ppm/4h (Rat; Literature study)
ATE CLP (oral)	725 mg/kg body weight
ATE CLP (gases)	13000 ppmV/4h
ATE CLP (vapors)	54 mg/l/4h
ATE CLP (dust, mist)	54 mg/l/4h
<b>1,2-dichloroethane (107-06-2)</b>	
LD50 oral rat	770 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	2800 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	7.758 mg/l/4h (Rat; Experimental value)
LC50 inhalation rat (ppm)	1886 ppm/4h (Rat; Experimental value)
ATE CLP (oral)	770 mg/kg body weight
ATE CLP (dermal)	2800 mg/kg body weight
ATE CLP (gases)	1886 ppmV/4h
ATE CLP (vapors)	7.758 mg/l/4h
ATE CLP (dust, mist)	7.758 mg/l/4h
<b>1,1-dichloroethene (75-35-4)</b>	
LD50 oral rat	200 - 1500 mg/kg (Rat)
LC50 inhalation rat (mg/l)	25.6 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	6350 ppm/4h (Rat)
ATE CLP (oral)	200 mg/kg body weight
ATE CLP (gases)	6350 ppmV/4h
ATE CLP (vapors)	11 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h

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<b>cis-1,3-Dichloropropene (10061-01-5)</b>	
ATE CLP (oral)	100 mg/kg body weight
ATE CLP (dermal)	300 mg/kg body weight
ATE CLP (gases)	4500 ppmV/4h
ATE CLP (vapors)	11 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h
<b>1,3-dichloropropene, trans- (10061-02-6)</b>	
ATE CLP (oral)	100 mg/kg body weight
ATE CLP (dermal)	1100 mg/kg body weight
ATE CLP (gases)	4500 ppmV/4h
ATE CLP (vapors)	11 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h
<b>Methylene Chloride (75-09-2)</b>	
LD50 oral rat	> 2000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Literature study)
<b>1,1,1,2-tetrachloroethane (79-34-5)</b>	
LD50 oral rat	250 mg/kg (Rat; Literature study)
LD50 dermal rabbit	3990 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	8.6 mg/l/4h (Rat; Literature study)
ATE CLP (oral)	250 mg/kg body weight
ATE CLP (dermal)	5 mg/kg body weight
ATE CLP (gases)	100 ppmV/4h
ATE CLP (vapors)	8.6 mg/l/4h
ATE CLP (dust, mist)	0.05 mg/l/4h
<b>tetrachloroethylene (127-18-4)</b>	
LD50 oral rat	> 2000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 3835 mg/kg bodyweight; Rat; Equivalent or similar to OECD 401; Experimental value; 3005 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 3000 mg/kg (Rabbit; Literature study; >10000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	27.58 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	3786 ppm/4h (Rat; Experimental value)
ATE CLP (gases)	3786 ppmV/4h
ATE CLP (vapors)	27.58 mg/l/4h
ATE CLP (dust, mist)	27.58 mg/l/4h
<b>1,1,1-trichloroethane (71-55-6)</b>	
LD50 oral rat	9600 mg/kg (Rat)
LD50 dermal rabbit	> 15800 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	99 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	18400 ppm/4h (Rat)
ATE CLP (oral)	9600 mg/kg body weight
ATE CLP (gases)	18400 ppmV/4h
ATE CLP (vapors)	11 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h
<b>1,1,2-trichloroethane (79-00-5)</b>	
LD50 oral rat	836 mg/kg (Rat; Literature study)
LD50 dermal rabbit	5377 mg/kg (Rabbit; Literature study; OECD 402: Acute Dermal Toxicity; 5380 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	7.8 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	1413 ppm/4h (Rat; Literature study)
ATE CLP (oral)	836 mg/kg body weight
ATE CLP (dermal)	1100 mg/kg body weight
ATE CLP (gases)	1413 ppmV/4h
ATE CLP (vapors)	7.8 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h
<b>trichloroethylene (79-01-6)</b>	
LD50 oral rat	4920 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	66 mg/l/4h (Rat)

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<b>trichloroethylene (79-01-6)</b>	
LC50 inhalation rat (ppm)	12000 ppm/4h (Rat)
ATE CLP (oral)	4920 mg/kg body weight
ATE CLP (gases)	12000 ppmV/4h
ATE CLP (vapors)	66 mg/l/4h
ATE CLP (dust, mist)	66 mg/l/4h

<b>methanol (67-56-1)</b>	
LD50 oral rat	> 5000 mg/kg (Rat; BASF test; Literature study; 1187-2769 mg/kg bodyweight; Rat; Weight of evidence)
LD50 dermal rabbit	15800 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	85 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	64000 ppm/4h (Rat; Literature study)
ATE CLP (oral)	100 mg/kg body weight
ATE CLP (dermal)	300 mg/kg body weight
ATE CLP (gases)	700 ppmV/4h
ATE CLP (vapors)	3 mg/l/4h
ATE CLP (dust, mist)	0.5 mg/l/4h

Skin corrosion/irritation	: Not classified Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified Based on available data, the classification criteria are not met
Respiratory or skin sensitization	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: May cause cancer. May cause cancer
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity – single exposure	: Causes damage to organs.
Specific target organ toxicity – repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Toxic if swallowed. Toxic in contact with skin.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - air	: Dangerous for the ozone layer.
Ecology - water	: Harmful to aquatic life with long lasting effects.

<b>bromoform (75-25-2)</b>	
LC50 fish 2	7.1 mg/l (LC50; 96 h)
EC50 Daphnia 2	7.2 - 46 mg/l (EC50; 48 h)

<b>carbon tetrachloride (56-23-5)</b>	
LC50 fish 1	27 mg/l (LC50; 96 h; Lepomis macrochirus)
EC50 Daphnia 1	29 mg/l (EC50; 48 h)
Threshold limit algae 1	> 600 mg/l (EC0; 168 h)

<b>chlorobenzene (108-90-7)</b>	
LC50 fish 2	4.7 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.59 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)

<b>chloroform (67-66-3)</b>	
LC50 fish 1	18.2 ppm (LC50; ASTM; 96 h; Oncorhynchus mykiss; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 2	152.5 mg/l (EC50; US EPA; 48 h; Daphnia magna; Static system; Salt water; Experimental value)



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<b>1,2-dichlorobenzene (95-50-1)</b>	
LC50 fish 1	1.58 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.74 mg/l (EC50; 48 h)
<b>1,3-dichlorobenzene (541-73-1)</b>	
LC50 fish 1	1.61 mg/l (LC50; 96 h)
EC50 Daphnia 1	1.2 mg/l (EC50; Equivalent or similar to OECD 202; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
<b>1,4-dichlorobenzene (106-46-7)</b>	
LC50 fish 2	1.12 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 2	0.7 mg/l (EC50; 48 h)
<b>1,2-dichloroethane (107-06-2)</b>	
EC50 Daphnia 1	155 - 220 mg/l (EC50; 48 h)
LC50 fish 2	225 mg/l (LC50; 96 h; Salmo gairdneri)
<b>1,1-dichloroethene (75-35-4)</b>	
EC50 Daphnia 1	11.6 - 79 mg/l (EC50; 48 h)
LC50 fish 2	74 - 220 mg/l (LC50; 96 h; Lepomis macrochirus)
<b>Methylene Chloride (75-09-2)</b>	
LC50 fish 1	193 mg/l (LC50; 96 h; Pimephales promelas)
EC50 Daphnia 1	168.2 mg/l (EC50; 48 h)
<b>1,1,2,2-tetrachloroethane (79-34-5)</b>	
EC50 Daphnia 1	9.32 mg/l (EC50; 48 h; Daphnia magna; Static system)
LC50 fish 2	20.3 ppm (LC50; 96 h; Pimephales promelas; Flow-through system)
Threshold limit algae 1	136 mg/l (EC50; 96 h; Selenastrum capricornutum)
<b>tetrachloroethylene (127-18-4)</b>	
EC50 Daphnia 1	8.5 mg/l (EC50; ASTM; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 2	3.64 mg/l (EC50; Other; 72 h; Chlamydomonas angulosa; Fresh water)
<b>1,1,1-trichloroethane (71-55-6)</b>	
LC50 fish 1	40 mg/l (LC50; 96 h; Lepomis macrochirus)
EC50 Daphnia 2	2384 mg/l (EC50; 48 h)
<b>1,1,2-trichloroethane (79-00-5)</b>	
LC50 fish 2	40 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Static system; Fresh water; Experimental value)
EC50 Daphnia 2	77.8 mg/l (EC50; 48 h; Daphnia magna)
Threshold limit algae 1	200 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Experimental value)
<b>trichloroethylene (79-01-6)</b>	
LC50 fish 1	40.7 mg/l (LC50; 96 h; Pimephales promelas)
EC50 Daphnia 2	20.8 mg/l (EC50; 48 h)
<b>methanol (67-56-1)</b>	
LC50 fish 1	15400 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	> 10000 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	10800 mg/l (LC50; 96 h; Salmo gairdneri)

### 12.2. Persistence and degradability

<b>601 Purgable Halocarbons Mix</b>	
Persistence and degradability	May cause long-term adverse effects in the environment.
<b>bromodichloromethane (75-27-4)</b>	
Persistence and degradability	Not readily biodegradable in water.
<b>bromoform (75-25-2)</b>	
Persistence and degradability	Not readily biodegradable in water.
<b>carbon tetrachloride (56-23-5)</b>	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.001 g O <sub>2</sub> /g substance
ThOD	0.21 g O <sub>2</sub> /g substance

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<b>carbon tetrachloride (56-23-5)</b>	
BOD (% of ThOD)	0
<b>chlorobenzene (108-90-7)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.03 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.41 g O <sub>2</sub> /g substance
ThOD	2.06 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.0145
<b>chloroform (67-66-3)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Low potential for adsorption in soil.
ThOD	0.33 - 1.35 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.015 - 0.06
<b>1,2-dichlorobenzene (95-50-1)</b>	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
BOD (% of ThOD)	0
<b>1,3-dichlorobenzene (541-73-1)</b>	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Low potential for adsorption in soil.
<b>1,4-dichlorobenzene (106-46-7)</b>	
Persistence and degradability	Readily biodegradable in water. Non degradable in the soil. Adsorbs into the soil.
ThOD	1.52 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.65 (Calculated value)
<b>1,1-dichloroethane (75-34-3)</b>	
Persistence and degradability	Not readily biodegradable in water. Not readily biodegradable in the soil. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0.002 g O <sub>2</sub> /g substance
ThOD	0.81 - 0.97 g O <sub>2</sub> /g substance
<b>1,2-dichloroethane (107-06-2)</b>	
Persistence and degradability	Not readily biodegradable in water. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.0014 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.025 g O <sub>2</sub> /g substance
ThOD	0.98 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.001 (Calculated value)
<b>1,1-dichloroethene (75-35-4)</b>	
Persistence and degradability	Not readily biodegradable in water.
<b>cis-1,3-Dichloropropene (10061-01-5)</b>	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
<b>1,3-dichloropropene, trans- (10061-02-6)</b>	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
<b>Methylene Chloride (75-09-2)</b>	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
<b>1,1,2,2-tetrachloroethane (79-34-5)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. No (test)data on mobility of the substance available.
<b>tetrachloroethylene (127-18-4)</b>	
Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.06 g O <sub>2</sub> /g substance
ThOD	0.39 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.15
<b>1,1,1-trichloroethane (71-55-6)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil.
<b>1,1,2-trichloroethane (79-00-5)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Highly mobile in soil.

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<b>trichloroethylene (79-01-6)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Biodegradable in the soil under anaerobic conditions.

<b>methanol (67-56-1)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.42 g O <sub>2</sub> /g substance
ThOD	1.5 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.8 (Literature study)

### 12.3. Bioaccumulative potential

<b>601 Purgable Halocarbons Mix</b>	
Bioaccumulative potential	Not established.

<b>bromodichloromethane (75-27-4)</b>	
Log Pow	1.88 - 2.24
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

<b>bromoform (75-25-2)</b>	
BCF fish 1	3.2 (BCF)
BCF fish 2	7.7 - 21 (BCF)
BCF other aquatic organisms 1	31.7 (BCF)
BCF other aquatic organisms 2	8.3 - 21 (BCF)
Log Pow	2.37 - 2.5
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>carbon tetrachloride (56-23-5)</b>	
BCF fish 1	17.4 (BCF)
BCF fish 2	3.1 - 11 (BCF)
BCF other aquatic organisms 1	300 (BCF; 24 h; Chlorella sp.)
BCF other aquatic organisms 2	20 - 114 (BCF)
Log Pow	2.75 - 2.83 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>chlorobenzene (108-90-7)</b>	
BCF fish 1	447 (BCF)
BCF fish 2	3.9 - 40 (BCF)
Log Pow	2.8 - 2.98
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>chloroform (67-66-3)</b>	
BCF fish 2	1.4 - 4.7 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 42 days; Cyprinus carpio; Flow-through system; Fresh water; Experimental value)
Log Pow	1.97 (Experimental value; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>1,2-dichlorobenzene (95-50-1)</b>	
BCF fish 1	90 - 260 (BCF)
BCF fish 2	270 - 560 (BCF)
BCF other aquatic organisms 1	14791 (BCF)
BCF other aquatic organisms 2	28840 (BCF)
Log Pow	3.43 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

<b>1,3-dichlorobenzene (541-73-1)</b>	
BCF fish 1	420 - 740 (BCF)
BCF fish 2	57 - 370 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 8 weeks; Cyprinus carpio; Flow-through system; Fresh water; Experimental value)
Log Pow	3.4 - 4.6
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>1,4-dichlorobenzene (106-46-7)</b>	
BCF fish 1	100 (BCF)
BCF fish 2	214 - 720 (BCF)
BCF other aquatic organisms 1	20 (BCF)
Log Pow	3.39 - 3.62 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

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<b>1,1-dichloroethane (75-34-3)</b>	
BCF fish 1	1.2 (BCF; 109 h; Pisces)
Log Pow	1.79 - 1.99 (Literature study)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,2-dichloroethane (107-06-2)</b>	
BCF fish 1	2 (BCF; 336 h)
Log Pow	1.45 - 1.48 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,1-dichloroethene (75-35-4)</b>	
BCF fish 1	2.5 - 6.4 (BCF)
BCF fish 2	7.8 (BCF)
Log Pow	1.48 - 2.17
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>cis-1,3-Dichloropropene (10061-01-5)</b>	
Log Pow	2.06
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>1,3-dichloropropene, trans- (10061-02-6)</b>	
Log Pow	2
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>Methylene Chloride (75-09-2)</b>	
BCF fish 1	2 - 40 (BCF)
Log Pow	1.25 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,1,1,2-tetrachloroethane (79-34-5)</b>	
BCF fish 1	4.1 - 13.2 (BCF; Cyprinus carpio)
Log Pow	2.39 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>tetrachloroethylene (127-18-4)</b>	
BCF fish 2	25.8 - 77.1 (BCF; 8 weeks)
Log Pow	3.4 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,1,1-trichloroethane (71-55-6)</b>	
BCF fish 1	9 (BCF; 672 h)
BCF fish 2	0.7 - 4.9 (BCF)
BCF other aquatic organisms 1	0.7 - 34 (BCF)
BCF other aquatic organisms 2	0 - 10 (BCF)
Log Pow	2.46 - 2.49 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,1,2-trichloroethane (79-00-5)</b>	
BCF fish 1	> > 0.7 - < 6.7, BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 6 weeks; Cyprinus carpio; Flow-through system; Experimental value
Log Pow	1.89 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>trichloroethylene (79-01-6)</b>	
BCF fish 1	17 (BCF; 336 h)
BCF fish 2	90 (BCF; 72 h; Leuciscus idus)
BCF other aquatic organisms 1	3440 (BCF; 120 h)
BCF other aquatic organisms 2	4270 (BCF; 120 h)
Log Pow	2.29 - 2.42 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>methanol (67-56-1)</b>	
BCF fish 1	< 10 (BCF; 72 h; Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>12.4. Mobility in soil</b>	
<b>bromoform (75-25-2)</b>	
Surface tension	0.045 N/m (25 °C)

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<b>carbon tetrachloride (56-23-5)</b>	
Surface tension	0.027 N/m (20 °C)
Ecology - soil	Soil contaminant. May be harmful to plant growth, blooming and fruit formation.
<b>chlorobenzene (108-90-7)</b>	
Surface tension	0.033 N/m (25 °C)
Log Koc	Koc,PCKOCWIN v1.66; 268; Calculated value; log Koc; PCKOCWIN v1.66; 2.42; Calculated value
<b>chloroform (67-66-3)</b>	
Surface tension	0.0271 N/m (20 °C)
Log Koc	Koc,Other; 86.7-367; Experimental value; log Koc; Other; 1.94-2.56; Experimental value
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.
<b>1,2-dichlorobenzene (95-50-1)</b>	
Surface tension	0.037 N/m (20 °C)
<b>1,3-dichlorobenzene (541-73-1)</b>	
Surface tension	0.036 N/m (20 °C)
Log Koc	log Koc,Other; 2.56; Experimental value
<b>1,4-dichlorobenzene (106-46-7)</b>	
Surface tension	0.03 N/m (55 °C)
<b>1,1-dichloroethane (75-34-3)</b>	
Surface tension	0.025 N/m
<b>1,2-dichloroethane (107-06-2)</b>	
Surface tension	0.032 N/m (20 °C)
Log Koc	log Koc,1.52; Koc; 121
<b>Methylene Chloride (75-09-2)</b>	
Surface tension	0.028 N/m (20 °C)
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.
<b>1,1,2,2-tetrachloroethane (79-34-5)</b>	
Surface tension	0.035 N/m (20 °C)
<b>tetrachloroethylene (127-18-4)</b>	
Surface tension	0.0313 N/m (20 °C)
Log Koc	Koc,141; Experimental value; log Koc; 2.15; Experimental value
<b>1,1,1-trichloroethane (71-55-6)</b>	
Surface tension	0.025 N/m
Ecology - soil	Soil contaminant.
<b>1,1,2-trichloroethane (79-00-5)</b>	
Surface tension	0.033 N/m (20 °C)
Log Koc	log Koc, SRC PCKOCWIN v2.0; 1.64 - 1.783; Estimated value
<b>trichloroethylene (79-01-6)</b>	
Surface tension	0.03 N/m
<b>methanol (67-56-1)</b>	
Surface tension	0.023 N/m (20 °C)
Log Koc	Koc,PCKOCWIN v1.66; 1; Calculated value

### 12.5. Results of PBT and vPvB assessment

Component	
1,2-dichloroethane (107-06-2)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII
trichloroethylene (79-01-6)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII

### 12.6. Other adverse effects

Additional information : Avoid release to the environment

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Additional information : Handle empty containers with care because residual vapors are flammable.  
Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

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### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR) : 1992  
UN-No. (IATA) : 1992  
UN-No. (IMDG) : 1992  
UN-No. (ADN) : 1992

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, TOXIC, N.O.S.  
Proper Shipping Name (IATA) : Flammable liquid, toxic, n.o.s.  
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, TOXIC, N.O.S.  
Proper Shipping Name (ADN) : FLAMMABLE LIQUID, TOXIC, N.O.S.  
Transport document description (ADR) : UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), I, (C/E)

#### 14.3. Packing group

Class (ADR) : 3  
Classification code (ADR) : FT1  
Class (IATA) : 3  
Class (IMDG) : 3  
Class (ADN) : 3  
Classification code (ADN) : FT1  
Subsidiary risks (ADR) : 6.1  
Subsidiary risks (IMDG) : 6.1  
Hazard labels (ADR) : 3, 6.1



Hazard labels (IATA) : 3, 6.1



Hazard labels (IMDG) : 3, 6.1



Hazard labels (ADN) : 3, 6.1



#### 14.4. Packing group

Packing group (ADR) : I  
Packing group (IATA) : I  
Packing group (IMDG) : I  
Packing group (ADN) : I

#### 14.5. Environmental hazards

Other information : No supplementary information available.

#### 14.6. Special precautions for user

##### 14.6.1. Overland transport

Hazard identification number (Kemler No.) : 336  
Classification code (ADR) : FT1

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Orange plates



Special provision (ADR) : 274  
Transport category (ADR) : 1  
Tunnel restriction code (ADR) : C/E  
Limited quantities (ADR) : 0  
Excepted quantities (ADR) : E0

### 14.6.2. Transport by sea

Special provision (IMDG) : 274  
Limited quantities (IMDG) : 0  
Excepted quantities (IMDG) : E0  
Packing instructions (IMDG) : P001  
Tank instructions (IMDG) : T14  
Tank special provisions (IMDG) : TP2, TP13, TP27  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-D  
Stowage category (IMDG) : E  
Properties and observations (IMDG) : Flammable toxic liquid which is not specified by name in this class or, on account of its characteristics, in some other class. Toxic if swallowed, by skin contact or by inhalation.

### 14.6.3. Air transport

CAO packing instructions (IATA) : 361  
CAO max net quantity (IATA) : 30L  
PCA packing instructions (IATA) : Forbidden  
PCA Limited quantities (IATA) : Forbidden  
PCA limited quantity max net quantity (IATA) : Forbidden  
PCA max net quantity (IATA) : Forbidden  
PCA Excepted quantities (IATA) : E0  
Special provision (IATA) : A3  
ERG code (IATA) : 3HP

### 14.6.4. Inland waterway transport

Special provision (ADN) : 274, 802  
Limited quantities (ADN) : 0  
Excepted quantities (ADN) : E0  
Carriage permitted (ADN) : T  
Equipment required (ADN) : PP, EP, EX, TOX, A  
Ventilation (ADN) : VE01, VE02  
Number of blue cones/lights (ADN) : 2  
Carriage prohibited (ADN) : No

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains substance on the candidate list in concentration  $\geq 0.1\%$  or with a lower specific limit: 1,2-dichloroethane (EC 203-458-1, CAS 107-06-2), Trichloroethylene (EC 201-167-4, CAS 79-01-6)

Contains REACH Annex XIV substances:

#### 15.1.2. National regulations

##### Germany

Water hazard class (WGK) : 3 - strongly hazardous to water

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### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

PHV SDS EU

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