

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

1.1. Product identifier

Product form : Mixture
Product name : 8010A Calibration Mix 1
Product code : AL0-101478
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. 1	H224
Acute Tox. 3 (Oral)	H301
Acute Tox. 3 (Dermal)	H311
Carc. 1B	H350
STOT SE 1	H370
STOT RE 2	H373
Aquatic Chronic 3	H412
Ozone 1	H420

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

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

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

8010A Calibration Mix 1

Safety Data Sheet

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 :

benzyl chloride, inhibited, bromodichloromethane, carbon tetrachloride, 1,3-dichloropropene, trans-, cis-1,3-Dichloropropene, methanol, 1,2,3-trichloropropane, trichloroethylene

Hazard statements (CLP) :

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

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P308+P313 - IF exposed or concerned: Get medical advice/attention
P403+P235 - Store in a well-ventilated place. Keep cool

EUH phrases :

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

No labeling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. 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	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
benzyl chloride, inhibited (Component)	(CAS No) 100-44-7 (EC no) 202-853-6 (EC index no) 602-037-00-3	0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Dam. 1, H318 Carc. 1B, H350 STOT SE 3, H335 STOT RE 2, H373
bromodichloromethane (Component)	(CAS No) 75-27-4 (EC no) 200-856-7	0.2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335
bromoform (Component)	(CAS No) 75-25-2 (EC no) 200-854-6 (EC index no) 602-007-00-X	0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411
carbon tetrachloride (Component)	(CAS No) 56-23-5 (EC no) 200-262-8 (EC index no) 602-008-00-5	0.2	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Carc. 2, H351 STOT RE 1, H372 Aquatic Chronic 3, H412 Ozone 1, H420

8010A Calibration Mix 1

Safety Data Sheet

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,2-dichlorobenzene (Component)	(CAS No) 95-50-1 (EC no) 202-425-9 (EC index no) 602-034-00-7	0.2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1,3-dichlorobenzene (Component)	(CAS No) 541-73-1 (EC no) 208-792-1 (EC index no) 602-067-00-7	0.2	Acute Tox. 4 (Oral), H302 Aquatic Chronic 2, H411
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
1,3-dichloropropene, trans- (Component)	(CAS No) 10061-02-6	0.2	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335
cis-1,3-Dichloropropene (Component)	(CAS No) 10061-01-5 (EC no) 233-195-8 (EC index no) 602-030-00-5	0.2	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Methylene Chloride (Component)	(CAS No) 75-09-2 (EC no) 200-838-9 (EC index no) 602-004-00-3	0.2	Carc. 2, H351
1,1-dichloroethene (Component)	(CAS No) 75-35-4 (EC no) 200-864-0 (EC index no) 602-025-00-8	0.2	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Carc. 2, H351
1,2,3-trichloropropane (Component) substance listed as REACH Candidate	(CAS No) 96-18-4 (EC no) 202-486-1 (EC index no) 602-062-00-X	0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Carc. 1B, H350 Repr. 1B, H360F
tetrachloroethylene (Component)	(CAS No) 127-18-4 (EC no) 204-825-9 (EC index no) 602-028-00-4	0.2	Carc. 2, H351 Aquatic Chronic 2, H411
trichloroethylene (Component) substance listed as REACH Candidate substance listed in REACH Annex XIV	(CAS No) 79-01-6 (EC no) 201-167-4 (EC index no) 602-027-00-9	0.2	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H336 Aquatic Chronic 3, H412
Name	Product identifier	Specific concentration limits	
methanol (Component)	(CAS No) 67-56-1 (EC no) 200-659-6 (EC index no) 603-001-00-X	(3 <= C < 10) STOT SE 2, H371 (C >= 10) STOT SE 1, H370	
carbon tetrachloride (Component)	(CAS No) 56-23-5 (EC no) 200-262-8 (EC index no) 602-008-00-5	(0,2 <= C < 1) STOT RE 2, H373 (C >= 1) STOT RE 1, H372	

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. 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.
-------------------	--

8010A Calibration Mix 1

Safety Data Sheet

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

chlorobenzene (108-90-7)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	350 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	75 mppcf

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.

8010A Calibration Mix 1

Safety Data Sheet

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 1	
ATE CLP (oral)	102.459 mg/kg body weight
ATE CLP (dermal)	307.785 mg/kg body weight
benzyl chloride, inhibited (100-44-7)	
LD50 oral rat	1230 mg/kg (Rat)
LC50 inhalation rat (mg/l)	0.74 mg/l/4h (Rat)
ATE CLP (oral)	1230.000 mg/kg body weight
ATE CLP (gases)	700.000 ppmV/4h
ATE CLP (vapors)	0.740 mg/l/4h
ATE CLP (dust, mist)	0.740 mg/l/4h
bromodichloromethane (75-27-4)	
LD50 oral rat	916 mg/kg (Rat)
ATE CLP (oral)	916.000 mg/kg body weight

8010A Calibration Mix 1

Safety Data Sheet

bromoform (75-25-2)	
LD50 oral rat	933 mg/kg (Rat)
ATE CLP (oral)	933.000 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
carbon tetrachloride (56-23-5)	
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
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
1,1-dichloroethene (75-35-4)	
LD50 oral rat	200 - 1500 mg/kg (Rat)
LC50 inhalation rat (mg/l)	25.6 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	6350 ppm/4h (Rat)
ATE CLP (oral)	200.000 mg/kg body weight
ATE CLP (gases)	6350.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
cis-1,3-Dichloropropene (10061-01-5)	
ATE CLP (oral)	100.000 mg/kg body weight
ATE CLP (dermal)	300.000 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
1,3-dichloropropene, trans- (10061-02-6)	
ATE CLP (oral)	100.000 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
Methylene Chloride (75-09-2)	
LD50 oral rat	> 2000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Literature study)
tetrachloroethylene (127-18-4)	
LD50 oral rat	> 2000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 3835 mg/kg bodyweight; Rat; Equivalent or similar to OECD 401; Experimental value; 3005 mg/kg bodyweight; Rat; Experimental value)

8010A Calibration Mix 1

Safety Data Sheet

tetrachloroethylene (127-18-4)	
LD50 dermal rabbit	> 3000 mg/kg (Rabbit; Literature study; >10000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	27.58 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	3786 ppm/4h (Rat; Experimental value)
ATE CLP (gases)	3786.000 ppmV/4h
ATE CLP (vapors)	27.580 mg/l/4h
ATE CLP (dust, mist)	27.580 mg/l/4h
trichloroethylene (79-01-6)	
LD50 oral rat	4920 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	66 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	12000 ppm/4h (Rat)
ATE CLP (oral)	4920.000 mg/kg body weight
ATE CLP (gases)	12000.000 ppmV/4h
ATE CLP (vapors)	66.000 mg/l/4h
ATE CLP (dust, mist)	66.000 mg/l/4h
1,2,3-trichloropropane (96-18-4)	
LD50 oral rat	442 mg/kg (Rat)
LD50 dermal rabbit	850 mg/kg (Rabbit)
ATE CLP (oral)	442.000 mg/kg body weight
ATE CLP (dermal)	850.000 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
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)	: May cause damage to organs through prolonged or repeated exposure. 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.

8010A Calibration Mix 1

Safety Data Sheet

SECTION 12: Ecological information

12.1. Toxicity

benzyl chloride, inhibited (100-44-7)	
LC50 fish 2	4 mg/l (LC50; 96 h)
EC50 Daphnia 2	6.1 mg/l (EC50; 48 h)
Threshold limit algae 1	50 mg/l (EC0; 192 h)
bromoform (75-25-2)	
LC50 fish 2	7.1 mg/l (LC50; 96 h)
EC50 Daphnia 2	7.2 - 46 mg/l (EC50; 48 h)
carbon tetrachloride (56-23-5)	
LC50 fish 1	27 mg/l (LC50; 96 h; <i>Lepomis macrochirus</i>)
EC50 Daphnia 1	29 mg/l (EC50; 48 h)
Threshold limit algae 1	> 600 mg/l (EC0; 168 h)
chlorobenzene (108-90-7)	
LC50 fish 2	4.7 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.59 mg/l (EC50; OECD 202: <i>Daphnia</i> sp. Acute Immobilisation Test; 48 h; <i>Daphnia magna</i> ; Static system; Fresh water; Experimental value)
1,2-dichlorobenzene (95-50-1)	
LC50 fish 1	1.58 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.74 mg/l (EC50; 48 h)
1,3-dichlorobenzene (541-73-1)	
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; <i>Daphnia magna</i> ; Static system; Fresh water; Experimental value)
1,1-dichloroethene (75-35-4)	
EC50 Daphnia 1	11.6 - 79 mg/l (EC50; 48 h)
LC50 fish 2	74 - 220 mg/l (LC50; 96 h; <i>Lepomis macrochirus</i>)
Methylene Chloride (75-09-2)	
LC50 fish 1	193 mg/l (LC50; 96 h; <i>Pimephales promelas</i>)
EC50 Daphnia 1	168.2 mg/l (EC50; 48 h)
tetrachloroethylene (127-18-4)	
EC50 Daphnia 1	8.5 mg/l (EC50; ASTM; 48 h; <i>Daphnia magna</i> ; Static system; Fresh water; Experimental value)
Threshold limit algae 2	3.64 mg/l (EC50; Other; 72 h; <i>Chlamydomonas angulosa</i> ; Fresh water)
trichloroethylene (79-01-6)	
LC50 fish 1	40.7 mg/l (LC50; 96 h; <i>Pimephales promelas</i>)
EC50 Daphnia 2	20.8 mg/l (EC50; 48 h)
1,2,3-trichloropropane (96-18-4)	
EC50 Daphnia 1	35.4 mg/l (EC50; 48 h)
LC50 fish 2	75 mg/l (LC50; 96 h; <i>Lepomis macrochirus</i>)
Threshold limit algae 1	170 mg/l (EC50; 3 h)
methanol (67-56-1)	
LC50 fish 1	15400 mg/l (LC50; EPA 660/3 - 75/009; 96 h; <i>Lepomis macrochirus</i> ; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	> 10000 mg/l (EC50; DIN 38412-11; 48 h; <i>Daphnia magna</i> ; Static system; Fresh water; Experimental value)
LC50 fish 2	10800 mg/l (LC50; 96 h; <i>Salmo gairdneri</i>)

12.2. Persistence and degradability

8010A Calibration Mix 1	
Persistence and degradability	Not established.
benzyl chloride, inhibited (100-44-7)	
Persistence and degradability	Readily biodegradable in water.
bromodichloromethane (75-27-4)	
Persistence and degradability	Not readily biodegradable in water.
bromoform (75-25-2)	
Persistence and degradability	Not readily biodegradable in water.

8010A Calibration Mix 1

Safety Data Sheet

carbon tetrachloride (56-23-5)	
Persistence and degradability	Not readily biodegradable in water. No (test) data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0 g O ₂ /g substance
Chemical oxygen demand (COD)	0.001 g O ₂ /g substance
ThOD	0.21 g O ₂ /g substance
BOD (% of ThOD)	0
chlorobenzene (108-90-7)	
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 ₂ /g substance
Chemical oxygen demand (COD)	0.41 g O ₂ /g substance
ThOD	2.06 g O ₂ /g substance
BOD (% of ThOD)	0.0145
1,2-dichlorobenzene (95-50-1)	
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
1,3-dichlorobenzene (541-73-1)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Low potential for adsorption in soil.
1,1-dichloroethene (75-35-4)	
Persistence and degradability	Not readily biodegradable in water.
cis-1,3-Dichloropropene (10061-01-5)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
1,3-dichloropropene, trans- (10061-02-6)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
Methylene Chloride (75-09-2)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
tetrachloroethylene (127-18-4)	
Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.06 g O ₂ /g substance
ThOD	0.39 g O ₂ /g substance
BOD (% of ThOD)	0.15
trichloroethylene (79-01-6)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Biodegradable in the soil under anaerobic conditions.
1,2,3-trichloropropane (96-18-4)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the 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 ₂ /g substance
Chemical oxygen demand (COD)	1.42 g O ₂ /g substance
ThOD	1.5 g O ₂ /g substance
BOD (% of ThOD)	0.8 (Literature study)
12.3. Bioaccumulative potential	
8010A Calibration Mix 1	
Bioaccumulative potential	Not established.
benzyl chloride, inhibited (100-44-7)	
BCF other aquatic organisms 1	5.7 ppm (BCF; 24 h; Lamellibranchiata)
BCF other aquatic organisms 2	3.1 - 4.2 ppm (BCF; 24 h; Lamellibranchiata)
Log Pow	2.30 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
bromodichloromethane (75-27-4)	
Log Pow	1.88 - 2.24
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
bromoform (75-25-2)	
BCF fish 1	3.2 (BCF)
BCF fish 2	7.7 - 21 (BCF)

8010A Calibration Mix 1

Safety Data Sheet

bromoform (75-25-2)	
BCF other aquatic organisms 1	31.7 (BCF)
BCF other aquatic organisms 2	8.3 - 21 (BCF)
Log Pow	2.37 - 2.5
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
carbon tetrachloride (56-23-5)	
BCF fish 1	17.4 (BCF)
BCF fish 2	3.1 - 11 (BCF)
BCF other aquatic organisms 1	300 (BCF; 24 h; Chlorella sp.)
BCF other aquatic organisms 2	20 - 114 (BCF)
Log Pow	2.75 - 2.83 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
chlorobenzene (108-90-7)	
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).
1,2-dichlorobenzene (95-50-1)	
BCF fish 1	90 - 260 (BCF)
BCF fish 2	270 - 560 (BCF)
BCF other aquatic organisms 1	14791 (BCF)
BCF other aquatic organisms 2	28840 (BCF)
Log Pow	3.43 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
1,3-dichlorobenzene (541-73-1)	
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).
1,1-dichloroethene (75-35-4)	
BCF fish 1	2.5 - 6.4 (BCF)
BCF fish 2	7.8 (BCF)
Log Pow	1.48 - 2.17
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
cis-1,3-Dichloropropene (10061-01-5)	
Log Pow	2.06
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
1,3-dichloropropene, trans- (10061-02-6)	
Log Pow	2
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Methylene Chloride (75-09-2)	
BCF fish 1	2 - 40 (BCF)
Log Pow	1.25 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
tetrachloroethylene (127-18-4)	
BCF fish 2	25.8 - 77.1 (BCF; 8 weeks)
Log Pow	3.40 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
trichloroethylene (79-01-6)	
BCF fish 1	17 (BCF; 336 h)
BCF fish 2	90 (BCF; 72 h; Leuciscus idus)
BCF other aquatic organisms 1	3440 (BCF; 120 h)
BCF other aquatic organisms 2	4270 (BCF; 120 h)
Log Pow	2.29 - 2.42 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
1,2,3-trichloropropane (96-18-4)	
BCF fish 1	5.3 - 13 (BCF)
Log Pow	2.27 (Experimental value)

8010A Calibration Mix 1

Safety Data Sheet

1,2,3-trichloropropane (96-18-4)	
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	
benzyl chloride, inhibited (100-44-7)	
Surface tension	0.038 N/m (20 °C)
bromoform (75-25-2)	
Surface tension	0.045 N/m (25 °C)
carbon tetrachloride (56-23-5)	
Surface tension	0.027 N/m (20 °C)
Ecology - soil	Soil contaminant. May be harmful to plant growth, blooming and fruit formation.
chlorobenzene (108-90-7)	
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
1,2-dichlorobenzene (95-50-1)	
Surface tension	0.037 N/m (20 °C)
1,3-dichlorobenzene (541-73-1)	
Surface tension	0.036 N/m (20 °C)
Log Koc	log Koc,Other; 2.56; Experimental value
Methylene Chloride (75-09-2)	
Surface tension	0.028 N/m (20 °C)
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.
tetrachloroethylene (127-18-4)	
Surface tension	0.0313 N/m (20 °C)
Log Koc	Koc,141; Experimental value; log Koc; 2.15; Experimental value
trichloroethylene (79-01-6)	
Surface tension	0.03 N/m
1,2,3-trichloropropane (96-18-4)	
Surface tension	0.038 N/m (20 °C)
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	
1,2,3-trichloropropane (96-18-4)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII
trichloroethylene (79-01-6)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII
12.6. Other adverse effects	
Additional information	: Avoid release to the environment
SECTION 13: Disposal considerations	
13.1. Waste treatment methods	
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.

8010A Calibration Mix 1

Safety Data Sheet

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) : 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

8010A Calibration Mix 1

Safety Data Sheet

Contains no substances with Annex XVII restrictions

Contains substance on the candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: 1,2,3-Trichloropropane (EC 202-486-1, CAS 96-18-4), Trichloroethylene (EC 201-167-4, CAS 79-01-6)

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

Copyright 2015 Phenova, Inc. License granted to make paper copies for internal use. The information contained in this Safety Data Sheet is based on our current knowledge. The information contained in this document should be used only as a guide for appropriate safety precautions and should not be considered to be all inclusive. Users should make their own investigation to determine the suitability of the information for their particular purposes. The document does not represent any guarantee of the properties of the product. Phenova, Inc. shall not be held liable for any damage resulting from the handling or use of this product. Visit the Terms and Conditions of Sale link at www.phenova.com for additional terms and conditions of sale.