

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : 8020A Calibration Standard  
Product code : AL0-101480  
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

##### 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
Aquatic Chronic 3	H412

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

Carc. Cat. 1; R45  
Muta. Cat. 2; R46  
F; R11  
T; R23/24/25  
T; R39/23/24/25  
R52/53

Full text of R-phrases: see section 16

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

No additional information available

#### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02



GHS06



GHS08

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Signal word (CLP)	: Danger
Hazardous ingredients	: benzene, methanol
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 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 P308+P313 - IF exposed or concerned: Get medical advice/attention P403+P235 - Store in a well-ventilated place. Keep cool

No labeling applicable

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

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	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
benzene (Component)	(CAS No) 71-43-2 (EC no) 200-753-7 (EC index no) 601-020-00-8	0.2	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304
chlorobenzene (Component)	(CAS No) 108-90-7 (EC no) 203-628-5 (EC index no) 602-033-00-1	0.2	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
1,2-dichlorobenzene (Component)	(CAS No) 95-50-1 (EC no) 202-425-9 (EC index no) 602-034-00-7	0.2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1,3-dichlorobenzene (Component)	(CAS No) 541-73-1 (EC no) 208-792-1 (EC index no) 602-067-00-7	0.2	Acute Tox. 4 (Oral), H302 Aquatic Chronic 2, H411
o-xylene (Component) substance with a Community workplace exposure limit	(CAS No) 95-47-6 (EC no) 202-422-2 (EC index no) 601-022-00-9	0.2	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315
m-xylene (Component) substance with a Community workplace exposure limit	(CAS No) 108-38-3 (EC no) 203-576-3 (EC index no) 601-022-00-9	0.2	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315
p-xylene (Component) substance with a Community workplace exposure limit	(CAS No) 106-42-3 (EC no) 203-396-5 (EC index no) 601-022-00-9	0.2	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315
toluene (Component)	(CAS No) 108-88-3 (EC no) 203-625-9 (EC index no) 601-021-00-3	0.2	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304
ethylbenzene (Component) substance with a Community workplace exposure limit	(CAS No) 100-41-4 (EC no) 202-849-4 (EC index no) 601-023-00-4	0.2	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Asp. Tox. 1, H304

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,4-dichlorobenzene (Component)	(CAS No) 106-46-7 (EC no) 203-400-5 (EC index no) 602-035-00-2	0.2	Eye Irrit. 2, H319 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
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	

### 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. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

#### 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

No additional information available

#### 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.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- 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.

#### 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

- 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.
- Hygiene measures : 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

- Storage conditions : Keep container closed when not in use. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.

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Incompatible materials : Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

benzene (71-43-2)		
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	25 ppm
chlorobenzene (108-90-7)		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	350 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	75 mppcf
1,4-dichlorobenzene (106-46-7)		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	450 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	75 ppm
USA OSHA	OSHA PEL (STEL) (mg/m <sup>3</sup> )	675 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (STEL) (ppm)	110 ppm

### 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

: Wear appropriate mask.

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)	: Non flammable
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

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Not established.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

No additional information available

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

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

8020A Calibration Standard	
ATE CLP (oral)	102.041 mg/kg body weight
ATE CLP (dermal)	306.122 mg/kg body weight
benzene (71-43-2)	
LD50 oral rat	> 930 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; > 2000 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 8240 mg/kg (Rabbit; Experimental value; 21 CFR 191.10; > 9.4; Rabbit)
LC50 inhalation rat (mg/l)	43.767 mg/l/4h (Rat; Experimental value)
LC50 inhalation rat (ppm)	13700 ppm/4h (Rat; Experimental value)
ATE CLP (gases)	13700.000 ppmV/4h
ATE CLP (vapors)	43.767 mg/l/4h
ATE CLP (dust, mist)	43.767 mg/l/4h
chlorobenzene (108-90-7)	
LD50 oral rat	> 1427 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value; >2000 mg/kg bodyweight; Rat)
LD50 dermal rat	> 2000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2200 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	17 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	3630 ppm/4h (Rat)
ATE CLP (gases)	3630.000 ppmV/4h
ATE CLP (vapors)	17.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
1,2-dichlorobenzene (95-50-1)	
LD50 oral rat	500 mg/kg (Rat)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	9.5 mg/l/4h (Rat)
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (vapors)	9.500 mg/l/4h
ATE CLP (dust, mist)	9.500 mg/l/4h
1,3-dichlorobenzene (541-73-1)	
LD50 oral rat	580 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LC50 inhalation rat (mg/l)	> 17.6 mg/l/4h (Rat; Literature study)
ATE CLP (oral)	580.000 mg/kg body weight
1,4-dichlorobenzene (106-46-7)	
LD50 dermal rat	> 6000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5 mg/l/4h (Rat)
ethylbenzene (100-41-4)	
LD50 oral rat	3500 mg/kg (Rat; Other; Experimental value)
LD50 dermal rabbit	15415 mg/kg (Rabbit; Literature study; Other; 15432 mg/kg; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	17.8 mg/l/4h (Rat; Literature study)

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<b>ethylbenzene (100-41-4)</b>	
LC50 inhalation rat (ppm)	4000 ppm/4h (Rat; Literature study)
ATE CLP (oral)	3500.000 mg/kg body weight
ATE CLP (dermal)	15415.000 mg/kg body weight
ATE CLP (gases)	4000.000 ppmV/4h
ATE CLP (vapors)	17.800 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
<b>toluene (108-88-3)</b>	
LD50 oral rat	> 2000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 5580 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	12223 mg/kg (Rabbit; Literature study; Other; >5000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	> 20 mg/l/4h (Rat; Literature study)
ATE CLP (dermal)	12223.000 mg/kg body weight
<b>m-xylene (108-38-3)</b>	
LD50 oral rat	5011 - 6630 mg/kg (Rat)
ATE CLP (oral)	5011.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
ATE CLP (gases)	4500.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
<b>o-xylene (95-47-6)</b>	
LD50 oral rat	3608 mg/kg (Rat)
ATE CLP (oral)	3608.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
ATE CLP (gases)	4500.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
<b>p-xylene (106-42-3)</b>	
LD50 oral rat	4030 mg/kg (Rat)
LC50 inhalation rat (mg/l)	20 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	4740 ppm/4h (Rat)
ATE CLP (oral)	4030.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
ATE CLP (gases)	4740.000 ppmV/4h
ATE CLP (vapors)	20.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
<b>methanol (67-56-1)</b>	
LD50 oral rat	> 5000 mg/kg (Rat; BASF test; Literature study; 1187-2769 mg/kg bodyweight; Rat; Weight of evidence)
LD50 dermal rabbit	15800 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	85 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	64000 ppm/4h (Rat; Literature study)
ATE CLP (oral)	100.000 mg/kg body weight
ATE CLP (dermal)	300.000 mg/kg body weight
ATE CLP (gases)	700.000 ppmV/4h
ATE CLP (vapors)	3.000 mg/l/4h
ATE CLP (dust, mist)	0.500 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. Based on available data, the classification criteria are not met
Carcinogenicity	: May cause cancer. Based on available data, the classification criteria are not met May cause cancer

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Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Causes damage to organs. Based on available data, the classification criteria are not met
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	: Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

#### 12.1. Toxicity

<b>benzene (71-43-2)</b>	
LC50 fish 1	5.3 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 2	10 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna)
Threshold limit algae 1	100 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)
<b>chlorobenzene (108-90-7)</b>	
LC50 fish 2	4.7 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.59 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
<b>1,2-dichlorobenzene (95-50-1)</b>	
LC50 fish 1	1.58 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.74 mg/l (EC50; 48 h)
<b>1,3-dichlorobenzene (541-73-1)</b>	
LC50 fish 1	1.61 mg/l (LC50; 96 h)
EC50 Daphnia 1	1.2 mg/l (EC50; Equivalent or similar to OECD 202; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
<b>1,4-dichlorobenzene (106-46-7)</b>	
LC50 fish 2	1.12 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 2	0.7 mg/l (EC50; 48 h)
<b>ethylbenzene (100-41-4)</b>	
LC50 fish 2	4.2 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Salmo gairdneri; Semi-static system; Fresh water; Experimental value)
<b>m-xylene (108-38-3)</b>	
EC50 Daphnia 1	4.7 mg/l (EC50; 48 h)
LC50 fish 2	8.4 mg/l (LC50; 96 h)
<b>o-xylene (95-47-6)</b>	
EC50 other aquatic organisms 1	4.7 mg/l (72 h; Selenastrum capricornutum; Growth)
LC50 fish 2	8.05 mg/l (LC50; 96 h)
EC50 Daphnia 2	3.2 mg/l (EC50; 48 h)
<b>p-xylene (106-42-3)</b>	
LC50 fish 1	2.6 mg/l (LC50; 96 h)
EC50 Daphnia 2	1.4 mg/l (EC50; 48 h)
<b>methanol (67-56-1)</b>	
LC50 fish 1	15400 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	> 10000 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	10800 mg/l (LC50; 96 h; Salmo gairdneri)

#### 12.2. Persistence and degradability

<b>8020A Calibration Standard</b>	
Persistence and degradability	Not established.
<b>benzene (71-43-2)</b>	
Persistence and degradability	Readily biodegradable in water. Ozonation in water. Forming sediments in water. Biodegradable in the soil. Low potential for adsorption in soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	2.18 g O <sub>2</sub> /g substance

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<b>benzene (71-43-2)</b>	
Chemical oxygen demand (COD)	2.15 g O <sub>2</sub> /g substance
ThOD	3.10 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.70
<b>chlorobenzene (108-90-7)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.03 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.41 g O <sub>2</sub> /g substance
ThOD	2.06 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.0145
<b>1,2-dichlorobenzene (95-50-1)</b>	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
BOD (% of ThOD)	0
<b>1,3-dichlorobenzene (541-73-1)</b>	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Low potential for adsorption in soil.
<b>1,4-dichlorobenzene (106-46-7)</b>	
Persistence and degradability	Readily biodegradable in water. Non degradable in the soil. Adsorbs into the soil.
ThOD	1.52 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.65 (Calculated value)
<b>ethylbenzene (100-41-4)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	1.44 g O <sub>2</sub> /g substance (20d.)
Chemical oxygen demand (COD)	2.1 g O <sub>2</sub> /g substance
ThOD	3.17 g O <sub>2</sub> /g substance
BOD (% of ThOD)	45.4 (20 days)
<b>toluene (108-88-3)</b>	
Persistence and degradability	Readily biodegradable in water. easily degradable in the soil.
Biochemical oxygen demand (BOD)	2.15 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.52 g O <sub>2</sub> /g substance
ThOD	3.13 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.69
<b>m-xylene (108-38-3)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Photolysis in the air. Photooxidation in the air.
Biochemical oxygen demand (BOD)	2.53 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.63 g O <sub>2</sub> /g substance
ThOD	3.1 g O <sub>2</sub> /g substance
<b>o-xylene (95-47-6)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Photodegradation in the air.
Biochemical oxygen demand (BOD)	1.64 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.91 g O <sub>2</sub> /g substance
ThOD	3.125 g O <sub>2</sub> /g substance
<b>p-xylene (106-42-3)</b>	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	1.40 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.56 g O <sub>2</sub> /g substance
ThOD	3.125 g O <sub>2</sub> /g substance
<b>methanol (67-56-1)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.42 g O <sub>2</sub> /g substance
ThOD	1.5 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.8 (Literature study)



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12.3. Bioaccumulative potential	
<b>8020A Calibration Standard</b>	
Bioaccumulative potential	Not established.
<b>benzene (71-43-2)</b>	
BCF fish 1	19 (BCF)
BCF fish 2	< 10 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 3 days; Leuciscus idus; Flow-through system; Fresh water; Experimental value)
BCF other aquatic organisms 1	30 (BCF; 24 h; Chlorella sp.)
Log Pow	2.13 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>chlorobenzene (108-90-7)</b>	
BCF fish 1	447 (BCF)
BCF fish 2	3.9 - 40 (BCF)
Log Pow	2.8 - 2.98
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,2-dichlorobenzene (95-50-1)</b>	
BCF fish 1	90 - 260 (BCF)
BCF fish 2	270 - 560 (BCF)
BCF other aquatic organisms 1	14791 (BCF)
BCF other aquatic organisms 2	28840 (BCF)
Log Pow	3.43 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation ( $500 \leq \text{BCF} \leq 5000$ ).
<b>1,3-dichlorobenzene (541-73-1)</b>	
BCF fish 1	420 - 740 (BCF)
BCF fish 2	57 - 370 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 8 weeks; Cyprinus carpio; Flow-through system; Fresh water; Experimental value)
Log Pow	3.4 - 4.6
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,4-dichlorobenzene (106-46-7)</b>	
BCF fish 1	100 (BCF)
BCF fish 2	214 - 720 (BCF)
BCF other aquatic organisms 1	20 (BCF)
Log Pow	3.39 - 3.62 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation ( $500 \leq \text{BCF} \leq 5000$ ).
<b>ethylbenzene (100-41-4)</b>	
BCF fish 1	1 (BCF; Other; 6 weeks; Oncorhynchus kisutch; Flow-through system; Salt water; Literature study)
BCF fish 2	15 - 79 (BCF)
BCF other aquatic organisms 1	4.68 (BCF)
Log Pow	3.15 (Experimental value; 3.6; Experimental value; EU Method A.8: Partition Coefficient; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>toluene (108-88-3)</b>	
BCF fish 2	90 (BCF; 72 h; Leuciscus idus; Static system; Fresh water)
Log Pow	2.73 (Experimental value; Other; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>m-xylene (108-38-3)</b>	
BCF fish 1	15 (BCF)
BCF fish 2	24 (BCF)
Log Pow	3.20 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>o-xylene (95-47-6)</b>	
BCF fish 1	21.4 (BCF)
BCF fish 2	14.1 (BCF)
BCF other aquatic organisms 1	219 (BCF)
Log Pow	3.12 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>p-xylene (106-42-3)</b>	
BCF fish 1	15 (BCF)

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<b>p-xylene (106-42-3)</b>	
BCF fish 2	23 (BCF; 240 h)
Log Pow	3.15 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>methanol (67-56-1)</b>	
BCF fish 1	< 10 (BCF; 72 h; Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>12.4. Mobility in soil</b>	
<b>benzene (71-43-2)</b>	
Surface tension	0.029 N/m (20 °C)
Log Koc	Koc,134.1; QSAR
<b>chlorobenzene (108-90-7)</b>	
Surface tension	0.033 N/m (25 °C)
Log Koc	Koc,PCKOCWIN v1.66; 268; Calculated value; log Koc; PCKOCWIN v1.66; 2.42; Calculated value
<b>1,2-dichlorobenzene (95-50-1)</b>	
Surface tension	0.037 N/m (20 °C)
<b>1,3-dichlorobenzene (541-73-1)</b>	
Surface tension	0.036 N/m (20 °C)
Log Koc	log Koc,Other; 2.56; Experimental value
<b>1,4-dichlorobenzene (106-46-7)</b>	
Surface tension	0.030 N/m (55 °C)
<b>ethylbenzene (100-41-4)</b>	
Surface tension	0.029 N/m
Log Koc	log Koc,PCKOCWIN v1.66; 2.71; Calculated value; Koc; PCKOCWIN v1.66; 517.8; Calculated value
<b>toluene (108-88-3)</b>	
Surface tension	0.03 N/m (20 °C)
<b>m-xylene (108-38-3)</b>	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.
<b>o-xylene (95-47-6)</b>	
Surface tension	0.003 N/m (25 °C)
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.
<b>p-xylene (106-42-3)</b>	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.
<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

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

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

### 14.1. UN number

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

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Transport document description (ADR) : UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), II, (D/E)

### 14.3. Packing group

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



Hazard labels (IATA) : 3, 6.1



### 14.4. Packing group

Packing group (ADR) : II  
Packing group (IATA) : 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) : 1I  
Excepted quantities (ADR) : E2

#### 14.6.2. Transport by sea

No additional information available

#### 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  
ERG code (IATA) : 3HP

#### 14.6.4. Inland waterway transport

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 substances with Annex XVII restrictions

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Contains no REACH candidate substance  
Contains no REACH Annex XIV substances.

### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

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

Other information : None.

PHV SDS EU

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