

# Method 8260 Gases

## Safety Data Sheet

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

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Method 8260 Gases  
Product code : AL0-130257  
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. 2	H225
Acute Tox. 3 (Oral)	H301
Acute Tox. 3 (Dermal)	H311
Muta. 1B	H340
Carc. 1A	H350
STOT SE 1	H370
Ozone	

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

Carc.Cat.1; R45  
Muta.Cat.2; R46  
F+; R12  
T; R23/24/25  
T; R39/23/24/25  
N; R59

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) :

H225 - Highly flammable liquid and vapor  
H301+H311 - Toxic if swallowed or in contact with skin  
H340 - May cause genetic defects  
H350 - May cause cancer  
H370 - Causes damage to organs

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  
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

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	98.4	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
1,3-butadiene (Component)	(CAS No) 106-99-0 (EC-No.) 203-450-8 (EC index no) 601-013-00-X	0.2	Flam. Gas 1, H220 Muta. 1B, H340 Carc. 1A, H350
chloroethane (Component)	(CAS No) 75-00-3 (EC-No.) 200-830-5 (EC index no) 602-009-00-0	0.2	Flam. Gas 1, H220 Press. Gas Carc. 2, H351 Aquatic Chronic 3, H412
chloromethane (Component)	(CAS No) 74-87-3 (EC-No.) 200-817-4 (EC index no) 602-001-00-7	0.2	Flam. Gas 1, H220 Carc. 2, H351 STOT RE 2, H373 Ozone
dichlorodifluoromethane (Component)	(CAS No) 75-71-8 (EC-No.) 200-893-9	0.2	Ozone
trichloromonofluoromethane (Component)	(CAS No) 75-69-4 (EC-No.) 200-892-3	0.2	Ozone
vinyl chloride, inhibited (Component)	(CAS No) 75-01-4 (EC-No.) 200-831-0 (EC index no) 602-023-00-7	0.2	Flam. Gas 1, H220 Carc. 1A, H350
dichlorofluoromethane, liquefied, under pressure (Component)	(CAS No) 75-43-4 (EC-No.) 200-869-8	0.2	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	

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### 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 inhalation	: May cause cancer by inhalation.
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	: Highly 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.

#### 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.

### 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. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so.
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.

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

Technical measures	: Proper grounding procedures to avoid static electricity should be followed. 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

1,3-butadiene (106-99-0)		
Belgium	Limit value (mg/m <sup>3</sup> )	4.5 mg/m <sup>3</sup> (1,3-Butadiène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	2 ppm (1,3-Butadiène; Belgium; Time-weighted average exposure limit 8 h)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	2 ppm (1,3-Butadiene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	46.2 mg/m <sup>3</sup> (1,3-Butadien; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	21 ppm (1,3-Butadien; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	22 mg/m <sup>3</sup> Buta-1,3-diene; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	10 ppm Buta-1,3-diene; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
chloroethane (75-00-3)		
EU	IOELV TWA (mg/m <sup>3</sup> )	268 mg/m <sup>3</sup> (Chloroethane; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	100 ppm (Chloroethane; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m <sup>3</sup> )	268 mg/m <sup>3</sup> (Chlorure d'éthyle; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	100 ppm (Chlorure d'éthyle; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m <sup>3</sup> )	268 mg/m <sup>3</sup> (Chloroéthane; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
France	VME (ppm)	100 ppm (Chloroéthane; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	100 ppm (Ethyl chloride; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	268 mg/m <sup>3</sup> (Chloorethaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	100 ppm (Chloorethaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	134 mg/m <sup>3</sup> Chloroethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	50 ppm Chloroethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
chloromethane (74-87-3)		
Belgium	Limit value (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup> (Chlorure de méthyle; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	50 ppm (Chlorure de méthyle; Belgium; Time-weighted average exposure limit 8 h)

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<b>chloromethane (74-87-3)</b>		
Belgium	Short time value (mg/m <sup>3</sup> )	210 mg/m <sup>3</sup> (Chlorure de méthyle; Belgium; Short time value)
Belgium	Short time value (ppm)	100 ppm (Chlorure de méthyle; Belgium; Short time value)
France	VLE (mg/m <sup>3</sup> )	210 mg/m <sup>3</sup> (Chlorométhane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	100 ppm (Chlorométhane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m <sup>3</sup> )	105 mg/m <sup>3</sup> (Chlorométhane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	50 ppm (Chlorométhane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	50 ppm (Methyl chloride; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	100 ppm (Methyl chloride; USA; Short time value; TLV - Adopted Value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	105 mg/m <sup>3</sup> Chloromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	50 ppm Chloromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	210 mg/m <sup>3</sup> Chloromethane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	100 ppm Chloromethane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
<b>dichlorodifluoromethane (75-71-8)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	5022 mg/m <sup>3</sup> (Dichlorodifluorométhane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	1000 ppm (Dichlorodifluorométhane; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m <sup>3</sup> )	4950 mg/m <sup>3</sup> (Dichlorodifluorométhane (F12); France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	1000 ppm (Dichlorodifluorométhane (F12); France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1000 ppm (Dichlorodifluorométhane; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
<b>trichloromonofluoromethane (75-69-4)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	5702 mg/m <sup>3</sup> (Trichlorofluorométhane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	1000 ppm (Trichlorofluorométhane; Belgium; Time-weighted average exposure limit 8 h)
France	VLE (mg/m <sup>3</sup> )	5600 mg/m <sup>3</sup> (Trichlorofluorométhane (F 11); France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	1000 ppm (Trichlorofluorométhane (F 11); France; Short time value; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH Ceiling (ppm)	1000 ppm (Trichlorofluorométhane; USA; Momentary value; TLV - Adopted Value)
<b>vinyl chloride, inhibited (75-01-4)</b>		
EU	IOELV TWA (mg/m <sup>3</sup> )	7.77 mg/m <sup>3</sup> (Vinyl chloride monomer; EU; Time-weighted average exposure limit 8 h; Limit value for occupational exposure)
EU	IOELV TWA (ppm)	3 ppm (Vinyl chloride monomer; EU; Time-weighted average exposure limit 8 h; Limit value for occupational exposure)
Belgium	Limit value (mg/m <sup>3</sup> )	7.77 mg/m <sup>3</sup> (Chlorure de vinyle (monomère); Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	3 ppm (Chlorure de vinyle (monomère); Belgium; Time-weighted average exposure limit 8 h)

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<b>vinyl chloride, inhibited (75-01-4)</b>		
France	VME (mg/m <sup>3</sup> )	2.59 mg/m <sup>3</sup> (Chlorure de vinyle; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	1 ppm (Chlorure de vinyle; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1 ppm (Vinyl chloride; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	7.77 mg/m <sup>3</sup> (Vinylchloridemonomeer; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value; monomeer)
Netherlands	Grenswaarde TGG 8H (ppm)	3 ppm (Vinylchloridemonomeer; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value; monomeer)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	7.8 mg/m <sup>3</sup> Vinyl chloride; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	3 ppm Vinyl chloride; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
<b>dichlorofluoromethane, liquefied, under pressure (75-43-4)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	43 mg/m <sup>3</sup> (Dichlorofluorométhane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	10 ppm (Dichlorofluorométhane; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m <sup>3</sup> )	40 mg/m <sup>3</sup> (Dichlorofluorométhane (F 21); France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	10 ppm (Dichlorofluorométhane (F 21); France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10 ppm (Dichlorofluoromethane; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	43 mg/m <sup>3</sup> Dichlorofluoromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	10 ppm Dichlorofluoromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
<b>methanol (67-56-1)</b>		
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)

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methanol (67-56-1)		
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  
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) : Highly 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

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### 10.2. Chemical stability

Highly 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. 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.

Method 8260 Gases	
ATE CLP (oral)	101.626 mg/kg body weight
ATE CLP (dermal)	304.878 mg/kg body weight
1,3-butadiene (106-99-0)	
LD50 oral rat	5480 mg/kg (Rat)
LC50 inhalation rat (mg/l)	285 mg/l/4h (Rat)
ATE CLP (oral)	5480 mg/kg body weight
ATE CLP (vapors)	285 mg/l/4h
ATE CLP (dust, mist)	285 mg/l/4h
chloroethane (75-00-3)	
LC50 inhalation rat (mg/l)	107 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	40700 ppm/4h (Rat; Literature study)
ATE CLP (gases)	40700 ppmV/4h
ATE CLP (vapors)	107 mg/l/4h
ATE CLP (dust, mist)	107 mg/l/4h
chloromethane (74-87-3)	
LD50 oral rat	1800 mg/kg (Rat)
LC50 inhalation rat (mg/l)	5.3 mg/l/4h (Rat)
ATE CLP (oral)	1800 mg/kg body weight
ATE CLP (vapors)	5.3 mg/l/4h
ATE CLP (dust, mist)	5.3 mg/l/4h
dichlorodifluoromethane (75-71-8)	
LC50 inhalation rat (mg/l)	3823 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	760000 ppm/4h (Rat)
ATE CLP (gases)	760000 ppmV/4h
ATE CLP (vapors)	3823 mg/l/4h
ATE CLP (dust, mist)	3823 mg/l/4h
trichloromonofluoromethane (75-69-4)	
LD50 oral rat	> 15000 mg/kg (Rat)
LC50 inhalation rat (mg/l)	150 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	26200 ppm/4h (Rat)
ATE CLP (gases)	26200 ppmV/4h
ATE CLP (vapors)	150 mg/l/4h
ATE CLP (dust, mist)	150 mg/l/4h
dichlorofluoromethane, liquefied, under pressure (75-43-4)	
LC50 inhalation rat (mg/l)	214 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	49900 ppm/4h (Rat)
ATE CLP (gases)	49900 ppmV/4h
ATE CLP (vapors)	214 mg/l/4h
ATE CLP (dust, mist)	214 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)



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<b>methanol (67-56-1)</b>	
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	: May cause genetic defects.
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	: Not classified Based on available data, the classification criteria are not met
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.

<b>1,3-butadiene (106-99-0)</b>	
LC50 fish 2	80 mg/l (LC50; 48 h)

<b>chloroethane (75-00-3)</b>	
LC50 fish 1	36 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 1	58 mg/l (EC50; EU Method C.2; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 2	118 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Scenedesmus subspicatus; Static system; Fresh water; Experimental value)

<b>chloromethane (74-87-3)</b>	
LC50 fish 2	550 mg/l (LC50; 96 h; Lepomis macrochirus)
Threshold limit algae 1	1450 mg/l (EC0; 148 h)

<b>dichlorodifluoromethane (75-71-8)</b>	
LC50 fish 1	80 mg/l (LC50; 24 h)

<b>trichloromonofluoromethane (75-69-4)</b>	
LC50 fish 1	190 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 1	130 mg/l (EC50; 48 h)

<b>vinyl chloride, inhibited (75-01-4)</b>	
EC50 Daphnia 1	119 mg/l (LC50; ECOSAR; 48 h; Daphnia sp.; Fresh water)
LC50 fish 2	210 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Brachydanio rerio; Semi-static system; Fresh water; Experimental value)
Threshold limit algae 1	77 mg/l (EC50; ECOSAR; 96 h; Algae; Fresh water)

<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)

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### 12.2. Persistence and degradability

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Persistence and degradability	Not established.
chloroethane (75-00-3)	
Persistence and degradability	Not readily biodegradable in water. No significant hydrolysis. Biodegradability in soil: not applicable. Not applicable (gas).
chloromethane (74-87-3)	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
dichlorodifluoromethane (75-71-8)	
Persistence and degradability	Not readily biodegradable in water.
trichloromonofluoromethane (75-69-4)	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0
vinyl chloride, inhibited (75-01-4)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0
dichlorofluoromethane, liquefied, under pressure (75-43-4)	
Persistence and degradability	Biodegradability in water: no data available.
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 <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

Method 8260 Gases	
Bioaccumulative potential	Not established.
1,3-butadiene (106-99-0)	
BCF fish 1	19.1 (BCF)
BCF fish 2	13 (BCF)
Log Pow	1.85 - 1.99
chloroethane (75-00-3)	
BCF other aquatic organisms 1	7.6 ppb (BCF; Ostreidae)
Log Pow	1.43 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
chloromethane (74-87-3)	
Log Pow	0.91
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
dichlorodifluoromethane (75-71-8)	
BCF fish 1	26 (BCF)
BCF fish 2	< 10 (BCF)
BCF other aquatic organisms 1	26 (BCF)
Log Pow	2.16
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
trichloromonofluoromethane (75-69-4)	
BCF fish 1	4.5 (BCF)
BCF fish 2	5 (BCF)
BCF other aquatic organisms 1	1.4 (BCF)
BCF other aquatic organisms 2	4.4 (BCF)
Log Pow	2.3 - 2.53
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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<b>vinyl chloride, inhibited (75-01-4)</b>	
BCF fish 1	< 10 (BCF; 72 h)
BCF fish 2	3.55 l/kg (BCF; BCFWIN)
BCF other aquatic organisms 1	1100 (BCF; 120 h; Bacteria)
BCF other aquatic organisms 2	40 (BCF; 24 h)
Log Pow	1.58 (Test data; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

<b>dichlorofluoromethane, liquefied, under pressure (75-43-4)</b>	
Log Pow	1.55 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

<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).

### 12.4. Mobility in soil

<b>chloroethane (75-00-3)</b>	
Surface tension	0.021 N/m (5 °C)

<b>chloromethane (74-87-3)</b>	
Surface tension	0.016 N/m (20 °C)

<b>trichloromonofluoromethane (75-69-4)</b>	
Surface tension	0.019 N/m (25 °C)

<b>vinyl chloride, inhibited (75-01-4)</b>	
Log Koc	log Koc, SRC PCKOCWIN v1.66; 1.4; QSAR
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

<b>dichlorofluoromethane, liquefied, under pressure (75-43-4)</b>	
Surface tension	0.023 N/m (0 °C)

<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

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.  
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  
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), II, (D/E)

### 14.3. Packing group

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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) : II  
Packing group (IATA) : II  
Packing group (IMDG) : II  
Packing group (ADN) : II

### 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) : 2  
Tunnel restriction code (ADR) : D/E  
Limited quantities (ADR) : 11  
Excepted quantities (ADR) : E2

#### 14.6.2. Transport by sea

Special provision (IMDG) : 274  
Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02  
Tank instructions (IMDG) : T7  
Tank special provisions (IMDG) : TP2, TP13

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EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: B
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)	: 364
CAO max net quantity (IATA)	: 60L
PCA packing instructions (IATA)	: 352
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA max net quantity (IATA)	: 1L
PCA Excepted quantities (IATA)	: E2
Special provision (IATA)	: A3
ERG code (IATA)	: 3HP

### 14.6.4. Inland waterway transport

Special provision (ADN)	: 274, 802
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
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) : 2 - 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.

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