

Custom Pesticide/Herbicide Mix

Safety Data Sheet

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

Date of issue: 30/07/2018

Revision date:

Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name : Custom Pesticide/Herbicide Mix
Product code : AL0-130378
Product group : Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Laboratory Use
Industrial/Professional use spec : Industrial
For professional use only
Use of the substance/mixture : Certified reference material for laboratory use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Phenova
6390 Joyce Dr. Suite 100
80403 Golden, CO - United States
T 1-866-942-2978 - F 1-866-283-0269
info@phenova.com - 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]

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Dermal)	H312
Acute Tox. 4 (Inhalation)	H332
Muta. 1B	H340
Carc. 1B	H350
Aquatic Acute 1	H400
Aquatic Chronic 2	H411

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

Carc.Cat.2; R45
Muta.Cat.2; R46
Xn; R20/21/22
N; R50/53

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H340 - May cause genetic defects
H350 - May cause cancer
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) :

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P308+P313 - IF exposed or concerned: Get medical advice/attention
P370+P378 - In case of fire: Use media other than water to extinguish
P362+P364 - Take off contaminated clothing and wash it before reuse
P391 - Collect spillage
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

EUH phrases :

EUH208 - Contains atrazine(1912-24-9), benzo[a]pyrene(50-32-8), bromoxynil(3336-39-8), malathion(121-75-5), 2,4-D methyl ester(1928-38-7), diclofop-methyl(51338-27-3), Trifluralin(1582-09-8), triallate(2303-17-5). May produce an allergic reaction

No labeling applicable

2.3. Other hazards

Contains PBT/vPvB substances \geq 0.1% assessed in accordance with REACH, Annex XIII

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Methylene Chloride (Component)	(CAS No) 75-09-2 (EC-No.) 200-838-9 (EC index no) 602-004-00-3	97.6	Carc. 2, H351
atrazine (Component)	(CAS No) 1912-24-9 (EC-No.) 217-617-8 (EC index no) 613-068-00-7	0.1	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
chlorpyrifos (Component)	(CAS No) 2921-88-2 (EC-No.) 220-864-4 (EC index no) 015-084-00-4	0.1	Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
benzo[a]pyrene (Component) substance listed as REACH Candidate (Benzo[def]chrysene)	(CAS No) 50-32-8 (EC-No.) 200-028-5 (EC index no) 601-032-00-3	0.1	Skin Sens. 1, H317 Muta. 1B, H340 Carc. 1B, H350 Repr. 1B, H360FD Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
bromoxynil (Component)	(CAS No) 3336-39-8	0.1	Acute Tox. 3 (Oral), H301 Skin Sens. 1, H317 Repr. 2, H361d Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
dimethoate (Component)	(CAS No) 60-51-5 (EC-No.) 200-480-3 (EC index no) 015-051-00-4	0.1	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Aquatic Chronic 2, H411
diazinon (Component)	(CAS No) 333-41-5 (EC-No.) 206-373-8 (EC index no) 015-040-00-4	0.1	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,4-dichlorophenol (Component)	(CAS No) 120-83-2 (EC-No.) 204-429-6 (EC index no) 604-011-00-7	0.1	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1B, H314 Aquatic Chronic 2, H411
malathion (Component)	(CAS No) 121-75-5 (EC-No.) 204-497-7 (EC index no) 015-041-00-X	0.1	Acute Tox. 3 (Oral), H301 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410
cyanazine (Component)	(CAS No) 21725-46-2 (EC-No.) 244-544-9 (EC index no) 613-013-00-7	0.1	Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,4-D methyl ester (Component)	(CAS No) 1928-38-7 (EC-No.) 217-670-7 (EC index no) 607-308-00-X	0.1	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
diclofop-methyl (Component)	(CAS No) 51338-27-3 (EC-No.) 257-141-8 (EC index no) 607-165-00-3	0.1	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,3,4,5,6-pentachlorophenol (Component)	(CAS No) 87-86-5 (EC-No.) 201-778-6 (EC index no) 604-002-00-8	0.1	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 2 (Inhalation), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)
simazine (Component)	(CAS No) 122-34-9 (EC-No.) 204-535-2 (EC index no) 612-088-00-3	0.1	Acute Tox. 4 (Oral), H302 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Trifluralin (Component)	(CAS No) 1582-09-8 (EC-No.) 216-428-8 (EC index no) 609-046-00-1	0.1	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation:gas), H331 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
terbufos (Component)	(CAS No) 13071-79-9 (EC-No.) 235-963-8 (EC index no) 015-139-00-2	0.1	Acute Tox. 1 (Oral), H300 Acute Tox. 1 (Dermal), H310 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
metolachlor (Component)	(CAS No) 51218-45-2 (EC-No.) 257-060-8	0.1	Not classified
2,3,4,6-tetrachlorophenol (Component)	(CAS No) 58-90-2 (EC-No.) 200-402-8 (EC index no) 604-013-00-8	0.1	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
2,4,6-trichlorophenol (Component)	(CAS No) 88-06-2 (EC-No.) 201-795-9 (EC index no) 604-018-00-5	0.1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
triallate (Component)	(CAS No) 2303-17-5 (EC-No.) 218-962-7 (EC index no) 006-039-00-X	0.1	Acute Tox. 4 (Oral), H302 STOT RE 2, H373 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Name	Product identifier	Specific concentration limits	
benzo[a]pyrene (Component)	(CAS No) 50-32-8 (EC-No.) 200-028-5 (EC index no) 601-032-00-3	(C >= 0.01) Carc. 1B, H350	
2,3,4,6-tetrachlorophenol (Component)	(CAS No) 58-90-2 (EC-No.) 200-402-8 (EC index no) 604-013-00-8	(C >= 5) Skin Irrit. 2, H315 (C >= 5) Eye Irrit. 2, H319	

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.

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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. 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, both acute and delayed

Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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.
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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

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. 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

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

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atrazine (1912-24-9)		
Belgium	Limit value (mg/m ³)	5 mg/m ³ (Atrazine; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	5 mg/m ³ (Atrazine; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ (Atrazine; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction)
benzo[a]pyrene (50-32-8)		
Netherlands	Grenswaarde TGG 8H (mg/m ³)	550 (Benzo(a)pyreen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
chlorpyrifos (2921-88-2)		
Belgium	Limit value (mg/m ³)	0.1 mg/m ³ (Chlorpyrifos (vapeur et aérosol); Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	0.2 mg/m ³ (Chlorpyrifos; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³ (Chlorpyrifos; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction and vapor)
United Kingdom	WEL TWA (mg/m ³)	0.2 mg/m ³ Chlorpyrifos (ISO); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	0.6 mg/m ³ Chlorpyrifos (ISO); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
diazinon (333-41-5)		
Belgium	Limit value (mg/m ³)	0.01 mg/m ³ (Diazinon (vapeur et aérosol); Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	0.1 mg/m ³ (Diazinon; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	0.01 mg/m ³ (Diazinon; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction and vapor)
malathion (121-75-5)		
Belgium	Limit value (mg/m ³)	1 mg/m ³ (Malathion (vapeur et aérosol); Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	10 mg/m ³ (Malathion; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³ (Malathion; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction and vapor)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ Malathion (ISO); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
2,3,4,5,6-pentachlorophenol (87-86-5)		
Belgium	Limit value (mg/m ³)	0.5 mg/m ³ (Pentachlorophénol; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	0.5 mg/m ³ (Pentachlorophénol; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³ (Pentachlorophenol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction and vapor)
Italy - Portugal - USA ACGIH	ACGIH STEL (mg/m ³)	1 mg/m ³ (Pentachlorophenol; USA; Short time value; TLV - Adopted Value; Inhalable fraction and vapor)
terbufos (13071-79-9)		
Belgium	Limit value (mg/m ³)	0.01 mg/m ³ (Terbufos (vapeur et aérosol); Belgium; Time-weighted average exposure limit 8 h)
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	0.01 mg/m ³ (Terbufos; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction and vapor)

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Methylene Chloride (75-09-2)		
Belgium	Limit value (mg/m ³)	177 mg/m ³ (Chlorure de méthylène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	50 ppm (Chlorure de méthylène; Belgium; Time-weighted average exposure limit 8 h)
France	VLE (mg/m ³)	356 mg/m ³ (Dichlorométhane; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	100 ppm (Dichlorométhane; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VME (mg/m ³)	178 mg/m ³ (Dichlorométhane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	50 ppm (Dichlorométhane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	50 ppm (Dichloromethane (Methylene chloride); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
United Kingdom	WEL TWA (mg/m ³)	350 mg/m ³ Dichloromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	100 ppm Dichloromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	1060 mg/m ³ Dichloromethane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	300 ppm Dichloromethane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)

8.2. Exposure controls

Appropriate engineering controls

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

Personal protective equipment

: Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.



Hand protection

: Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration.

Eye protection

: Chemical goggles or safety glasses. Safety glasses.

Skin and body protection

: Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.

Respiratory protection

: 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

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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: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation: Harmful if inhaled.

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ATE CLP (oral)	500 mg/kg body weight
ATE CLP (dermal)	1084.218 mg/kg body weight
ATE CLP (gases)	4500 ppmV/4h
ATE CLP (vapors)	11 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h
atrazine (1912-24-9)	
LD50 oral rat	672 mg/kg (Rat)
LD50 dermal rat	7500 mg/kg (Rat)
LC50 inhalation rat (mg/l)	5.2 mg/l/4h (Rat)
ATE CLP (oral)	672 mg/kg body weight
ATE CLP (dermal)	7500 mg/kg body weight
ATE CLP (vapors)	5.2 mg/l/4h
ATE CLP (dust, mist)	5.2 mg/l/4h
bromoxynil (3336-39-8)	
LD50 oral rat	190 mg/kg (Rat)
LD50 dermal rat	> 2000 mg/kg (Rat)
LD50 dermal rabbit	3660 mg/kg (Rabbit)
ATE CLP (oral)	190 mg/kg body weight
ATE CLP (dermal)	3660 mg/kg body weight
chlorpyrifos (2921-88-2)	
LD50 oral rat	82 mg/kg (Rat)
ATE CLP (oral)	82 mg/kg body weight
cyanazine (21725-46-2)	
LD50 oral rat	149 mg/kg (Rat)
LD50 dermal rat	> 1200 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
ATE CLP (oral)	149 mg/kg body weight
2,4-D methyl ester (1928-38-7)	
ATE CLP (oral)	500 mg/kg body weight
diazinon (333-41-5)	
LD50 oral rat	> 300 mg/kg (Rat)
ATE CLP (oral)	500 mg/kg body weight
2,4-dichlorophenol (120-83-2)	
LD50 dermal rat	780 mg/kg body weight (Rat; Weight of evidence; OECD 402: Acute Dermal Toxicity)
ATE CLP (oral)	500 mg/kg body weight

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2,4-dichlorophenol (120-83-2)	
ATE CLP (dermal)	780 mg/kg body weight
diclofop-methyl (51338-27-3)	
LD50 oral rat	563 mg/kg (Rat, Oral)
LD50 dermal rat	> 5000 mg/kg (Rat, Dermal)
LD50 dermal rabbit	180 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	< 8.3 mg/l (4 h, Rat, Inhalation)
ATE CLP (oral)	563 mg/kg body weight
ATE CLP (dermal)	180 mg/kg body weight
dimethoate (60-51-5)	
LD50 oral rat	387 mg/kg (Rat)
LD50 dermal rat	> 400 mg/kg (Rat)
LD50 dermal rabbit	1000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 1.6 mg/l/4h (Rat)
ATE CLP (oral)	387 mg/kg body weight
ATE CLP (dermal)	1000 mg/kg body weight
malathion (121-75-5)	
LD50 oral rat	290 mg/kg (Rat)
LD50 dermal rat	4444 mg/kg (Rat)
LD50 dermal rabbit	4100 mg/kg (Rabbit)
ATE CLP (oral)	290 mg/kg body weight
ATE CLP (dermal)	4100 mg/kg body weight
metolachlor (51218-45-2)	
LD50 oral rat	2700 mg/kg (Rat)
LD50 dermal rat	> 3170 mg/kg (Rat)
LC50 inhalation rat (mg/l)	> 1.75 mg/l/4h (Rat)
ATE CLP (oral)	2700 mg/kg body weight
2,3,4,5,6-pentachlorophenol (87-86-5)	
ATE CLP (oral)	100 mg/kg body weight
ATE CLP (dermal)	300 mg/kg body weight
ATE CLP (gases)	100 ppmV/4h
ATE CLP (vapors)	0.5 mg/l/4h
ATE CLP (dust, mist)	0.05 mg/l/4h
simazine (122-34-9)	
LD50 oral rat	971 mg/kg (Rat)
LD50 dermal rat	> 3100 mg/kg (Rat)
LD50 dermal rabbit	> 10200 mg/kg (Rabbit)
ATE CLP (oral)	971 mg/kg body weight
terbufos (13071-79-9)	
LD50 oral rat	4.5 mg/kg (Rat)
LD50 dermal rat	7.4 mg/kg (Rat)
LD50 dermal rabbit	1.1 mg/kg (Rabbit)
ATE CLP (oral)	4.5 mg/kg body weight
ATE CLP (dermal)	1.1 mg/kg body weight
2,3,4,6-tetrachlorophenol (58-90-2)	
LD50 oral rat	140 mg/kg (Rat)
LD50 dermal rat	485 mg/kg (Rat)
ATE CLP (oral)	140 mg/kg body weight
ATE CLP (dermal)	485 mg/kg body weight
triallate (2303-17-5)	
LD50 oral rat	800 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	> 5.3 mg/l (4 h, Rat, Inhalation)
ATE CLP (oral)	800 mg/kg body weight
2,4,6-trichlorophenol (88-06-2)	
LD50 oral rat	820 mg/kg (Rat; Literature study)
ATE CLP (oral)	820 mg/kg body weight

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Trifluralin (1582-09-8)	
LD50 oral rat	1930 ml/kg
ATE CLP (oral)	500 mg/kg body weight

Methylene Chloride (75-09-2)	
LD50 oral rat	> 2000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Literature study)

Skin corrosion/irritation	: Not classified Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified Based on available data, the classification criteria are not met
Respiratory or skin sensitization	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: May cause genetic defects.
Carcinogenicity	: May cause cancer. May cause cancer
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity – single exposure	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity – repeated exposure	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Harmful if swallowed. Harmful in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

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

atrazine (1912-24-9)	
EC50 Daphnia 1	36.5 mg/l (EC50; 48 h)
LC50 fish 2	4.5 - 8.8 mg/l (LC50; 96 h)

benzo[a]pyrene (50-32-8)	
LC50 fish 1	0.0056 mg/l (LC50; 38 h)
EC50 Daphnia 1	0.005 mg/l (LC50; 96 h)
Threshold limit algae 1	0.015 mg/l (EC50; 72 h)

bromoxynil (3336-39-8)	
EC50 Daphnia 1	0.011 mg/l (LC50)
LC50 fish 2	0.05 mg/l (LC50; 48 h)

chlorpyrifos (2921-88-2)	
LC50 fish 2	0.003 mg/l (LC50; 96 h)
LC50 other aquatic organisms 2	0.0017 mg/l (Daphnia magna)
Threshold limit algae 1	0.228 mg/l (EC50; 96 h)

cyanazine (21725-46-2)	
EC50 Daphnia 1	53-106, EC50; 48 h
LC50 fish 2	9 mg/l (LC50; 96 h)
Threshold limit algae 1	0.01 mg/l (EC50)

diazinon (333-41-5)	
LC50 fish 1	0.09 mg/l (LC50; 96 h)
EC50 Daphnia 1	0.00096 mg/l (EC50; 48 h)
EC50 other aquatic organisms 1	17.3 mg/l (120 h; Scenedesmus subspicatus; Growth rate)

2,4-dichlorophenol (120-83-2)	
EC50 Daphnia 2	1.3 - 5.1 mg/l (EC50; 48 h; Daphnia magna)

dimethoate (60-51-5)	
LC50 fish 2	6.2 mg/l (LC50; 96 h)
EC50 Daphnia 2	4.7 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 24 h; Daphnia magna)

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malathion (121-75-5)	
EC50 Daphnia 1	0.0008 mg/l (EC50; 48 h)
LC50 fish 2	0.17 mg/l (LC50; 96 h)
2,3,4,5,6-pentachlorophenol (87-86-5)	
LC50 fish 1	0.052 mg/l (LC50; 96 h)
EC50 Daphnia 1	0.01 - 0.36 mg/l (EC50; 48 h)
simazine (122-34-9)	
LC50 fish 1	12.6 mg/l (LC50; 96 h)
EC50 Daphnia 1	1.1 mg/l (EC50; 48 h)
Threshold limit algae 2	0.042 mg/l (EC50; 72 h)
2,3,4,6-tetrachlorophenol (58-90-2)	
LC50 fish 1	0.14 mg/l (LC50; 96 h; Lepomis macrochirus)
EC50 Daphnia 1	0.01 mg/l (EC50; 48 h)
Threshold limit algae 2	1.3 mg/l (EC50; 96 h)
triallate (2303-17-5)	
LC50 fish 1	1 - 1.2 mg/l (96 h, Salmo gairdneri)
EC50 Daphnia 1	0.091 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna)
2,4,6-trichlorophenol (88-06-2)	
LC50 fish 1	0.73 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 2	0.69 mg/l (EC50; 48 h; Daphnia magna)
Threshold limit algae 2	3.5 mg/l (EC50; 96 h; Selenastrum capricornutum)
Methylene Chloride (75-09-2)	
LC50 fish 1	193 mg/l (LC50; 96 h; Pimephales promelas)
EC50 Daphnia 1	168.2 mg/l (EC50; 48 h)

12.2. Persistence and degradability

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Persistence and degradability	May cause long-term adverse effects in the environment.
atrazine (1912-24-9)	
Persistence and degradability	Not readily biodegradable in water. Biodegradability in soil: no data available.
benzo[a]pyrene (50-32-8)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil.
Chemical oxygen demand (COD)	2.92 g O ₂ /g substance
ThOD	2.92 g O ₂ /g substance
bromoxynil (3336-39-8)	
Persistence and degradability	Not readily biodegradable in water.
chlorpyrifos (2921-88-2)	
Persistence and degradability	Not readily biodegradable in water.
cyanazine (21725-46-2)	
Persistence and degradability	Not readily biodegradable in water.
diazinon (333-41-5)	
Persistence and degradability	Not readily biodegradable in water.
2,4-dichlorophenol (120-83-2)	
Persistence and degradability	Not readily biodegradable in water. Inherently biodegradable. Biodegradable in the soil. No (test) data on mobility of the substance available.
dimethoate (60-51-5)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
malathion (121-75-5)	
Persistence and degradability	Biodegradable in the soil.
metolachlor (51218-45-2)	
Persistence and degradability	Biodegradability in water: no data available.
2,3,4,5,6-pentachlorophenol (87-86-5)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil.
simazine (122-34-9)	
Persistence and degradability	Not readily biodegradable in water.

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terbufos (13071-79-9)	
Persistence and degradability	Biodegradable in the soil.
2,3,4,6-tetrachlorophenol (58-90-2)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil.
triallate (2303-17-5)	
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 water. Readily biodegradable in the soil. No (test)data on mobility of the substance available.
Methylene Chloride (75-09-2)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
12.3. Bioaccumulative potential	
Custom Pesticide/Herbicide Mix	
Bioaccumulative potential	Not established.
atrazine (1912-24-9)	
BCF fish 1	3 - 4 (BCF)
BCF fish 2	3 - 10 (BCF)
BCF other aquatic organisms 1	52 (BCF; 24 h)
BCF other aquatic organisms 2	10 - 83 (BCF)
Log Pow	2.64
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
benzo[a]pyrene (50-32-8)	
BCF fish 1	480 (BCF; 72 h)
BCF fish 2	70.7 (BCF; 168 h; Salmo salar)
BCF other aquatic organisms 1	3000 (BCF; 192 h)
BCF other aquatic organisms 2	1.5 (BCF; 24 h)
Log Pow	5.97 - 6.06
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
bromoxynil (3336-39-8)	
Log Pow	2.8
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
chlorpyrifos (2921-88-2)	
BCF fish 1	1700 (BCF)
BCF fish 2	49 - 2880 (BCF)
BCF other aquatic organisms 1	1 - 10 mg/l (BCF; 120 h; Algae)
Log Pow	4.82 - 5.27
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
cyanazine (21725-46-2)	
Log Pow	1.8 - 2.25
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
diazinon (333-41-5)	
BCF fish 1	7 - 46.9 (BCF)
BCF fish 2	470 - 540 (BCF; 672 h)
Log Pow	3.3 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
2,4-dichlorophenol (120-83-2)	
BCF fish 1	7.1 - 69 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 8 weeks; Cyprinus carpio; Fresh water)
Log Pow	3 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
diclofop-methyl (51338-27-3)	
Bioaccumulative potential	No bioaccumulation data available.
dimethoate (60-51-5)	
BCF fish 1	< 1.6 (BCF)
Log Pow	0.78 - 2.71
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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malathion (121-75-5)	
Log Pow	2.36 - 2.89
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
metolachlor (51218-45-2)	
Bioaccumulative potential	No bioaccumulation data available.
2,3,4,5,6-pentachlorophenol (87-86-5)	
BCF fish 1	770 (BCF; 768 h)
BCF fish 2	39 - 224 (BCF)
BCF other aquatic organisms 1	1250 (BCF)
Log Pow	4.07 - 5.19
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
simazine (122-34-9)	
BCF fish 1	2.3 - 14.6 (BCF)
BCF fish 2	1585 (BCF)
Log Pow	3
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
terbufos (13071-79-9)	
Bioaccumulative potential	Not bioaccumulative.
2,3,4,6-tetrachlorophenol (58-90-2)	
BCF fish 1	200 (BCF; 24 h)
BCF fish 2	93 (BCF; 24 h)
Log Pow	4.1 - 4.8
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).
triallate (2303-17-5)	
BCF fish 1	1280 - 1520 (840 h, <i>Lepomis macrochirus</i> , Fresh water)
BCF other aquatic organisms 1	283 (Estimated value)
Log Pow	4.6
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
2,4,6-trichlorophenol (88-06-2)	
BCF fish 2	12130 (BCF; 36 days; <i>Poecilia reticulata</i>)
Log Pow	3.4 - 4.05 (Literature)
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
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).
12.4. Mobility in soil	
atrazine (1912-24-9)	
Ecology - soil	Toxic to flora. Not toxic to bees.
bromoxynil (3336-39-8)	
Ecology - soil	Not toxic to bees.
chlorpyrifos (2921-88-2)	
Ecology - soil	Toxic to bees. May be harmful to plant growth, blooming and fruit formation.
cyanazine (21725-46-2)	
Ecology - soil	Not toxic to bees.
diclofop-methyl (51338-27-3)	
Ecology - soil	Toxic to flora. Not toxic to bees.
dimethoate (60-51-5)	
Ecology - soil	Toxic to flora. Toxic to bees.
malathion (121-75-5)	
Surface tension	0.037 N/m (24 °C)
Ecology - soil	Toxic to bees. Not toxic to plants.
simazine (122-34-9)	
Ecology - soil	Toxic to flora. Not toxic to bees.
terbufos (13071-79-9)	
Ecology - soil	Not toxic to plants. Not toxic to bees in normal conditions of use.

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triallate (2303-17-5)	
Ecology - soil	Adsorbs into the soil. Not toxic to bees.

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.

12.5. Results of PBT and vPvB assessment

Component	
benzo[a]pyrene (50-32-8)	This substance/mixture meets the PBT criteria of REACH, annex XIII This substance/mixture meets the vPvB criteria of REACH, annex XIII
diclofop-methyl (51338-27-3)	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

Product/Packaging 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) : 2810
UN-No. (IATA) : 2810
UN-No. (IMDG) : 2810
UN-No. (ADN) : 2810

14.2. UN proper shipping name

Proper Shipping Name (ADR) : TOXIC LIQUID, ORGANIC, N.O.S.
Proper Shipping Name (IATA) : Toxic liquid, organic, n.o.s.
Proper Shipping Name (IMDG) : TOXIC LIQUID, ORGANIC, N.O.S.
Proper Shipping Name (ADN) : TOXIC LIQUID, ORGANIC, N.O.S.
Transport document description (ADR) : UN 2810 TOXIC LIQUID, ORGANIC, N.O.S., 6.1, III, (E), ENVIRONMENTALLY HAZARDOUS

14.3. Packing group

Class (ADR) : 6.1
Classification code (ADR) : T1
Class (IATA) : 6.1
Class (IMDG) : 6.1
Class (ADN) : 6.1
Classification code (ADN) : T1
Hazard labels (ADR) : 6.1



Division (IATA) : 6.1
Hazard labels (IATA) : 6.1



Hazard labels (IMDG) : 6.1



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Hazard labels (ADN) : 6.1



14.4. Packing group

Packing group (ADR) : III
Packing group (IATA) : III
Packing group (IMDG) : III
Packing group (ADN) : III

14.5. Environmental hazards

Dangerous for the environment :



Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 60
Classification code (ADR) : T1
Orange plates :



Special provision (ADR) : 274, 614
Transport category (ADR) : 2
Tunnel restriction code (ADR) : E
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1
EAC : 2X
APP : B

14.6.2. Transport by sea

Special provision (IMDG) : 223, 274
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP1, TP28
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-A
Stowage category (IMDG) : A
Properties and observations (IMDG) : Toxic if swallowed, by skin contact or by inhalation.

14.6.3. Air transport

CAO packing instructions (IATA) : 663
CAO max net quantity (IATA) : 220L
PCA packing instructions (IATA) : 655
PCA Limited quantities (IATA) : Y642
PCA limited quantity max net quantity (IATA) : 2L
PCA max net quantity (IATA) : 60L
PCA Excepted quantities (IATA) : E1
Special provision (IATA) : A3, A4, A137
ERG code (IATA) : 6L

14.6.4. Inland waterway transport

Special provision (ADN) : 274, 614, 802

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Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, TOX, A
Ventilation (ADN)	: VE02
Number of blue cones/lights (ADN)	: 0
Carriage prohibited (ADN)	: No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains substance on the candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Benzo[def]chrysene (EC 200-028-5, CAS 50-32-8)

Contains no REACH Annex XIV substances.

15.1.2. National regulations

Germany

Water hazard class (WGK) : 3 - strongly hazardous to water

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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

Other information : None.

PHV SDS EU

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