

Custom Volatiles Additions Mix

Safety Data Sheet

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

Date of issue: 24/03/2018

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Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name : Custom Volatiles Additions Mix
Product code : AL0-130272
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 - 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	

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
R19
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

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 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
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 :

EUH059 - Hazardous to the ozone layer
EUH208 - Contains ethyl methacrylate(97-63-2). May produce an allergic reaction
EUH019 - May form explosive peroxides

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	94.2	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
tert-Butanol (Component)	(CAS No) 75-65-0 (EC-No.) 200-889-7 (EC index no) 603-005-00-1	2	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 STOT SE 3, H335
acetone (Component) substance with a Community workplace exposure limit	(CAS No) 67-64-1 (EC-No.) 200-662-2 (EC index no) 606-001-00-8	0.2	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
acetonitrile (Component)	(CAS No) 75-05-8 (EC-No.) 200-835-2 (EC index no) 608-001-00-3	0.2	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319
2-Butanone (Component) substance with a Community workplace exposure limit	(CAS No) 78-93-3 (EC-No.) 201-159-0 (EC index no) 606-002-00-3	0.2	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
carbon disulfide (Component)	(CAS No) 75-15-0 (EC-No.) 200-843-6 (EC index no) 006-003-00-3	0.2	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361fd STOT RE 1, H372

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-chloroethylvinyl ether (Component)	(CAS No) 110-75-8 (EC-No.) 203-799-6	0.2	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
cyclohexane (Component)	(CAS No) 110-82-7 (EC-No.) 203-806-2 (EC index no) 601-017-00-1	0.2	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2-hexanone (Component)	(CAS No) 591-78-6 (EC-No.) 209-731-1 (EC index no) 606-030-00-6	0.2	Flam. Liq. 3, H226 Repr. 2, H361f STOT SE 3, H336 STOT RE 1, H372
tert-Butyl Methyl Ether (MTBE) (Component) substance with a Community workplace exposure limit	(CAS No) 1634-04-4 (EC-No.) 216-653-1 (EC index no) 603-181-00-X	0.2	Flam. Liq. 2, H225 Skin Irrit. 2, H315
4-Methyl-2-Pentanone (Component) substance with a Community workplace exposure limit	(CAS No) 108-10-1 (EC-No.) 203-550-1 (EC index no) 606-004-00-4	0.2	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 STOT SE 3, H335
iodomethane (Component)	(CAS No) 74-88-4 (EC-No.) 200-819-5 (EC index no) 602-005-00-9	0.2	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Carc. 2, H351 STOT SE 3, H335 Aquatic Acute 1, H400
ethyl methacrylate (Component)	(CAS No) 97-63-2 (EC-No.) 202-597-5 (EC index no) 607-071-00-2	0.2	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335
diethyl ether (Component) substance with a Community workplace exposure limit	(CAS No) 60-29-7 (EC-No.) 200-467-2 (EC index no) 603-022-00-4	0.2	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 STOT SE 3, H336
1,4-dichloro-2-butene, trans- (Component)	(CAS No) 110-57-6 (EC-No.) 203-779-7 (EC index no) 602-073-00-X	0.2	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Skin Corr. 1B, H314 Carc. 1B, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
hexane (Component)	(CAS No) 110-54-3 (EC-No.) 203-777-6 (EC index no) 601-037-00-0	0.2	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361f STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
1,1,2-trichloro-1,2,2-trifluoroethane (Component)	(CAS No) 76-13-1 (EC-No.) 200-936-1	0.2	Aquatic Chronic 2, H411 Ozone

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 disulfide (Component)	(CAS No) 75-15-0 (EC-No.) 200-843-6 (EC index no) 006-003-00-3	(0.2 =<C < 1) STOT RE 2, H373 (C >= 1) STOT RE 1, H372 (C >= 1) Repr. 2, H361fd
1,4-dichloro-2-butene, trans- (Component)	(CAS No) 110-57-6 (EC-No.) 203-779-7 (EC index no) 602-073-00-X	(C >= 0.01) Carc. 1B, H350 (C >= 5) STOT SE 3, H335
hexane (Component)	(CAS No) 110-54-3 (EC-No.) 203-777-6 (EC index no) 601-037-00-0	(C >= 5) STOT RE 2, H373

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.

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- 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. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. May form explosive peroxides.

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. DO NOT fight fire when fire reaches explosives. Evacuate area.
- 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.

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.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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. Hazardous waste due to potential risk of explosion.
- 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. Keep away from sources of ignition - No smoking.
- 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. Proper grounding procedures to avoid static electricity should be followed.
- 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 products : Oxidizing agent.
- Incompatible materials : Direct sunlight. Heat sources.

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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

acetone (67-64-1)		
EU	IOELV TWA (mg/m ³)	1210 mg/m ³ (Acetone; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	500 ppm (Acetone; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	1210 mg/m ³ (Acétone; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	500 ppm (Acétone; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	2420 mg/m ³ (Acétone; Belgium; Short time value)
Belgium	Short time value (ppm)	1000 ppm (Acétone; Belgium; Short time value)
France	VLE (mg/m ³)	2420 mg/m ³ (Acétone; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	1000 ppm (Acétone; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VME (mg/m ³)	1210 mg/m ³ (Acétone; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	500 ppm (Acétone; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	500 ppm (Acetone; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	750 ppm (Acetone; USA; Short time value; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	1210 mg/m ³ (Aceton; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	501 ppm (Aceton; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	2420 mg/m ³ (Aceton; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	1002 ppm (Aceton; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	1210 mg/m ³ Acetone; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	500 ppm Acetone; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	3620 mg/m ³ Acetone; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	1500 ppm Acetone; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
acetonitrile (75-05-8)		
EU	IOELV TWA (mg/m ³)	70 mg/m ³ (Acetonitrile; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	40 ppm (Acetonitrile; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	34 mg/m ³ (Acétonitrile; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	20 ppm (Acétonitrile; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	70 mg/m ³ (Acétonitrile; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)

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acetonitrile (75-05-8)		
France	VME (ppm)	40 ppm (Acétonitrile; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20 ppm (Acetonitrile; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	34 mg/m ³ (Acetonitril; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	20 ppm (Acetonitril; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	68 mg/m ³ Acetonitrile; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	40 ppm Acetonitrile; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	102 mg/m ³ Acetonitrile; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	60 ppm Acetonitrile; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
tert-Butanol (75-65-0)		
Belgium	Limit value (mg/m ³)	307 mg/m ³ (Alcool tert-butylique; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	100 ppm (Alcool tert-butylique; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	300 mg/m ³ (Alcool tert-butylique; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	100 ppm (Alcool tert-butylique; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	100 ppm (tert-Butanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
United Kingdom	WEL TWA (mg/m ³)	308 mg/m ³ 2-Methylpropan-2-ol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	100 ppm 2-Methylpropan-2-ol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	462 mg/m ³ 2-Methylpropan-2-ol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	150 ppm 2-Methylpropan-2-ol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
2-Butanone (78-93-3)		
EU	IOELV TWA (mg/m ³)	600 mg/m ³ (Butanone; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	200 ppm (Butanone; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV STEL (mg/m ³)	900 mg/m ³ (Butanone; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	300 ppm (Butanone; EU; Short time value; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	600 mg/m ³ (2-Butanone; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	200 ppm (2-Butanone; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	900 mg/m ³ (2-Butanone; Belgium; Short time value)
Belgium	Short time value (ppm)	300 ppm (2-Butanone; Belgium; Short time value)
France	VLE (mg/m ³)	900 mg/m ³ (Méthyléthylcétone; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	300 ppm (Méthyléthylcétone; France; Short time value; VRC: Valeur réglementaire contraignante)

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2-Butanone (78-93-3)		
France	VME (mg/m ³)	600 mg/m ³ (Méthyléthylcétone; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	200 ppm (Méthyléthylcétone; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200 ppm (Methyl ethyl ketone (MEK); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	300 ppm (Methyl ethyl ketone (MEK); USA; Short time value; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	590 mg/m ³ (2-Butanon; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	197 ppm (2-Butanon; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	900 mg/m ³ (2-Butanon; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	300 ppm (2-Butanon; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	600 mg/m ³ Butan-2-one (methyl ethyl ketone); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	200 ppm Butan-2-one (methyl ethyl ketone); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	899 mg/m ³ Butan-2-one (methyl ethyl ketone); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	300 ppm Butan-2-one (methyl ethyl ketone); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
carbon disulfide (75-15-0)		
EU	IOELV TWA (mg/m ³)	15 mg/m ³ (Carbon disulphide; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	5 ppm (Carbon disulphide; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	3.16 mg/m ³ (Carbone (sulfure de); Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	1 ppm (Carbone (sulfure de); Belgium; Time-weighted average exposure limit 8 h)
France	VLE (mg/m ³)	75 mg/m ³ (Sulfure de carbone; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	25 ppm (Sulfure de carbone; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m ³)	15 mg/m ³ (Sulfure de carbone; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	5 ppm (Sulfure de carbone; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1 ppm (Carbon disulfide; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	15 mg/m ³ (Zwavelkoolstof; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	4.74 ppm (Zwavelkoolstof; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	15 mg/m ³ Carbon disulphide; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	5 ppm Carbon disulphide; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)

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cyclohexane (110-82-7)		
EU	IOELV TWA (mg/m ³)	700 mg/m ³ (Cyclohexane; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	200 ppm (Cyclohexane; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	350 mg/m ³ (Cyclohexane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	100 ppm (Cyclohexane; Belgium; Time-weighted average exposure limit 8 h)
France	VLE (mg/m ³)	1300 mg/m ³ (Cyclohexane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	375 ppm (Cyclohexane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m ³)	700 mg/m ³ (Cyclohexane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	200 ppm (Cyclohexane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	100 ppm (Cyclohexane; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	700 mg/m ³ (Cyclohexaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	200 ppm (Cyclohexaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	1400 mg/m ³ (Cyclohexaan; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	400 ppm (Cyclohexaan; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	350 mg/m ³ Cyclohexane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	100 ppm Cyclohexane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	1050 mg/m ³ Cyclohexane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	300 ppm Cyclohexane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
1,4-dichloro-2-butene, trans- (110-57-6)		
Belgium	Limit value (mg/m ³)	0.025 mg/m ³ (1,4-Dichloro-2-butène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	0.005 ppm (1,4-Dichloro-2-butène; Belgium; Time-weighted average exposure limit 8 h)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	0.005 ppm (1,4-Dichloro-2-butene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
diethyl ether (60-29-7)		
EU	IOELV TWA (mg/m ³)	308 mg/m ³ (Diethylether; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	100 ppm (Diethylether; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV STEL (mg/m ³)	616 mg/m ³ (Diethylether; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	200 ppm (Diethylether; EU; Short time value; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	308 mg/m ³ (Oxyde de diéthyle; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	100 ppm (Oxyde de diéthyle; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	616 mg/m ³ (Oxyde de diéthyle; Belgium; Short time value)

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diethyl ether (60-29-7)		
Belgium	Short time value (ppm)	200 ppm (Oxyde de diéthyle; Belgium; Short time value)
France	VLE (mg/m ³)	616 mg/m ³ (Oxyde de diéthyle; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	200 ppm (Oxyde de diéthyle; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VME (mg/m ³)	308 mg/m ³ (Oxyde de diéthyle; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	100 ppm (Oxyde de diéthyle; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	400 ppm (Ethyl ether; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	500 ppm (Ethyl ether; USA; Short time value; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	308 mg/m ³ (Diethylether; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	100 ppm (Diethylether; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	616 mg/m ³ (Diethylether; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	200 ppm (Diethylether; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	310 mg/m ³ Diethyl ether; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	100 ppm Diethyl ether; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	620 mg/m ³ Diethyl ether; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	200 ppm Diethyl ether; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
hexane (110-54-3)		
EU	IOELV TWA (mg/m ³)	72 mg/m ³ (n-Hexane; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	20 ppm (n-Hexane; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	72 mg/m ³ (n-Hexane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	20 ppm (n-Hexane; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	72 mg/m ³ (n-Hexane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	20 ppm (n-Hexane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	50 ppm (n-Hexane; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	72 mg/m ³ (n-Hexaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	20 ppm (n-Hexaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	144 mg/m ³ (n-Hexaan; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	40 ppm (n-Hexaan; Netherlands; Short time value; Public occupational exposure limit value)

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hexane (110-54-3)		
United Kingdom	WEL TWA (mg/m ³)	72 mg/m ³ n-Hexane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	20 ppm n-Hexane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
2-hexanone (591-78-6)		
Belgium	Limit value (mg/m ³)	21 mg/m ³ (2-Hexanone; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	5 ppm (2-Hexanone; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	42 mg/m ³ (2-Hexanone; Belgium; Short time value)
Belgium	Short time value (ppm)	10 ppm (2-Hexanone; Belgium; Short time value)
France	VLE (mg/m ³)	35 mg/m ³ (2-Hexanone; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	8 ppm (2-Hexanone; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m ³)	20 mg/m ³ (2-Hexanone; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	5 ppm (2-Hexanone; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	5 ppm (Methyl n-butyl ketone; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	10 ppm (Methyl n-butyl ketone; USA; Short time value; TLV - Adopted Value)
United Kingdom	WEL TWA (mg/m ³)	21 mg/m ³ Hexane-2-one; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	5 ppm Hexane-2-one; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
iodomethane (74-88-4)		
Belgium	Limit value (mg/m ³)	12 mg/m ³ (Iodométhane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	2 ppm (Iodométhane; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	12 mg/m ³ (Iodométhane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	2 ppm (Iodométhane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	2 ppm (Methyl iodide; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
United Kingdom	WEL TWA (mg/m ³)	12 mg/m ³ Iodomethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	2 ppm Iodomethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
tert-Butyl Methyl Ether (MTBE) (1634-04-4)		
EU	IOELV TWA (mg/m ³)	183.5 mg/m ³ (Tertiary-butyl-methyl ether; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	50 ppm (Tertiary-butyl-methyl ether; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV STEL (mg/m ³)	367 mg/m ³ (Tertiary-butyl-methyl ether; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	100 ppm (Tertiary-butyl-methyl ether; EU; Short time value; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	146 mg/m ³ (Oxyde de méthyle et de tert-butyle; Belgium; Time-weighted average exposure limit 8 h)

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tert-Butyl Methyl Ether (MTBE) (1634-04-4)		
Belgium	Limit value (ppm)	40 ppm (Oxyde de méthyle et de tert-butyle; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	367 mg/m ³ (Oxyde de méthyle et de tert-butyle; Belgium; Short time value)
Belgium	Short time value (ppm)	100 ppm (Oxyde de méthyle et de tert-butyle; Belgium; Short time value)
France	VLE (mg/m ³)	367 mg/m ³ (Oxyde de tert-butyle et de méthyle; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	100 ppm (Oxyde de tert-butyle et de méthyle; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VME (mg/m ³)	183.5 mg/m ³ (Oxyde de tert-butyle et de méthyle; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	50 ppm (Oxyde de tert-butyle et de méthyle; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	50 ppm (Methyl-tert butyl ether (MTBE); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	180 mg/m ³ (tert-Butylmethylether; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	49 ppm (tert-Butylmethylether; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	360 mg/m ³ (tert-Butylmethylether; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	98 ppm (tert-Butylmethylether; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	183.5 mg/m ³ Methyl-tert-butyl-ether or Tertiary-butyl-methyl-ether; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	50 ppm Methyl-tert-butyl-ether or Tertiary-butyl-methyl-ether; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	367 mg/m ³ Methyl-tert-butyl-ether or Tertiary-butyl-methyl-ether; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	100 ppm Methyl-tert-butyl-ether or Tertiary-butyl-methyl-ether; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
4-Methyl-2-Pentanone (108-10-1)		
EU	IOELV TWA (mg/m ³)	83 mg/m ³ (4-Methylpentan-2-one; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	20 ppm (4-Methylpentan-2-one; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV STEL (mg/m ³)	208 mg/m ³ (4-Methylpentan-2-one; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	50 ppm (4-Methylpentan-2-one; EU; Short time value; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	83 mg/m ³ (4-Méthyl-2-pentanone; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	20 ppm (4-Méthyl-2-pentanone; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	208 mg/m ³ (4-Méthyl-2-pentanone; Belgium; Short time value)
Belgium	Short time value (ppm)	50 ppm (4-Méthyl-2-pentanone; Belgium; Short time value)
France	VLE (mg/m ³)	208 mg/m ³ (Méthylisobutylcétone; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	50 ppm (Méthylisobutylcétone; France; Short time value; VRC: Valeur réglementaire contraignante)

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4-Methyl-2-Pentanone (108-10-1)		
France	VME (mg/m ³)	83 mg/m ³ (Méthylisobutylcétone; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	20 ppm (Méthylisobutylcétone; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20 ppm (Methyl isobutyl ketone; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	75 ppm (Methyl isobutyl ketone; USA; Short time value; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	104 mg/m ³ (4-Methyl-2-pentanone; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	25 ppm (4-Methyl-2-pentanone; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	208 mg/m ³ (4-Methyl-2-pentanone; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	50 ppm (4-Methyl-2-pentanone; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	208 mg/m ³ 4-Methylpentan-2-one; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	50 ppm 4-Methylpentan-2-one; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	416 mg/m ³ 4-Methylpentan-2-one; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	100 ppm 4-Methylpentan-2-one; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)		
Belgium	Limit value (mg/m ³)	7781 mg/m ³ (1,1,2-Trichloro-1,2,2-trifluoroéthane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	1000 ppm (1,1,2-Trichloro-1,2,2-trifluoroéthane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	9729 mg/m ³ (1,1,2-Trichloro-1,2,2-trifluoroéthane; Belgium; Short time value)
Belgium	Short time value (ppm)	1250 ppm (1,1,2-Trichloro-1,2,2-trifluoroéthane; Belgium; Short time value)
France	VLE (mg/m ³)	9500 mg/m ³ (1,1,2-Trichlorotrifluoroéthane (F 113); France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	1250 ppm (1,1,2-Trichlorotrifluoroéthane (F 113); France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m ³)	7600 mg/m ³ (1,1,2-Trichlorotrifluoroéthane (F 113); France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	1000 ppm (1,1,2-Trichlorotrifluoroéthane (F 113); France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1000 ppm (1,1,2-Trichloro-1,2,2-trifluoroethane; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	1250 ppm (1,1,2-Trichloro-1,2,2-trifluoroethane; USA; Short time value; TLV - Adopted Value)
methanol (67-56-1)		
EU	IOELV TWA (mg/m ³)	260 mg/m ³ (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 ³)	266 mg/m ³ (Alcool méthylique; Belgium; Time-weighted average exposure limit 8 h)

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methanol (67-56-1)		
Belgium	Limit value (ppm)	200 ppm (Alcool méthylique; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	333 mg/m ³ (Alcool méthylique; Belgium; Short time value)
Belgium	Short time value (ppm)	250 ppm (Alcool méthylique; Belgium; Short time value)
France	VLE (mg/m ³)	1300 mg/m ³ (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 ³)	260 mg/m ³ (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 ³)	133 mg/m ³ (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 ³)	266 mg/m ³ 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 ³)	333 mg/m ³ 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
Color : Colorless.
Odor : characteristic.
pH : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available

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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	: May form explosive peroxides.
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

Reacts vigorously with strong oxidizers and acids.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

May release flammable gases. May form explosive peroxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Custom Volatiles Additions Mix	
ATE CLP (oral)	105.619 mg/kg body weight
ATE CLP (dermal)	317.591 mg/kg body weight
acetone (67-64-1)	
LD50 oral rat	5800 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	20000 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; >7426 mg/kg bodyweight; Rabbit; Weight of evidence)
LC50 inhalation rat (mg/l)	71 mg/l/4h (Rat; Experimental value; 76 mg/l/4h; Rat; Experimental value)
LC50 inhalation rat (ppm)	30000 ppm/4h (Rat; Experimental value)
ATE CLP (oral)	5800 mg/kg body weight
ATE CLP (dermal)	20000 mg/kg body weight
ATE CLP (gases)	30000 ppmV/4h
ATE CLP (vapors)	71 mg/l/4h
ATE CLP (dust, mist)	71 mg/l/4h
acetonitrile (75-05-8)	
LD50 oral rat	> 1327 mg/kg (Rat)
LD50 dermal rabbit	980 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	27 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	16000 ppm/4h (Rat)
ATE CLP (oral)	500 mg/kg body weight
ATE CLP (dermal)	980 mg/kg body weight
ATE CLP (gases)	16000 ppmV/4h
ATE CLP (vapors)	11 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h
tert-Butanol (75-65-0)	
LD50 oral rat	3500 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (ppm)	> 10000 ppm/4h (Rat; Literature study)

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tert-Butanol (75-65-0)	
ATE CLP (oral)	3500 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
carbon disulfide (75-15-0)	
LD50 oral rat	3188 mg/kg (Rat)
ATE CLP (oral)	3188 mg/kg body weight
2-chloroethylvinyl ether (110-75-8)	
LD50 oral rat	250 mg/kg (Rat)
LD50 dermal rabbit	3354 mg/kg (Rabbit)
ATE CLP (oral)	250 mg/kg body weight
ATE CLP (dermal)	3354 mg/kg body weight
cyclohexane (110-82-7)	
LD50 oral rat	> 12705 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value; >5000 mg/kg bodyweight; Rat)
LD50 dermal rabbit	> 2000 mg/kg body weight (Rabbit; Experimental value; Equivalent or similar to OECD 402)
LC50 inhalation rat (mg/l)	> 19.07 mg/l/4h (Rat; Experimental value)
LC50 inhalation rat (ppm)	> 5540 ppm/4h (Rat)
1,4-dichloro-2-butene, trans- (110-57-6)	
LC50 inhalation rat (mg/l)	0.45 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	86 ppm/4h (Rat)
ATE CLP (oral)	100 mg/kg body weight
ATE CLP (dermal)	300 mg/kg body weight
ATE CLP (gases)	86 ppmV/4h
ATE CLP (vapors)	0.45 mg/l/4h
ATE CLP (dust, mist)	0.45 mg/l/4h
diethyl ether (60-29-7)	
LD50 oral rat	1215 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 1600 mg/kg bodyweight; Rat)
LD50 dermal rabbit	> 14200 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	99 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	32000 ppm/4h (Rat)
ATE CLP (oral)	1215 mg/kg body weight
ATE CLP (gases)	32000 ppmV/4h
ATE CLP (vapors)	99 mg/l/4h
ATE CLP (dust, mist)	99 mg/l/4h
ethyl methacrylate (97-63-2)	
LD50 oral rat	14800 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	38 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	8300 ppm/4h (Rat)
ATE CLP (oral)	14800 mg/kg body weight
ATE CLP (gases)	8300 ppmV/4h
ATE CLP (vapors)	38 mg/l/4h
ATE CLP (dust, mist)	38 mg/l/4h
hexane (110-54-3)	
LD50 oral rat	16000 mg/kg body weight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	> 3350 mg/kg body weight (Rabbit; Read-across; Equivalent or similar to OECD 402)
ATE CLP (oral)	16000 mg/kg body weight
2-hexanone (591-78-6)	
LD50 oral rat	2590 mg/kg (Rat)
LD50 dermal rabbit	4800 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	33 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	8000 ppm/4h (Rat)
ATE CLP (oral)	2590 mg/kg body weight
ATE CLP (dermal)	4800 mg/kg body weight
ATE CLP (gases)	8000 ppmV/4h
ATE CLP (vapors)	33 mg/l/4h

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2-hexanone (591-78-6)	
ATE CLP (dust, mist)	33 mg/l/4h
iodomethane (74-88-4)	
LD50 oral rat	7984 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 131,98 mg/kg bodyweight; Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg body weight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity)
LC50 inhalation rat (mg/l)	401 mg/l/4h (Rat; Calculated value; 1,3 mg/l/4h; Rat)
LC50 inhalation rat (ppm)	691 ppm/4h (Rat; Experimental value)
ATE CLP (oral)	100 mg/kg body weight
ATE CLP (dermal)	1100 mg/kg body weight
ATE CLP (gases)	691 ppmV/4h
ATE CLP (vapors)	3 mg/l/4h
ATE CLP (dust, mist)	0.5 mg/l/4h
tert-Butyl Methyl Ether (MTBE) (1634-04-4)	
LD50 oral rat	4000 mg/kg (Rat)
LD50 dermal rat	> 6800 mg/kg (Rat)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	85 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	23576 ppm/4h (Rat)
ATE CLP (oral)	4000 mg/kg body weight
ATE CLP (gases)	23576 ppmV/4h
ATE CLP (vapors)	85 mg/l/4h
ATE CLP (dust, mist)	85 mg/l/4h
4-Methyl-2-Pentanone (108-10-1)	
LD50 oral rat	2080 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rat	>= 2000 mg/kg body weight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	8.2- 16.4,Rat; Experimental value
LC50 inhalation rat (ppm)	2000 - 4000 ppm/4h (Rat; Experimental value)
ATE CLP (oral)	2080 mg/kg body weight
ATE CLP (gases)	2000 ppmV/4h
ATE CLP (vapors)	11 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h
1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)	
LD50 oral rat	43000 mg/kg (Rat)
LD50 dermal rabbit	> 11000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	300 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	38500 ppm/4h (Rat)
ATE CLP (oral)	43000 mg/kg body weight
ATE CLP (gases)	38500 ppmV/4h
ATE CLP (vapors)	300 mg/l/4h
ATE CLP (dust, mist)	300 mg/l/4h
methanol (67-56-1)	
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

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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.

acetone (67-64-1)	
LC50 fish 2	5540 mg/l (LC50; EU Method C.1; 96 h; Salmo gairdneri; Static system; Fresh water; Experimental value)
EC50 Daphnia 2	12600 mg/l (LC50; Other; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)

acetonitrile (75-05-8)	
LC50 fish 1	1640 mg/l (LC50; Other; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	> 1000 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Semi-static system; Fresh water; Experimental value)
Threshold limit algae 1	9696 mg/l (EC50; ISO 10253; 72 h; Phaeodactylum; Static system; Salt water; Experimental value)
Threshold limit algae 2	> 1000 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)

tert-Butanol (75-65-0)	
EC50 Daphnia 1	933 mg/l (EC50; EU Method C.2; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	6410 mg/l (LC50; 96 h; Pimephales promelas)

2-Butanone (78-93-3)	
EC50 Daphnia 1	308 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	2993 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Pimephales promelas; Static system; Fresh water; Experimental value)

carbon disulfide (75-15-0)	
LC50 fish 2	4 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Poecilia reticulata)
EC50 Daphnia 2	2.1 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna)
Threshold limit algae 1	21 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 96 h; Chlorella sp.)

cyclohexane (110-82-7)	
LC50 fish 1	4.53 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	0.9 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 1	3.428 mg/l (EbC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Selenastrum capricornutum)
Threshold limit algae 2	0.925 mg/l (NOEC; OECD 201: Alga, Growth Inhibition Test; 72 h; Selenastrum capricornutum)

diethyl ether (60-29-7)	
LC50 fish 2	2560 mg/l (LC50; 96 h; Pimephales promelas)
EC50 Daphnia 2	1380 mg/l (EC50; 48 h)

hexane (110-54-3)	
LC50 fish 1	2.5 mg/l (LC50; 96 h)
EC50 Daphnia 1	2.1 mg/l (EC50; 48 h)

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hexane (110-54-3)	
Threshold limit algae 2	26 mg/l (EbC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system)
2-hexanone (591-78-6)	
LC50 fish 1	428 mg/l (LC50; 96 h; Pimephales promelas)
iodomethane (74-88-4)	
LC50 fish 2	1.4 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Oncorhynchus mykiss; Static system; Fresh water; Experimental value)
EC50 Daphnia 2	0.57 mg/l (LC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Semi-static system; Fresh water; Experimental value)
Threshold limit algae 2	2.55 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)
tert-Butyl Methyl Ether (MTBE) (1634-04-4)	
LC50 fish 1	672 - 706 mg/l (LC50; 96 h; Pimephales promelas)
EC50 Daphnia 1	651 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna)
1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)	
EC50 Daphnia 1	71 mg/l (EC50; 48 h)
LC50 fish 2	7.4 mg/l (LC50; 96 h; Salmo gairdneri)
methanol (67-56-1)	
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

Custom Volatiles Additions Mix	
Persistence and degradability	May cause long-term adverse effects in the environment.
acetone (67-64-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	1.43 g O ₂ /g substance
Chemical oxygen demand (COD)	1.92 g O ₂ /g substance
ThOD	2.2 g O ₂ /g substance
BOD (% of ThOD)	0.872 (20 days; Literature study)
acetonitrile (75-05-8)	
Persistence and degradability	Readily biodegradable in water. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0.17 g O ₂ /g substance
ThOD	3.12 g O ₂ /g substance
BOD (% of ThOD)	0.055
tert-Butanol (75-65-0)	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0 g O ₂ /g substance
Chemical oxygen demand (COD)	2.18 g O ₂ /g substance
ThOD	2.59 g O ₂ /g substance
BOD (% of ThOD)	0
2-Butanone (78-93-3)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions.
Biochemical oxygen demand (BOD)	2.03 g O ₂ /g substance
Chemical oxygen demand (COD)	2.31 g O ₂ /g substance
ThOD	2.44 g O ₂ /g substance
BOD (% of ThOD)	> 0.5 (5 days; Literature study)
carbon disulfide (75-15-0)	
Persistence and degradability	Readily biodegradable in water. Biodegradability in soil: no data available.
2-chloroethylvinyl ether (110-75-8)	
Persistence and degradability	Biodegradability in soil: no data available.

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cyclohexane (110-82-7)	
Persistence and degradability	Readily biodegradable in water. Non degradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.22 g O ₂ /g substance
ThOD	3.425 g O ₂ /g substance
BOD (% of ThOD)	< 0.5 (Literature study)
diethyl ether (60-29-7)	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available. Reacts with air.
Biochemical oxygen demand (BOD)	0.03 g O ₂ /g substance
Chemical oxygen demand (COD)	0.026 g O ₂ /g substance (KMnO ₄)
ThOD	2.6 g O ₂ /g substance
BOD (% of ThOD)	0.012
ethyl methacrylate (97-63-2)	
Persistence and degradability	Biodegradable in water.
hexane (110-54-3)	
Persistence and degradability	Readily biodegradable in water. Photooxidation in water. easily degradable in the soil.
ThOD	3.52 g O ₂ /g substance
BOD (% of ThOD)	0.63 (Literature study)
2-hexanone (591-78-6)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
ThOD	2.72 g O ₂ /g substance
iodomethane (74-88-4)	
Persistence and degradability	Not readily biodegradable in water. Highly mobile in soil. Photolysis in the air.
tert-Butyl Methyl Ether (MTBE) (1634-04-4)	
Persistence and degradability	Not readily biodegradable in water.
4-Methyl-2-Pentanone (108-10-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Low potential for adsorption in soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	2.06 g O ₂ /g substance
Chemical oxygen demand (COD)	2.16 g O ₂ /g substance
ThOD	2.72 g O ₂ /g substance
BOD (% of ThOD)	0.76
1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil under anaerobic conditions.
methanol (67-56-1)	
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 ₂ /g substance
Chemical oxygen demand (COD)	1.42 g O ₂ /g substance
ThOD	1.5 g O ₂ /g substance
BOD (% of ThOD)	0.8 (Literature study)
12.3. Bioaccumulative potential	
Custom Volatiles Additions Mix	
Bioaccumulative potential	Not established.
acetone (67-64-1)	
BCF fish 1	0.69 (BCF)
BCF other aquatic organisms 1	3 (BCF; BCFWIN)
Log Pow	-0.24 (Test data)
Bioaccumulative potential	Not bioaccumulative.
acetonitrile (75-05-8)	
BCF other aquatic organisms 1	3.162 (BCF; BCFWIN)
Log Pow	0.29 (Weight of evidence approach; Equivalent or similar to OECD 107; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
tert-Butanol (75-65-0)	
BCF fish 1	< 5 (BCF)
BCF fish 2	1 (BCF)
Log Pow	0.35 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)

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tert-Butanol (75-65-0)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
2-Butanone (78-93-3)	
Log Pow	0.3 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 40 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
carbon disulfide (75-15-0)	
BCF fish 1	4.3 - 8 (BCF)
BCF fish 2	< 60 (BCF)
Log Pow	1.94 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
2-chloroethylvinyl ether (110-75-8)	
Log Pow	0.70 - 1.28 (Calculated)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
cyclohexane (110-82-7)	
BCF fish 2	31 - 129 (BCF; 8 weeks; Cyprinus carpio)
Log Pow	3.44 (Experimental value; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
1,4-dichloro-2-butene, trans- (110-57-6)	
Log Pow	2.11 - 2.6 (QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
diethyl ether (60-29-7)	
BCF fish 1	0.9 - 9.1 (BCF)
Log Pow	0.82 - 0.89 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
ethyl methacrylate (97-63-2)	
BCF fish 1	5 - 18 (BCF)
Log Pow	1.94
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
hexane (110-54-3)	
BCF fish 1	501.187 (BCF; Other; Pimephales promelas)
Log Pow	3.5 - 3.94 (Calculated)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
2-hexanone (591-78-6)	
Log Pow	1.38
iodomethane (74-88-4)	
Log Pow	1.57 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
tert-Butyl Methyl Ether (MTBE) (1634-04-4)	
BCF fish 1	1.5 (BCF; 672 h)
Log Pow	1.06 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
4-Methyl-2-Pentanone (108-10-1)	
BCF fish 1	2 - 5 (BCF)
Log Pow	1.9 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)	
BCF fish 1	11 - 86 (BCF)
Log Pow	1.66 - 3.3 (Calculated)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
methanol (67-56-1)	
BCF fish 1	< 10 (BCF; 72 h; Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

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acetone (67-64-1)	
Surface tension	0.0237 N/m
acetonitrile (75-05-8)	
Surface tension	0.029 N/m (20 °C)
tert-Butanol (75-65-0)	
Surface tension	0.02 N/m (25 °C)
2-Butanone (78-93-3)	
Surface tension	0.024 N/m (20 °C)
Log Koc	Koc,34; Calculated value
Ecology - soil	Slightly harmful to plants.
carbon disulfide (75-15-0)	
Surface tension	0.032 N/m (20 °C)
cyclohexane (110-82-7)	
Surface tension	0.025 N/m (20 °C)
Log Koc	log Koc,Other; 2.89; QSAR; Koc; Other; 770; QSAR
1,4-dichloro-2-butene, trans- (110-57-6)	
Surface tension	0.024 N/m (20 °C)
Log Koc	log Koc,2.33; Experimental value; Other isomer
diethyl ether (60-29-7)	
Surface tension	0.017 N/m (20 °C)
hexane (110-54-3)	
Surface tension	0.018 N/m (25 °C; 1 g/l)
Log Koc	Koc,2187.76; QSAR; log Koc; 3.34; QSAR
2-hexanone (591-78-6)	
Surface tension	0.025 N/m (20 °C)
iodomethane (74-88-4)	
Surface tension	0.026 N/m (43 °C)
Log Koc	log Koc,OECD 106: Adsorption/Desorption Using a Batch Equilibrium Method; 1.15 - 1.79; Experimental value; GLP
tert-Butyl Methyl Ether (MTBE) (1634-04-4)	
Surface tension	0.02 N/m (20 °C)
4-Methyl-2-Pentanone (108-10-1)	
Surface tension	0.024 N/m (20 °C)
Log Koc	Koc,101.85; Weight of evidence; Calculated value; log Koc; 2.008; Weight of evidence; Calculated value
1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)	
Surface tension	0.023 N/m
methanol (67-56-1)	
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

No additional information available

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. Hazardous waste due to potential risk of explosion.
Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

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

14.1. UN number

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

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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.

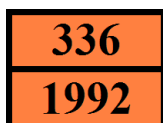
14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 336

Classification code (ADR) : FT1

Orange plates :



Special provision (ADR) : 274

Transport category (ADR) : 1

Tunnel restriction code (ADR) : C/E

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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 no REACH candidate substance
Contains no REACH Annex XIV substances.

15.1.2. National regulations

Germany

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

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.

Custom Volatiles Additions Mix

Safety Data Sheet

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

PHV SDS EU

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