8010A Calibration Mix 2

Safety Data Sheet

Date of issue: 29/06/2015 Revision date: : Version: 1.0

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

1.1. Product identifier

Product form : Mixture

Product name : 8010A Calibration Mix 2

Product code : AL0-101479

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 - 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
Carc. 1B	H350
STOT SE 1	H370
Ozone 1	H420

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

Carc.Cat.2; R45
F; R11
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

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS02 GHS06 GHS08

Signal word (CLP) : Danger

Hazardous ingredients : dibromomethane, 1,1,2,2-tetrachloroethane, 1,1,1-trichloroethane, 1,2-dichloroethane,

methanol

Hazard statements (CLP) : H225 - Highly flammable liquid and vapor
H301+H311 - Toxic if swallowed or in contact with skin
H350 - May cause cancer
H370 - Causes damage to organs
H420 - Harms public health and the environment by destroying ozone in the upper atmosphere

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P303 - IF ON SKIN (or hair):
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	97.6	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
Bromobenzene (Component)	(CAS No) 108-86-1 (EC no) 203-623-8 (EC index no) 602-060-00-9	0.2	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Aquatic Chronic 2, H411
chloroform (Component)	(CAS No) 67-66-3 (EC no) 200-663-8 (EC index no) 602-006-00-4	0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361d STOT RE 1, H372
dibromomethane (Component)	(CAS No) 74-95-3 (EC no) 200-824-2 (EC index no) 602-003-00-8	0.2	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Inhalation), H332 Aquatic Chronic 3, H412
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
1,1,2,2-tetrachloroethane (Component)	(CAS No) 79-34-5 (EC no) 201-197-8 (EC index no) 602-015-00-3	0.2	Acute Tox. 3 (Oral), H301 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Aquatic Chronic 2, H411
1,1,1,2-tetrachloroethane (Component)	(CAS No) 630-20-6 (EC no) 211-135-1	0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Dam. 1, H318 Carc. 2, H351
1,1,1-trichloroethane (Component)	(CAS No) 71-55-6 (EC no) 200-756-3 (EC index no) 602-013-00-2	0.2	Acute Tox. 4 (Inhalation), H332 Ozone 1, H420
1,1,2-trichloroethane (Component)	(CAS No) 79-00-5 (EC no) 201-166-9 (EC index no) 602-014-00-8	0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Carc. 2, H351
1,2-dichloroethane (Component) substance listed as REACH Candidate substance listed in REACH Annex XIV (1,2-dichloroethane (EDC))	(CAS No) 107-06-2 (EC no) 203-458-1 (EC index no) 602-012-00-7	0.2	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 1B, H350 STOT SE 3, H335
1,1-dichloroethane (Component) substance with a Community workplace exposure limit	(CAS No) 75-34-3 (EC no) 200-863-5 (EC index no) 602-011-00-1	0.2	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 3, H412

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.

Incompatible materials : Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

1,4-dichlorobenzene (106-46-7)		
USA OSHA	OSHA PEL (TWA) (mg/m³)	450 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	75 ppm
USA OSHA	OSHA PEL (STEL) (mg/m³)	675 mg/m³
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

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.

8010A Calibration Mix 2	
ATE CLP (oral)	102.181 mg/kg body weight
ATE CLP (dermal)	273.723 mg/kg body weight

Bromobenzene (108-86-1)	
LD50 oral rat	2383 mg/kg (Rat)
ATE CLP (oral)	2383.000 mg/kg body weight

chloroform (67-66-3)	
LD50 oral rat	695 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 908 mg/kg bodyweight; Rat; OECD 401: Acute Oral Toxicity; Experimental value; 1117 mg/kg bodyweight; Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit; No reliable data available; >3980 mg/kg bodyweight; Rabbit)
ATE CLP (oral)	695.000 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

dibromomethane (74-95-3)	
LD50 oral rat	108 mg/kg (Rat)
LD50 dermal rabbit	> 4000 mg/kg (Rabbit)
ATE CLP (oral)	108.000 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

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)

1,1-dichloroethane (75-34-3)	
LD50 oral rat	725 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2348 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	54 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	13000 ppm/4h (Rat; Literature study)
ATE CLP (oral)	725.000 mg/kg body weight
ATE CLP (gases)	13000.000 ppmV/4h
ATE CLP (vapors)	54.000 mg/l/4h
ATE CLP (dust, mist)	54.000 mg/l/4h

1,2-dichloroethane (107-06-2)	
LD50 oral rat	770 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	2800 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	7.758 mg/l/4h (Rat; Experimental value)
LC50 inhalation rat (ppm)	1886 ppm/4h (Rat; Experimental value)
ATE CLP (oral)	770.000 mg/kg body weight
ATE CLP (dermal)	2800.000 mg/kg body weight
ATE CLP (gases)	1886.000 ppmV/4h
ATE CLP (vapors)	7.758 mg/l/4h
ATE CLP (dust, mist)	7.758 mg/l/4h

1,1,1,2-tetrachloroethane (630-20-6)	
LD50 oral rat	670 mg/kg (Rat; Literature study)
LD50 dermal rabbit	20000 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	14 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	2100 ppm/4h (Rat; Literature study)
ATE CLP (oral)	670.000 mg/kg body weight
ATE CLP (dermal)	20000.000 mg/kg body weight
ATE CLP (gases)	2100.000 ppmV/4h
ATE CLP (vapors)	14.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h

1,1,2,2-tetrachloroethane (79-34-5)	
LD50 oral rat	250 mg/kg (Rat; Literature study)
LD50 dermal rabbit	3990 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	8.6 mg/l/4h (Rat; Literature study)
ATE CLP (oral)	250.000 mg/kg body weight
ATE CLP (dermal)	5.000 mg/kg body weight
ATE CLP (gases)	100.000 ppmV/4h
ATE CLP (vapors)	8.600 mg/l/4h
ATE CLP (dust, mist)	0.050 mg/l/4h

1,1,1-trichloroethane (71-55-6)	
LD50 oral rat	9600 mg/kg (Rat)
LD50 dermal rabbit	> 15800 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	99 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	18400 ppm/4h (Rat)
ATE CLP (oral)	9600.000 mg/kg body weight
ATE CLP (gases)	18400.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h

1,1,2-trichloroethane (79-00-5)	
LD50 oral rat	836 mg/kg (Rat; Literature study)
LD50 dermal rabbit	5377 mg/kg (Rabbit; Literature study; OECD 402: Acute Dermal Toxicity; 5380 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	7.8 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	1413 ppm/4h (Rat; Literature study)
ATE CLP (oral)	836.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
ATE CLP (gases)	1413.000 ppmV/4h
ATE CLP (vapors)	7.800 mg/l/4h
ATE CLP (dust, mist)	1.500 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)	100.000 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 : Not classified

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

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

Bromobenzene (108-86-1)	
LC50 fish 1	6.8 mg/l (LC50; 48 h)

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

1,4-dichlorobenzene (106-46-7)	
LC50 fish 2	1.12 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 2	0.7 mg/l (EC50; 48 h)

1,2-dichloroethane (107-06-2)	
EC50 Daphnia 1	155 - 220 mg/l (EC50; 48 h)
LC50 fish 2	225 mg/l (LC50; 96 h; Salmo gairdneri)

1,1,1,2-tetrachloroethane (630-20-6)	
LC50 fish 1	16 - 24 mg/l (LC50; 96 h; Lepomis macrochirus; Static system)
EC50 Daphnia 1	17 - 30 mg/l (EC50; 48 h; Daphnia magna)

1,1,2,2-tetrachloroethane (79-34-5)	
EC50 Daphnia 1	9.32 mg/l (EC50; 48 h; Daphnia magna; Static system)
LC50 fish 2	20.3 ppm (LC50; 96 h; Pimephales promelas; Flow-through system)
Threshold limit algae 1	136 mg/l (EC50; 96 h; Selenastrum capricornutum)

1,1,1-trichloroethane (71-55-6)	
LC50 fish 1	40 mg/l (LC50; 96 h; Lepomis macrochirus)
EC50 Daphnia 2	2384 mg/l (EC50; 48 h)

1,1,2-trichloroethane (79-00-5)	
LC50 fish 2	40 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Static system; Fresh water; Experimental value)
EC50 Daphnia 2	77.8 mg/l (EC50; 48 h; Daphnia magna)
Threshold limit algae 1	200 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Experimental value)

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

8010A Calibration Mix 2	
Persistence and degradability	Not established.

Bromobenzene (108-86-1)	
Persistence and degradability	Not readily biodegradable in water.

chloroform (67-66-3)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Low potential for adsorption in soil.
ThOD	0.33 - 1.35 g O□ /g substance
BOD (% of ThOD)	0.015 - 0.06

dibromomethane (74-95-3)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water.

1,4-dichlorobenzene (106-46-7)	
Persistence and degradability	Readily biodegradable in water. Non degradable in the soil. Adsorbs into the soil.
ThOD	1.52 g O□ /g substance
BOD (% of ThOD)	0.65 (Calculated value)

1,1-dichloroethane (75-34-3)	
Persistence and degradability	Not readily biodegradable in water. Not readily biodegradable in the soil. No (test)data on mobility of the substance available.

1,1-dichloroethane (75-34-3)	
Biochemical oxygen demand (BOD)	0.002 g O□ /g substance
ThOD	0.81 - 0.97 g O□ /g substance

1,2-dichloroethane (107-06-2)	
Persistence and degradability	Not readily biodegradable in water. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.0014 g O□ /g substance
Chemical oxygen demand (COD)	1.025 g O□ /g substance
ThOD	0.98 g O□ /g substance
BOD (% of ThOD)	0.001 (Calculated value)

1,1,1,2-tetrachloroethane (630-20-6)	
Persistence and degradability	Readily biodegradable in water. No (test)data on mobility of the substance available.

1,1,2,2-tetrachloroethane (79-34-5)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. No (test)data on mobility of the substance available.

1,1,1-trichloroethane (71-55-6)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil.

1,1,2-trichloroethane (79-00-5)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Highly mobile in soil.

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□ /g substance
Chemical oxygen demand (COD)	1.42 g O□ /g substance
ThOD	1.5 g O□ /g substance
BOD (% of ThOD)	0.8 (Literature study)

12.3. Bioaccumulative potential

8010A Calibration Mix 2	
Bioaccumulative potential	Not established.

Bromobenzene (108-86-1)	
BCF fish 1	8.8 - 34 (BCF)
BCF fish 2	72 (BCF)
BCF other aquatic organisms 1	190 (BCF; 24 h)
Log Pow	2.99 - 3.05
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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

dibromomethane (74-95-3)	
BCF fish 1	6 (BCF)
Log Pow	1.22
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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

1,1-dichloroethane (75-34-3)	
BCF fish 1	1.2 (BCF; 109 h; Pisces)
Log Pow	1.79 - 1.99 (Literature study)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

1,2-dichloroethane (107-06-2)	
BCF fish 1	2 (BCF; 336 h)
Log Pow	1.45 - 1.48 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

1,1,1,2-tetrachloroethane (630-20-6)	
Log Pow	2.93 (Estimated value)

1,1,1,2-tetrachloroethane (630-20-6)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

1,1,2,2-tetrachloroethane (79-34-5)	
BCF fish 1	4.1 - 13.2 (BCF; Cyprinus carpio)
Log Pow	2.39 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

1,1,1-trichloroethane (71-55-6)	
BCF fish 1	9 (BCF; 672 h)
BCF fish 2	0.7 - 4.9 (BCF)
BCF other aquatic organisms 1	0.7 - 34 (BCF)
BCF other aquatic organisms 2	0 - 10 (BCF)
Log Pow	2.46 - 2.49 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

1,1,2-trichloroethane (79-00-5)	
BCF fish 1	> > 0.7 - < 6.7,BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 6 weeks; Cyprinus carpio; Flow-through system; Experimental value
Log Pow	1.89 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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

Bromobenzene (108-86-1)	
Surface tension	0.036 N/m

chloroform (67-66-3)	
Surface tension	0.0271 N/m (20 °C)
Log Koc	Koc,Other; 86.7-367; Experimental value; log Koc; Other; 1.94-2.56; Experimental value
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

1,4-dichlorobenzene (106-46-7)	
Surface tension	0.030 N/m (55 °C)

1,1-dichloroethane (75-34-3)	
Surface tension	0.025 N/m

1,2-dichloroethane (107-06-2)	
Surface tension	0.032 N/m (20 °C)
Log Koc	log Koc,1.52; Koc; 121

1,1,1,2-tetrachloroethane (630-20-6)	
Surface tension	0.033 N/m (20 °C)

1,1,2,2-tetrachloroethane (79-34-5)	
Surface tension	0.035 N/m (20 °C)

1,1,1-trichloroethane (71-55-6)	
Surface tension	0.025 N/m
Ecology - soil	Soil contaminant.

1,1,2-trichloroethane (79-00-5)	
Surface tension	0.033 N/m (20 °C)
Log Koc	log Koc,SRC PCKOCWIN v2.0; 1.64 - 1.783; Estimated value

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

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

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.

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.

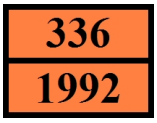
14.6. Special precautions for user

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) : 1l

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

Contains substance on the candidate list in concentration ≥ 0.1% or with a lower specific limit: 1,2-dichloroethane (EC 203-458-1, CAS 107-06-2)

Contains 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