

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : 8270 Calibration Mix
 Product code : AL0-180100

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Phenova
 6390 Joyce Dr. Suite 100
 Golden, CO 80403 - 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: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Germ cell mutagenicity Category 1B	H340	May cause genetic defects
Carcinogenicity Category 1A	H350	May cause cancer
Reproductive toxicity Category 1B	H360	May damage fertility or the unborn child

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H225 - Highly flammable liquid and vapor
 H317 - May cause an allergic skin reaction
 H340 - May cause genetic defects
 H350 - May cause cancer
 H360 - May damage fertility or the unborn child

Precautionary statements (GHS US) :

P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 - Keep container tightly closed.
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
 P272 - Contaminated work clothing must not be allowed out of the workplace.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 - If on skin: Wash with plenty of water.
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P308+P313 - If exposed or concerned: Get medical advice/attention.
 P321 - Specific treatment (see supplemental first aid instruction on this label).
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

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P363 - Wash contaminated clothing 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.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc.
Methylene Chloride (Component)	(CAS-No.) 75-09-2	91.5
azobenzene (Component)	(CAS-No.) 103-33-3	0.1
benzidine (Component)	(CAS-No.) 92-87-5	0.1
benzo[a]anthracene (Component)	(CAS-No.) 56-55-3	0.1
3,3'-dichlorobenzidine (Component)	(CAS-No.) 91-94-1	0.1
4-chloroaniline (Component)	(CAS-No.) 106-47-8	0.1
chrysene (Component)	(CAS-No.) 218-01-9	0.1
Benzo(b)fluoranthene (Component)	(CAS-No.) 205-99-2	0.1
benzo[k]fluoranthene (Component)	(CAS-No.) 207-08-9	0.1
benzo[a]pyrene (Component)	(CAS-No.) 50-32-8	0.1
4-chloro-3-methylphenol (Component)	(CAS-No.) 59-50-7	0.1
dibenz(a,h)anthracene (Component)	(CAS-No.) 53-70-3	0.1
naphthalene (Component)	(CAS-No.) 91-20-3	0.1
hexachloroethane (Component)	(CAS-No.) 67-72-1	0.1
2,3,4,5,6-pentachlorophenol (Component)	(CAS-No.) 87-86-5	0.1
2,4-dinitrotoluene (Component)	(CAS-No.) 121-14-2	0.1
hexachlorobenzene (Component)	(CAS-No.) 118-74-1	0.1
indeno(1,2,3-cd)pyrene (Component)	(CAS-No.) 193-39-5	0.1
4,6-Dinitro-2-methylphenol (Component)	(CAS-No.) 534-52-1	0.1
2,6-dinitrotoluene (Component)	(CAS-No.) 606-20-2	0.1
2,4,6-trichlorophenol (Component)	(CAS-No.) 88-06-2	0.1
hexachlorobuta-1,3-diene (Component)	(CAS-No.) 87-68-3	0.1
1,4-dichlorobenzene (Component)	(CAS-No.) 106-46-7	0.1
nitrobenzene (Component)	(CAS-No.) 98-95-3	0.1
Bis(2-ethylhexyl) phthalate (Component)	(CAS-No.) 117-81-7	0.1
bis(2-chloroethyl) ether (Component)	(CAS-No.) 111-44-4	0.1

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Name	Product identifier	Conc.
isophorone (Component)	(CAS-No.) 78-59-1	0.1
N-Nitrosodimethylamine (Component)	(CAS-No.) 62-75-9	0.1
N-Nirosodi-n-propylamine (Component)	(CAS-No.) 621-64-7	0.1

Full text of hazard classes and H-statements : see section 16

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 affected person to breathe fresh air. Allow the victim to rest.
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	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	: Harmful if swallowed. Toxic in contact with skin.
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	: Swallowing a small quantity of this material will result in serious health hazard.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: Highly flammable liquid and vapor.
Explosion hazard	: May form flammable/explosive vapor-air mixture.

5.3. Special protective equipment and precautions for fire-fighters

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.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up in absorbent material. Collect spillage.
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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.

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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8270 Calibration Mix		
ACGIH	Local name	Dichloromethane
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	COHb-emia; CNS impair
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Remark (OSHA)	(2) See Table Z-2.
OSHA	Regulatory reference (US-OSHA)	OSHA
azobenzene (103-33-3)		
Not applicable		
benzidine (92-87-5)		
Not applicable		
benzo[a]anthracene (56-55-3)		
Not applicable		
benzo[a]pyrene (50-32-8)		
Not applicable		
Benzo(b)fluoranthene (205-99-2)		
Not applicable		
benzo[k]fluoranthene (207-08-9)		
Not applicable		
4-chloroaniline (106-47-8)		
Not applicable		
4-chloro-3-methylphenol (59-50-7)		
Not applicable		
chrysene (218-01-9)		
Not applicable		
dibenz(a,h)anthracene (53-70-3)		
Not applicable		
3,3'-dichlorobenzidine (91-94-1)		
Not applicable		

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4,6-Dinitro-2-methylphenol (534-52-1)		
ACGIH	Local name	Dinitro-o-cresol
ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³
ACGIH	Remark (ACGIH)	Basal metab
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	0.2 mg/m ³
OSHA	Regulatory reference (US-OSHA)	OSHA
2,4-dinitrotoluene (121-14-2)		
ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³
2,6-dinitrotoluene (606-20-2)		
ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³
hexachlorobenzene (118-74-1)		
ACGIH	Local name	Hexachlorobenzene
ACGIH	ACGIH TWA (mg/m ³)	0.002 mg/m ³
ACGIH	Remark (ACGIH)	Porphyrin eff; Skin dam; CNS impair
ACGIH	Regulatory reference	ACGIH 2018
hexachloroethane (67-72-1)		
ACGIH	Local name	Hexachloroethane
ACGIH	ACGIH TWA (ppm)	1 ppm
ACGIH	Remark (ACGIH)	Liver & kidney dam
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	10 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	1 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
indeno(1,2,3-cd)pyrene (193-39-5)		
Not applicable		
naphthalene (91-20-3)		
ACGIH	Local name	Naphthalene
ACGIH	ACGIH TWA (ppm)	10 ppm (Naphthalene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Hematologic eff; URT & eye irr; Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure)
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	50 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	10 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
2,3,4,5,6-pentachlorophenol (87-86-5)		
ACGIH	Local name	Pentachlorophenol
ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³ (Inhalable fraction and vapor)
ACGIH	ACGIH STEL (mg/m ³)	1 mg/m ³ (Inhalable fraction and vapor)

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2,3,4,5,6-pentachlorophenol (87-86-5)		
ACGIH	Remark (ACGIH)	URT & eye irr; CNS & card impair; Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure); BEI
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	0.5 mg/m ³
OSHA	Regulatory reference (US-OSHA)	OSHA
2,4,6-trichlorophenol (88-06-2)		
Not applicable		
bis(2-chloroethyl) ether (111-44-4)		
ACGIH	Local name	Dichloroethyl ether
ACGIH	ACGIH TWA (ppm)	5 ppm
ACGIH	ACGIH STEL (ppm)	10 ppm
ACGIH	Remark (ACGIH)	URT & eye irr; nausea
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (Ceiling) (mg/m ³)	90 mg/m ³
OSHA	OSHA PEL (Ceiling) (ppm)	15 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
Bis(2-ethylhexyl) phthalate (117-81-7)		
ACGIH	Local name	Di(2-ethylhexyl)phthalate (DEHP)
ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
ACGIH	Remark (ACGIH)	LRT irr
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
OSHA	Regulatory reference (US-OSHA)	OSHA
1,4-dichlorobenzene (106-46-7)		
ACGIH	Local name	p-Dichlorobenzene
ACGIH	ACGIH TWA (ppm)	10 ppm
ACGIH	Remark (ACGIH)	Eye irr; kidney dam
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	450 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	75 ppm
OSHA	OSHA PEL (STEL) (mg/m ³)	675 mg/m ³
OSHA	OSHA PEL (STEL) (ppm)	110 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
hexachlorobuta-1,3-diene (87-68-3)		
ACGIH	Local name	Hexachlorobutadiene
ACGIH	ACGIH TWA (ppm)	0.02 ppm
ACGIH	Remark (ACGIH)	Kidney dam
ACGIH	Regulatory reference	ACGIH 2018

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isophorone (78-59-1)		
ACGIH	Local name	Isophorone
ACGIH	ACGIH Ceiling (ppm)	5 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr; CNS impair;
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	140 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	25 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
nitrobenzene (98-95-3)		
ACGIH	Local name	Nitrobenzene
ACGIH	ACGIH TWA (ppm)	1 ppm (Nitrobenzene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	MeHb-emia
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	1 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
N-Nitrosodimethylamine (62-75-9)		
Not applicable		
N-Nirosodi-n-propylamine (621-64-7)		
Not applicable		
Methylene Chloride (75-09-2)		
ACGIH	Local name	Dichloromethane
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	COHb-emia; CNS impair
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Remark (OSHA)	(2) See Table Z-2.
OSHA	Regulatory reference (US-OSHA)	OSHA

8.2. Appropriate engineering controls

Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.

8.3. Individual protection measures/Personal protective equipment

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

Personal protective equipment symbol(s):

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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
	: Colorless
	: characteristic
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: 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

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

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Acute toxicity : Not classified

azobenzene (103-33-3)	
LD50 oral rat	1000 mg/kg (Rat, Literature study, Oral)
ATE US (oral)	1000 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

benzidine (92-87-5)	
LD50 oral rat	309 mg/kg (Rat, Literature study, Oral)
ATE US (oral)	309 mg/kg body weight

4-chloroaniline (106-47-8)	
LD50 oral rat	300 – 340 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 7 day(s))
LD50 dermal rabbit	360 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	2.34 mg/l (4 h, Rat, Male, Experimental value, Inhalation (vapours))
ATE US (oral)	300 mg/kg body weight
ATE US (dermal)	360 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	2.34 mg/l/4h
ATE US (dust, mist)	2.34 mg/l/4h

4-chloro-3-methylphenol (59-50-7)	
LD50 oral rat	1830 mg/kg body weight (Rat, Male, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
ATE US (oral)	1830 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight

3,3'-dichlorobenzidine (91-94-1)	
LD50 oral rat	7070 mg/kg (Rat, Oral)
ATE US (oral)	7070 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight

4,6-Dinitro-2-methylphenol (534-52-1)	
LD50 oral rat	7 – 40 mg/kg (Rat, Oral)
ATE US (oral)	7 mg/kg body weight
ATE US (dermal)	5 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h

2,4-dinitrotoluene (121-14-2)	
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h

2,6-dinitrotoluene (606-20-2)	
LD50 oral rat	177 mg/kg (Rat, Oral)
ATE US (oral)	177 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h

hexachlorobenzene (118-74-1)	
LD50 oral rat	10000 mg/kg (Rat, Oral)
ATE US (oral)	10000 mg/kg body weight

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hexachloroethane (67-72-1)	
LD50 oral rat	4460 mg/kg (Rat, Oral)
LD50 dermal rabbit	32000 mg/kg (Rabbit, Dermal)
ATE US (oral)	4460 mg/kg body weight
ATE US (dermal)	32000 mg/kg body weight

naphthalene (91-20-3)	
LD50 oral rat	> 1100 mg/kg (Rat)
LD50 dermal rat	> 2500 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)
ATE US (oral)	500 mg/kg body weight

2,3,4,5,6-pentachlorophenol (87-86-5)	
LC50 inhalation rat (mg/l)	355 mg/m ³ (Rat, Literature, Inhalation)
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h

2,4,6-trichlorophenol (88-06-2)	
LD50 oral rat	820 mg/kg (Rat, Literature study, Oral)
ATE US (oral)	820 mg/kg body weight

bis(2-chloroethyl) ether (111-44-4)	
LD50 oral rat	75 mg/kg body weight (Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	9 mg/kg body weight (24 h, Rabbit, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	0.33 mg/l (4 h, Rat, Experimental value, Inhalation (mist))
ATE US (oral)	5 mg/kg body weight
ATE US (dermal)	9 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.33 mg/l/4h
ATE US (dust, mist)	0.33 mg/l/4h

Bis(2-ethylhexyl) phthalate (117-81-7)	
LD50 dermal rabbit	19800 mg/kg body weight (24 h, Rabbit, Experimental value, Dermal)
ATE US (dermal)	19800 mg/kg body weight

1,4-dichlorobenzene (106-46-7)	
LD50 dermal rat	> 6000 mg/kg (Rat, Dermal)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	> 5 mg/l (4 h, Rat, Inhalation)
ATE US (oral)	500 mg/kg body weight

hexachlorobuta-1,3-diene (87-68-3)	
LD50 oral rat	90 mg/kg (Rat, Oral)
LD50 dermal rabbit	1211 mg/kg (Rabbit, Dermal)
ATE US (oral)	90 mg/kg body weight
ATE US (dermal)	1211 mg/kg body weight

isophorone (78-59-1)	
LD50 oral rat	1500 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 13 day(s))
LD50 dermal rabbit	1200 mg/kg body weight (24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	7 mg/l (4 h, Rat, Male, Experimental value, Inhalation (aerosol), 14 day(s))
ATE US (oral)	1500 mg/kg body weight
ATE US (dermal)	1200 mg/kg body weight
ATE US (vapors)	7 mg/l/4h
ATE US (dust, mist)	7 mg/l/4h

nitrobenzene (98-95-3)	
LD50 oral rat	640 mg/kg (Rat; Experimental value; 588 mg/kg bodyweight; Rat)
LD50 dermal rabbit	760 mg/kg body weight (Rabbit; Experimental value)

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nitrobenzene (98-95-3)	
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	760 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h
N-Nitrosodimethylamine (62-75-9)	
LD50 oral rat	37 mg/kg (Rat)
LC50 inhalation rat (mg/l)	0.24 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	78 ppm/4h (Rat)
ATE US (oral)	37 mg/kg body weight
ATE US (gases)	78 ppmV/4h
ATE US (vapors)	0.24 mg/l/4h
ATE US (dust, mist)	0.24 mg/l/4h
N-Nirosodi-n-propylamine (621-64-7)	
LD50 oral rat	480 mg/kg (Rat)
ATE US (oral)	480 mg/kg body weight
Methylene Chloride (75-09-2)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: May cause genetic defects.
Carcinogenicity	: May cause cancer.
azobenzene (103-33-3)	
IARC group	3 - Not classifiable
benzidine (92-87-5)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	Known Human Carcinogens
benzo[a]anthracene (56-55-3)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
benzo[a]pyrene (50-32-8)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
Benzo(b)fluoranthene (205-99-2)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
benzo[k]fluoranthene (207-08-9)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
4-chloroaniline (106-47-8)	
IARC group	2B - Possibly carcinogenic to humans
dibenz(a,h)anthracene (53-70-3)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
3,3'-dichlorobenzidine (91-94-1)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
2,4-dinitrotoluene (121-14-2)	
IARC group	2B - Possibly carcinogenic to humans
2,6-dinitrotoluene (606-20-2)	
IARC group	2B - Possibly carcinogenic to humans

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hexachlorobenzene (118-74-1)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
hexachloroethane (67-72-1)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
indeno(1,2,3-cd)pyrene (193-39-5)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
naphthalene (91-20-3)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
2,3,4,5,6-pentachlorophenol (87-86-5)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
2,4,6-trichlorophenol (88-06-2)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
bis(2-chloroethyl) ether (111-44-4)	
IARC group	3 - Not classifiable
Bis(2-ethylhexyl) phthalate (117-81-7)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
1,4-dichlorobenzene (106-46-7)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
nitrobenzene (98-95-3)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
N-Nitrosodimethylamine (62-75-9)	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
N-Nirosodi-n-propylamine (621-64-7)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
Methylene Chloride (75-09-2)	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

Reproductive toxicity : May damage fertility or the unborn child.
Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Harmful if swallowed. Toxic in contact with skin.

Symptoms/effects after inhalation : May cause cancer by inhalation.

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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	: Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

azobenzene (103-33-3)	
LC50 fish 1	< 1 mg/l (Pisces)
benzidine (92-87-5)	
LC50 fish 1	7.4 mg/l (96 h, Salmo gairdneri, Static system)
EC50 Daphnia 1	0.6 mg/l (48 h, Daphnia magna)
benzo[a]anthracene (56-55-3)	
LC50 fish 1	0.0018 mg/l (65 h, Pimephales promelas, Lethal)
EC50 Daphnia 1	0.01 mg/l (96 h, Daphnia pulex, Static system)
benzo[a]pyrene (50-32-8)	
LC50 fish 1	0.0056 mg/l (38 h, Pimephales promelas, Lethal)
4-chloroaniline (106-47-8)	
LC50 fish 1	2.4 mg/l (Other, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value)
4-chloro-3-methylphenol (59-50-7)	
LC50 fish 1	3.71 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Poecilia reticulata, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	1.5 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
3,3'-dichlorobenzidine (91-94-1)	
LC50 fish 1	0.5 mg/l (96 h, Lepomis macrochirus)
4,6-Dinitro-2-methylphenol (534-52-1)	
LC50 fish 1	0.066 mg/l (96 h, Salmo gairdneri, Literature study)
EC50 Daphnia 1	0.145 mg/l (48 h, Daphnia magna, Literature study)
2,6-dinitrotoluene (606-20-2)	
LC50 fish 1	18.5 – 50 mg/l (96 h, Pimephales promelas)
EC50 Daphnia 1	21.7 mg/l (48 h, Daphnia magna, Static system)
hexachlorobenzene (118-74-1)	
LC50 fish 1	2.3 mg/l (96 h, Salmo gairdneri)
EC50 Daphnia 1	> 0.03 mg/l (24 h, Daphnia magna)
hexachloroethane (67-72-1)	
LC50 fish 1	0.84 mg/l (96 h, Salmo gairdneri)
EC50 Daphnia 1	1.4 mg/l (Daphnia magna)
naphthalene (91-20-3)	
EC50 Daphnia 1	2.16 mg/l (EC50; 48 h; Daphnia magna)
LC50 fish 2	0.11 mg/l (LC50; 96 h; Oncorhynchus mykiss)
Threshold limit algae 1	0.4 mg/l (EC50; 72 h; Skeletonema costatum)
2,3,4,5,6-pentachlorophenol (87-86-5)	
LC50 fish 1	0.052 mg/l (96 h, Salmo gairdneri)
EC50 Daphnia 1	0.01 – 0.36 mg/l (48 h, Daphnia magna)
2,4,6-trichlorophenol (88-06-2)	
LC50 fish 1	0.73 mg/l (96 h, Salmo gairdneri, Literature study)
EC50 Daphnia 1	0.69 mg/l (48 h, Daphnia magna, Literature study)
bis(2-chloroethyl) ether (111-44-4)	
LC50 fish 1	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oryzias latipes, Semi-static system, Fresh water, Experimental value, GLP)

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bis(2-chloroethyl) ether (111-44-4)	
EC50 Daphnia 1	414 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP)
ErC50 (algae)	> 79.44 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
1,4-dichlorobenzene (106-46-7)	
LC50 fish 1	1.12 mg/l (96 h, Salmo gairdneri, Flow-through system)
EC50 Daphnia 1	0.7 mg/l (48 h, Daphnia magna, Measured concentration)
hexachlorobuta-1,3-diene (87-68-3)	
LC50 fish 1	0.25 mg/l (96 h, Salmo gairdneri)
EC50 other aquatic organisms 1	0.21 mg/l (96 h, Lymnaea sp.)
isophorone (78-59-1)	
LC50 fish 1	228 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 Daphnia 1	254 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)
nitrobenzene (98-95-3)	
LC50 fish 1	4.3 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 48 h; Oryzias latipes)
EC50 Daphnia 1	35 mg/l (Other, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
Methylene Chloride (75-09-2)	
LC50 fish 1	193 mg/l (96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	168.2 mg/l (48 h, Daphnia magna)
12.2. Persistence and degradability	
8270 Calibration Mix	
Persistence and degradability	May cause long-term adverse effects in the environment.
azobenzene (103-33-3)	
Persistence and degradability	Not readily biodegradable in water.
benzidine (92-87-5)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
benzo[a]anthracene (56-55-3)	
Persistence and degradability	Biodegradability in soil: no data available. Inhibits biodegradation processes in the soil. Not readily biodegradable in water.
ThOD	2.95 g O ₂ /g substance
benzo[a]pyrene (50-32-8)	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water.
Chemical oxygen demand (COD)	2.92 g O ₂ /g substance
ThOD	2.92 g O ₂ /g substance
Benzo(b)fluoranthene (205-99-2)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
ThOD	2.92 g O ₂ /g substance
benzo[k]fluoranthene (207-08-9)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
ThOD	2.92 g O ₂ /g substance
4-chloroaniline (106-47-8)	
Persistence and degradability	Non degradable in the soil. Inherently biodegradable. Not readily biodegradable in water.
4-chloro-3-methylphenol (59-50-7)	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water. Inherently biodegradable.
Chemical oxygen demand (COD)	1.5 – 1.8 g O ₂ /g substance

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chrysene (218-01-9)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
dibenz(a,h)anthracene (53-70-3)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
3,3'-dichlorobenzidine (91-94-1)	
Persistence and degradability	Inherently biodegradable. Not readily biodegradable in water.
4,6-Dinitro-2-methylphenol (534-52-1)	
Persistence and degradability	Not readily biodegradable in water.
2,4-dinitrotoluene (121-14-2)	
Persistence and degradability	Not readily biodegradable in water.
Chemical oxygen demand (COD)	1.6 g O ₂ /g substance
2,6-dinitrotoluene (606-20-2)	
Persistence and degradability	Not readily biodegradable in water.
hexachlorobenzene (118-74-1)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water. Not easily biodegradable in water in anaerobic conditions.
hexachloroethane (67-72-1)	
Persistence and degradability	Readily biodegradable in water.
indeno(1,2,3-cd)pyrene (193-39-5)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
ThOD	2.9 g O ₂ /g substance
naphthalene (91-20-3)	
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)	0 g O ₂ /g substance
Chemical oxygen demand (COD)	0.22 g O ₂ /g substance
ThOD	2.99 g O ₂ /g substance
2,3,4,5,6-pentachlorophenol (87-86-5)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
2,4,6-trichlorophenol (88-06-2)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
bis(2-chloroethyl) ether (111-44-4)	
Persistence and degradability	Not readily biodegradable in water.
Bis(2-ethylhexyl) phthalate (117-81-7)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
1,4-dichlorobenzene (106-46-7)	
Persistence and degradability	Non degradable in the soil. Readily biodegradable in water.
ThOD	1.52 g O ₂ /g substance
BOD (% of ThOD)	0.65 (Calculated value)
hexachlorobuta-1,3-diene (87-68-3)	
Persistence and degradability	Biodegradability in soil: no data available. Readily biodegradable in water.
isophorone (78-59-1)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.78 g O ₂ /g substance
nitrobenzene (98-95-3)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0 g O ₂ /g substance

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nitrobenzene (98-95-3)	
ThOD	1.95 g O ₂ /g substance
BOD (% of ThOD)	0
N-Nitrosodimethylamine (62-75-9)	
Persistence and degradability	Not readily biodegradable in water. Photolysis in water. Photolysis in the air.
Methylene Chloride (75-09-2)	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water.
12.3. Bioaccumulative potential	
8270 Calibration Mix	
Bioaccumulative potential	Not established.
azobenzene (103-33-3)	
Partition coefficient n-octanol/water (Log Pow)	3.82
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
benzidine (92-87-5)	
BCF fish 1	55 (Gambusia affinis)
BCF fish 2	38 – 42 (908 h, Lepomis macrochirus, Muscles)
BCF other aquatic organisms 1	2512 (Chlorophyta)
BCF other aquatic organisms 2	293 (Daphnia magna)
Partition coefficient n-octanol/water (Log Pow)	1.34 – 1.81
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
benzo[a]anthracene (56-55-3)	
BCF fish 1	350 (72 h, Leuciscus idus)
BCF other aquatic organisms 1	1106 (24 h, Daphnia pulex)
BCF other aquatic organisms 2	18000 (192 h, Crassostrea sp.)
Partition coefficient n-octanol/water (Log Pow)	5.61 – 5.79
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
benzo[a]pyrene (50-32-8)	
BCF fish 1	480 (72 h, Leuciscus idus)
BCF fish 2	70.7 (168 h, Salmo salar, Eggs)
BCF other aquatic organisms 1	3000 (192 h, Crassostrea sp.)
BCF other aquatic organisms 2	1.5 (24 h, Daphnia magna)
Partition coefficient n-octanol/water (Log Pow)	5.97 – 6.06
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
Benzo(b)fluoranthene (205-99-2)	
BCF other aquatic organisms 1	2800 (168 h, Lamellibranchiata)
Partition coefficient n-octanol/water (Log Pow)	6.57
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
benzo[k]fluoranthene (207-08-9)	
BCF fish 1	8750 (Pisces, QSAR)
BCF other aquatic organisms 1	0.0013 mg/kg (Algae, Dry weight)
BCF other aquatic organisms 2	37000 (Mytilus edulis)
Partition coefficient n-octanol/water (Log Pow)	6.84
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
4-chloroaniline (106-47-8)	
BCF fish 1	0.8 – 1.7 (336 h, Cyprinus carpio, Literature study)
BCF other aquatic organisms 1	260 (24 h, Chlorella fusca, Static system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.87 (Experimental value, Equivalent or similar to OECD 117)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
4-chloro-3-methylphenol (59-50-7)	
BCF fish 1	5.5 – 13 (Cyprinus carpio, Test duration: 6 weeks)
Partition coefficient n-octanol/water (Log Pow)	2.78 – 3.1
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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chrysene (218-01-9)	
BCF other aquatic organisms 1	4440 (180 day(s), Lamellibranchiata, Literature study, Chronic)
Partition coefficient n-octanol/water (Log Pow)	5.81 – 5.86 (Experimental value)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
dibenz(a,h)anthracene (53-70-3)	
Partition coefficient n-octanol/water (Log Pow)	5.97 – 6.84
3,3'-dichlorobenzidine (91-94-1)	
BCF fish 1	507 (168 h, Lepomis macrochirus)
BCF fish 2	43 – 213 (Cyprinus carpio, Test duration: 8 weeks)
BCF other aquatic organisms 1	940 (Algae)
Partition coefficient n-octanol/water (Log Pow)	3.02 – 3.78 (Literature study)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
4,6-Dinitro-2-methylphenol (534-52-1)	
BCF fish 1	0.3 – 2.9 (6 week(s), Cyprinus carpio, Literature study)
Partition coefficient n-octanol/water (Log Pow)	2.12 – 3.1 (Literature study)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
2,4-dinitrotoluene (121-14-2)	
BCF fish 1	102.8 (336 h, Lepomis macrochirus)
BCF fish 2	16 – 204 (Poecilia reticulata)
BCF other aquatic organisms 1	13 (96 h, Daphnia magna)
BCF other aquatic organisms 2	58 (96 h, Annelida)
Partition coefficient n-octanol/water (Log Pow)	1.98 – 2.8
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
2,6-dinitrotoluene (606-20-2)	
BCF fish 1	22 (Poecilia reticulata)
BCF other aquatic organisms 1	5225 (Algae, Biomass)
Partition coefficient n-octanol/water (Log Pow)	1.72 – 2.05
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
hexachlorobenzene (118-74-1)	
BCF fish 1	20000 (Salmo gairdneri, Test duration: 8 weeks)
BCF fish 2	30000 (Cyprinus carpio, Test duration: 8 weeks)
BCF other aquatic organisms 1	25000 (Algae)
BCF other aquatic organisms 2	1130 (720 h, Daphnia magna)
Partition coefficient n-octanol/water (Log Pow)	5.73 – 6.39 (Experimental value)
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
hexachloroethane (67-72-1)	
BCF fish 1	1200 (Salmo gairdneri)
BCF fish 2	756 mg/l (768 h, Pimephales promelas)
Partition coefficient n-octanol/water (Log Pow)	3.34 – 4.62
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
indeno(1,2,3-cd)pyrene (193-39-5)	
BCF other aquatic organisms 1	10000 (240 h, Amphipoda)
Partition coefficient n-octanol/water (Log Pow)	6.6 – 7.7
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
naphthalene (91-20-3)	
BCF fish 1	23 – 168 (BCF; 8 weeks; Cyprinus carpio)
Partition coefficient n-octanol/water (Log Pow)	3.3 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
2,3,4,5,6-pentachlorophenol (87-86-5)	
BCF fish 1	770 (768 h, Pimephales promelas)
BCF fish 2	39 – 224 (Cyprinus carpio, Test duration: 8 weeks)
BCF other aquatic organisms 1	1250 (Algae)
Partition coefficient n-octanol/water (Log Pow)	4.07 – 5.19

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2,3,4,5,6-pentachlorophenol (87-86-5)	
Bioaccumulative potential	Potential for bioaccumulation ($500 \leq \text{BCF} \leq 5000$).
2,4,6-trichlorophenol (88-06-2)	
BCF fish 1	12130 (36 day(s), <i>Poecilia reticulata</i> , Literature study)
Partition coefficient n-octanol/water (Log Pow)	3.4 – 4.05 (Literature)
Bioaccumulative potential	High potential for bioaccumulation ($\text{BCF} > 5000$).
bis(2-chloroethyl) ether (111-44-4)	
BCF fish 1	11 l/kg (Equivalent or similar to OECD 305, 14 day(s), <i>Lepomis macrochirus</i> , Semi-static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	1.12 (Experimental value, Equivalent or similar to OECD 107, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation ($\text{BCF} < 500$).
Bis(2-ethylhexyl) phthalate (117-81-7)	
BCF fish 1	155 – 886 (56 day(s), <i>Pimephales promelas</i> , Literature study)
Partition coefficient n-octanol/water (Log Pow)	7.68 (Experimental value, Other)
Bioaccumulative potential	High potential for bioaccumulation ($\text{Log Kow} > 5$).
1,4-dichlorobenzene (106-46-7)	
BCF fish 1	214 – 720 (<i>Salmo gairdneri</i> , Chronic)
Partition coefficient n-octanol/water (Log Pow)	3.39 – 3.62 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation ($500 \leq \text{BCF} \leq 5000$).
hexachlorobuta-1,3-diene (87-68-3)	
BCF fish 1	17000 (<i>Salmo gairdneri</i>)
BCF fish 2	7000 (<i>Pleuronectes platessa</i> , Flow-through system)
BCF other aquatic organisms 1	45.36 (<i>Procambarus sp.</i> , Flow-through system)
BCF other aquatic organisms 2	3000 (<i>Mytilus edulis</i> , Flow-through system)
Partition coefficient n-octanol/water (Log Pow)	3.74 – 4.9
Bioaccumulative potential	High potential for bioaccumulation ($\text{BCF} > 5000$).
isophorone (78-59-1)	
BCF fish 1	7 (Other, 14 day(s), <i>Lepomis macrochirus</i> , Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.67 (Experimental value, Equivalent or similar to OECD 107, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation ($\text{BCF} < 500$).
nitrobenzene (98-95-3)	
BCF fish 1	15 (BCF; 672 h)
BCF fish 2	1.6 – 7.7 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 42 days; <i>Cyprinus carpio</i> ; Flow-through system; Fresh water; Experimental value)
BCF other aquatic organisms 1	24 (BCF)
Partition coefficient n-octanol/water (Log Pow)	1.85 (Calculated; 1.86; Experimental value; EU Method A.8: Partition Coefficient)
Bioaccumulative potential	Low potential for bioaccumulation ($\text{BCF} < 500$).
N-Nitrosodimethylamine (62-75-9)	
Partition coefficient n-octanol/water (Log Pow)	-0.77 – -0.57
Bioaccumulative potential	Bioaccumulation: not applicable.
N-Nirosodi-n-propylamine (621-64-7)	
Partition coefficient n-octanol/water (Log Pow)	1.31 – 1.36
Bioaccumulative potential	Low potential for bioaccumulation ($\text{Log Kow} < 4$).
Methylene Chloride (75-09-2)	
BCF fish 1	2 – 40 (OECD 305: Bioconcentration: Flow-Through Fish Test, 6 week(s), <i>Cyprinus carpio</i> , Semi-static system, Fresh water, Experimental value, GLP)
Partition coefficient n-octanol/water (Log Pow)	1.25 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation ($\text{BCF} < 500$).

12.4. Mobility in soil

azobenzene (103-33-3)	
Ecology - soil	No (test)data on mobility of the substance available. May be harmful to plant growth, blooming and fruit formation.

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benzidine (92-87-5)	
Ecology - soil	Adsorbs into the soil.
benzo[a]anthracene (56-55-3)	
Ecology - soil	Adsorbs into the soil.
benzo[a]pyrene (50-32-8)	
Ecology - soil	Adsorbs into the soil.
Benzo(b)fluoranthene (205-99-2)	
Ecology - soil	Adsorbs into the soil.
benzo[k]fluoranthene (207-08-9)	
Ecology - soil	Adsorbs into the soil.
4-chloroaniline (106-47-8)	
Ecology - soil	No (test)data on mobility of the substance available. Soil contaminant.
4-chloro-3-methylphenol (59-50-7)	
Surface tension	Not applicable (solid)
Partition coefficient n-octanol/water (Log Koc)	2.69 (log Koc)
Ecology - soil	Low potential for adsorption in soil.
chrysene (218-01-9)	
Ecology - soil	Adsorbs into the soil.
dibenz(a,h)anthracene (53-70-3)	
Ecology - soil	Adsorbs into the soil.
4,6-Dinitro-2-methylphenol (534-52-1)	
Ecology - soil	No (test)data on mobility of the substance available.
2,4-dinitrotoluene (121-14-2)	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.
hexachlorobenzene (118-74-1)	
Ecology - soil	Adsorbs into the soil. Not toxic to bees.
indeno(1,2,3-cd)pyrene (193-39-5)	
Ecology - soil	Adsorbs into the soil.
naphthalene (91-20-3)	
Surface tension	0.03 N/m (100 °C)
2,3,4,5,6-pentachlorophenol (87-86-5)	
Ecology - soil	No (test)data on mobility of the substance available.
2,4,6-trichlorophenol (88-06-2)	
Ecology - soil	No (test)data on mobility of the substance available.
bis(2-chloroethyl) ether (111-44-4)	
Surface tension	0.038 N/m (19 °C)
Partition coefficient n-octanol/water (Log Koc)	1.88 (log Koc, Experimental value)
Ecology - soil	Highly mobile in soil.
Bis(2-ethylhexyl) phthalate (117-81-7)	
Surface tension	0.032 N/m (20 °C)
Partition coefficient n-octanol/water (Log Koc)	5.2 (log Koc, Calculated value)
Ecology - soil	Adsorbs into the soil. Low potential for mobility in soil.
1,4-dichlorobenzene (106-46-7)	
Surface tension	0.03 N/m (55 °C)
Ecology - soil	Adsorbs into the soil.
hexachlorobuta-1,3-diene (87-68-3)	
Ecology - soil	Soil contaminant.
isophorone (78-59-1)	
Surface tension	32 mN/m (20 °C)
Partition coefficient n-octanol/water (Log Koc)	1.766 (log Koc, QSAR)

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isophorone (78-59-1)	
Ecology - soil	Highly mobile in soil.
nitrobenzene (98-95-3)	
Surface tension	0.0439 N/m
Partition coefficient n-octanol/water (Log Koc)	Koc,Other; 118; Calculated value; log Koc; Other; 2.07; Calculated value
Ecology - soil	Low potential for adsorption in soil.
Methylene Chloride (75-09-2)	
Surface tension	0.028 N/m (20 °C)
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.

12.5. Other adverse effects

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azobenzene (103-33-3)	
benzidine (92-87-5)	
benzo[a]anthracene (56-55-3)	
benzo[a]pyrene (50-32-8)	
Benzo(b)fluoranthene (205-99-2)	
benzo[k]fluoranthene (207-08-9)	
4-chloroaniline (106-47-8)	
4-chloro-3-methylphenol (59-50-7)	
chrysene (218-01-9)	
dibenz(a,h)anthracene (53-70-3)	
3,3'-dichlorobenzidine (91-94-1)	
4,6-Dinitro-2-methylphenol (534-52-1)	
2,4-dinitrotoluene (121-14-2)	
2,6-dinitrotoluene (606-20-2)	
hexachlorobenzene (118-74-1)	
hexachloroethane (67-72-1)	
indeno(1,2,3-cd)pyrene (193-39-5)	
naphthalene (91-20-3)	

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2,3,4,5,6-pentachlorophenol (87-86-5)	
2,4,6-trichlorophenol (88-06-2)	
bis(2-chloroethyl) ether (111-44-4)	
Bis(2-ethylhexyl) phthalate (117-81-7)	
1,4-dichlorobenzene (106-46-7)	
hexachlorobuta-1,3-diene (87-68-3)	
isophorone (78-59-1)	
nitrobenzene (98-95-3)	
N-Nitrosodimethylamine (62-75-9)	
N-Nirosodi-n-propylamine (621-64-7)	
Methylene Chloride (75-09-2)	

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal 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 : Hazardous waste due to toxicity. Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2810 Toxic, liquids, organic, n.o.s. (benzidine ; 3,3'-dichlorobenzidine ; 4-chloroaniline ; benzo[a]pyrene ; 4-chloro-3-methylphenol ; 4,6-dinitro-o-cresol ; di-2-ethylhexylphthalate), 6.1, III
UN-No.(DOT) : UN2810
Proper Shipping Name (DOT) : Toxic, liquids, organic, n.o.s. benzidine ; 3,3'-dichlorobenzidine ; 4-chloroaniline ; benzo[a]pyrene ; 4-chloro-3-methylphenol ; 4,6-dinitro-o-cresol ; di-2-ethylhexylphthalate
Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
Packing group (DOT) : III - Minor Danger
Hazard labels (DOT) : 6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 241

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DOT Special Provisions (49 CFR 172.102)	: IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"
Emergency Response Guide (ERG) Number	: 153
Other information	: No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Transport by sea

Transport document description (IMDG)	: UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (benzidine ; 3,3'-dichlorobenzidine ; 4-chloroaniline ; benzo[a]pyrene ; 4-chloro-3-methylphenol ; 4,6-dinitro-o-cresol ; di-2-ethylhexylphthalate), 6.1, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
UN-No. (IMDG)	: 2810
Proper Shipping Name (IMDG)	: TOXIC LIQUID, ORGANIC, N.O.S.
Class (IMDG)	: 6.1 - Toxic substances
Packing group (IMDG)	: III - substances presenting low danger
Limited quantities (IMDG)	: 5 L

Air transport

Transport document description (IATA)	: UN 2810 Toxic liquid, organic, n.o.s. (benzidine ; 3,3'-dichlorobenzidine ; 4-chloroaniline ; benzo[a]pyrene ; 4-chloro-3-methylphenol ; 4,6-dinitro-o-cresol ; di-2-ethylhexylphthalate), 6.1, III, ENVIRONMENTALLY HAZARDOUS
UN-No. (IATA)	: 2810
Proper Shipping Name (IATA)	: Toxic liquid, organic, n.o.s.
Class (IATA)	: 6.1 - Toxic Substances
Packing group (IATA)	: III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

azobenzene (103-33-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

benzidine (92-87-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

Listed on EPA Hazardous Air Pollutant (HAPS)

EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a final Significant New Use Rule.
CERCLA RQ	1 lb

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benzo[a]anthracene (56-55-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	10 lb
benzo[a]pyrene (50-32-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1 lb
Benzo(b)fluoranthene (205-99-2)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1 lb
benzo[k]fluoranthene (207-08-9)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb
4-chloroaniline (106-47-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1000 lb
4-chloro-3-methylphenol (59-50-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	5000 lb
chrysene (218-01-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
dibenz(a,h)anthracene (53-70-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1 lb
3,3'-dichlorobenzidine (91-94-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1 lb
4,6-Dinitro-2-methylphenol (534-52-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313 Not subject to reporting requirements of the United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	10 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	10 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	10000 lb 10lb if the substance is solid in powder form with particle size less than 100 microns, or is in solution or molten form
2,4-dinitrotoluene (121-14-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	10 lb
2,6-dinitrotoluene (606-20-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb

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hexachlorobenzene (118-74-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	10 lb
hexachloroethane (67-72-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
EPA TSCA Regulatory Flag	TP - TP - indicates a substance that is the subject of a proposed TSCA section 4 test rule.
CERCLA RQ	100 lb
indeno(1,2,3-cd)pyrene (193-39-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
naphthalene (91-20-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	100 lb
2,3,4,5,6-pentachlorophenol (87-86-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	10 lb
2,4,6-trichlorophenol (88-06-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	10 lb
bis(2-chloroethyl) ether (111-44-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a final TSCA section 4 test rule.
CERCLA RQ	10 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	10 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	10000 lb
Bis(2-ethylhexyl) phthalate (117-81-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	100 lb
1,4-dichlorobenzene (106-46-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	100 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

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hexachlorobuta-1,3-diene (87-68-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1 lb
isophorone (78-59-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	5000 lb
nitrobenzene (98-95-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	10000 lb
N-Nitrosodimethylamine (62-75-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	10 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	10 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb
N-Nirosodi-n-propylamine (621-64-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	10 lb
Methylene Chloride (75-09-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
EPA TSCA Regulatory Flag	R - R - indicates a substance that is the subject of a TSCA section 6 risk management rule.
CERCLA RQ	1000 lb

15.2. International regulations

CANADA

azobenzene (103-33-3)	
Listed on the Canadian DSL (Domestic Substances List)	
benzidine (92-87-5)	
Listed on the Canadian NDSL (Non-Domestic Substances List)	
benzo[a]anthracene (56-55-3)	
Listed on the Canadian NDSL (Non-Domestic Substances List)	
benzo[a]pyrene (50-32-8)	
Listed on the Canadian DSL (Domestic Substances List)	
Benzo(b)fluoranthene (205-99-2)	
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)	
benzo[k]fluoranthene (207-08-9)	
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)	
4-chloroaniline (106-47-8)	
Listed on the Canadian DSL (Domestic Substances List)	

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4-chloro-3-methylphenol (59-50-7)
Listed on the Canadian DSL (Domestic Substances List)
chrysene (218-01-9)
Listed on the Canadian DSL (Domestic Substances List)
dibenz(a,h)anthracene (53-70-3)
Listed on the Canadian NDSL (Non-Domestic Substances List)
3,3'-dichlorobenzidine (91-94-1)
Listed on the Canadian NDSL (Non-Domestic Substances List)
4,6-Dinitro-2-methylphenol (534-52-1)
Listed on the Canadian DSL (Domestic Substances List)
2,4-dinitrotoluene (121-14-2)
Listed on the Canadian DSL (Domestic Substances List)
2,6-dinitrotoluene (606-20-2)
Listed on the Canadian DSL (Domestic Substances List)
hexachlorobenzene (118-74-1)
Listed on the Canadian DSL (Domestic Substances List)
hexachloroethane (67-72-1)
Listed on the Canadian DSL (Domestic Substances List)
indeno(1,2,3-cd)pyrene (193-39-5)
Listed on the Canadian NDSL (Non-Domestic Substances List)
naphthalene (91-20-3)
Listed on the Canadian DSL (Domestic Substances List)
2,3,4,5,6-pentachlorophenol (87-86-5)
Listed on the Canadian DSL (Domestic Substances List)
2,4,6-trichlorophenol (88-06-2)
Listed on the Canadian NDSL (Non-Domestic Substances List)
bis(2-chloroethyl) ether (111-44-4)
Listed on the Canadian DSL (Domestic Substances List)
Bis(2-ethylhexyl) phthalate (117-81-7)
Listed on the Canadian DSL (Domestic Substances List)
1,4-dichlorobenzene (106-46-7)
Listed on the Canadian DSL (Domestic Substances List)
hexachlorobuta-1,3-diene (87-68-3)
Listed on the Canadian DSL (Domestic Substances List)
isophorone (78-59-1)
Listed on the Canadian DSL (Domestic Substances List)
nitrobenzene (98-95-3)
Listed on the Canadian DSL (Domestic Substances List)
N-Nitrosodimethylamine (62-75-9)
Listed on the Canadian NDSL (Non-Domestic Substances List)
N-Nirosodi-n-propylamine (621-64-7)
Listed on the Canadian NDSL (Non-Domestic Substances List)
Methylene Chloride (75-09-2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

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National regulations

benzidine (92-87-5)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

benzo[a]anthracene (56-55-3)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)

benzo[a]pyrene (50-32-8)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)

Benzo(b)fluoranthene (205-99-2)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)

benzo[k]fluoranthene (207-08-9)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)

4-chloroaniline (106-47-8)

Listed on IARC (International Agency for Research on Cancer)

chrysene (218-01-9)

Listed on IARC (International Agency for Research on Cancer)

dibenz(a,h)anthracene (53-70-3)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)

3,3'-dichlorobenzidine (91-94-1)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

4,6-Dinitro-2-methylphenol (534-52-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

2,4-dinitrotoluene (121-14-2)

Listed on IARC (International Agency for Research on Cancer)
Listed on EPA Hazardous Air Pollutant (HAPS)

2,6-dinitrotoluene (606-20-2)

Listed on IARC (International Agency for Research on Cancer)

hexachlorobenzene (118-74-1)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

hexachloroethane (67-72-1)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

indeno(1,2,3-cd)pyrene (193-39-5)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)

naphthalene (91-20-3)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

2,3,4,5,6-pentachlorophenol (87-86-5)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

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2,4,6-trichlorophenol (88-06-2)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on EPA Hazardous Air Pollutant (HAPS)
bis(2-chloroethyl) ether (111-44-4)
Listed on EPA Hazardous Air Pollutant (HAPS)
Bis(2-ethylhexyl) phthalate (117-81-7)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on EPA Hazardous Air Pollutant (HAPS)
1,4-dichlorobenzene (106-46-7)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on EPA Hazardous Air Pollutant (HAPS)
hexachlorobuta-1,3-diene (87-68-3)
Listed on EPA Hazardous Air Pollutant (HAPS)
isophorone (78-59-1)
Listed on EPA Hazardous Air Pollutant (HAPS)
nitrobenzene (98-95-3)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on EPA Hazardous Air Pollutant (HAPS)
N-Nitrosodimethylamine (62-75-9)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on EPA Hazardous Air Pollutant (HAPS)
N-Nirosodi-n-propylamine (621-64-7)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)
Methylene Chloride (75-09-2)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on EPA Hazardous Air Pollutant (HAPS)

15.3. US State regulations

azobenzene (103-33-3)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	6 µg/day	
benzidine (92-87-5)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.001 µg/day	
benzo[a]anthracene (56-55-3)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.033 µg/day	

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benzo[a]pyrene (50-32-8)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.06 µg/day	
Benzo(b)fluoranthene (205-99-2)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.096 µg/day	
benzo[k]fluoranthene (207-08-9)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		
4-chloroaniline (106-47-8)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	1.5 µg/day	
chrysene (218-01-9)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.35 µg/day	
dibenz(a,h)anthracene (53-70-3)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.2 µg/day	
3,3'-dichlorobenzidine (91-94-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.6 µg/day	
2,4-dinitrotoluene (121-14-2)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	Yes	2 µg/day	

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2,6-dinitrotoluene (606-20-2)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	Yes		
hexachlorobenzene (118-74-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	Yes	No	No	0.4 µg/day	
hexachloroethane (67-72-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	20 µg/day	
indeno(1,2,3-cd)pyrene (193-39-5)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		
naphthalene (91-20-3)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	5.8 µg/day	
2,3,4,5,6-pentachlorophenol (87-86-5)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	40 µg/day	
2,4,6-trichlorophenol (88-06-2)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	10 µg/day	
bis(2-chloroethyl) ether (111-44-4)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.3 µg/day	

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Bis(2-ethylhexyl) phthalate (117-81-7)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	Yes	No	Yes	310 µg/day	4200 µg/day (intravenous), Adult; 600 µg/day (intravenous), Infant boys, age 29 days - 24 mos; 210 µg/day (intravenous), Neonatal infant boys, age 0 - 28 days; 410 µg/day (oral), Adult; 58 µg/day (oral), Infant boys, age 29 days - 24 mos; 20 µg/day (oral), Neonatal infant boys, age 0 - 28 days
1,4-dichlorobenzene (106-46-7)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	20 µg/day	
hexachlorobuta-1,3-diene (87-68-3)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		
nitrobenzene (98-95-3)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	Yes		
N-Nitrosodimethylamine (62-75-9)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.04 µg/day	
N-Nirosodi-n-propylamine (621-64-7)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.1 µg/day	

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Methylene Chloride (75-09-2)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	50 µg/day	

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.

Full text of H-phrases:

H225	Highly flammable liquid and vapor
H317	May cause an allergic skin reaction
H340	May cause genetic defects
H350	May cause cancer
H360	May damage fertility or the unborn child

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