

Custom FA Herbicides Mix

Safety Data Sheet

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

Date of issue: 04/09/2018

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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 FA Herbicides Mix
Product code : AL0-130374
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]

Flam. Liq. 2	H225
Acute Tox. 3 (Oral)	H301
Acute Tox. 3 (Dermal)	H311
Carc. 1B	H350
STOT SE 1	H370
Aquatic Chronic 3	H412

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

F; R11
T; R23/24/25
T; R39/23/24/25
N; R51/53
R44

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02



GHS06



GHS08

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Signal word (CLP)	: Danger
Hazardous ingredients	: 2,3,4,5,6-pentachlorophenol; dinoseb; Chloramben; methanol
Hazard statements (CLP)	: H225 - Highly flammable liquid and vapor H301+H311 - Toxic if swallowed or in contact with skin H350 - May cause cancer H370 - Causes damage to organs H412 - Harmful to aquatic life with long lasting effects
Precautionary statements (CLP)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P233 - Keep container tightly closed P260 - Do not breathe dust/fume/gas/mist/vapors/spray P270 - Do not eat, drink or smoke when using this product P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/eye protection/face protection 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 P308+P313 - IF exposed or concerned: Get medical advice/attention P361+P364 - Take off immediately all contaminated clothing and wash it 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
EUH phrases	: EUH208 - Contains 2,4-dichlorophenoxyacetic acid(94-75-7), bentazone(25057-89-0). May produce an allergic reaction EUH044 - Risk of explosion if heated under confinement
No labeling applicable	

2.3. Other hazards

No additional information available

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]
methanol (Component)	(CAS No) 67-56-1 (EC-No.) 200-659-6 (EC index no) 603-001-00-X	98.2	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
2,4-D (Component)	(CAS No) 94-75-7 (EC-No.) 202-361-1 (EC index no) 607-039-00-8	0.1	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412
2,4-DB (Component)	(CAS No) 94-82-6 (EC-No.) 202-366-9 (EC index no) 607-083-00-8	0.1	Acute Tox. 4 (Oral), H302 Aquatic Chronic 2, H411
2,4,5-TP (Component)	(CAS No) 93-72-1 (EC-No.) 202-271-2 (EC index no) 607-047-00-1	0.1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,4,5-T (Component)	(CAS No) 93-76-5 (EC-No.) 202-273-3 (EC index no) 607-041-00-9	0.1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 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)

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acifluorfen (Component)	(CAS No) 50594-66-6 (EC index no) 604-041-00-0	0.1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
dinoseb (Component) substance listed as REACH Candidate (Dinoseb (6-sec-butyl-2,4-dinitrophenol))	(CAS No) 88-85-7 (EC-No.) 201-861-7 (EC index no) 609-025-00-7	0.1	Acute Tox. 2 (Oral), H300 Acute Tox. 2 (Dermal), H310 Eye Irrit. 2, H319 Repr. 1B, H360D Aquatic Acute 1, H400 Aquatic Chronic 1, H410
bentazone (Component)	(CAS No) 25057-89-0 (EC-No.) 246-585-8 (EC index no) 613-012-00-1	0.1	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Chloramben (Component)	(CAS No) 133-90-4 (EC-No.) 205-123-5	0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 1B, H350 STOT SE 3, H335 Aquatic Chronic 3, H412
MCPA (Component)	(CAS No) 94-74-6 (EC-No.) 202-360-6 (EC index no) 607-051-00-3	0.1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
MCPP (Component)	(CAS No) 93-65-2 (EC-No.) 202-264-4 (EC index no) 607-049-00-2	0.1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 1, H410
Name	Product identifier	Specific concentration limits	
methanol (Component)	(CAS No) 67-56-1 (EC-No.) 200-659-6 (EC index no) 603-001-00-X	(3 =<C < 10) STOT SE 2, H371 (C >= 10) STOT SE 1, H370	

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- 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 : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Immediately call a poison center or doctor/physician.

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. Toxic in contact with skin.
- Symptoms/effects after ingestion : Toxic if swallowed. 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

- Fire hazard : Highly flammable liquid and vapor.
- Explosion hazard : May form flammable/explosive vapor-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Risk of explosion if heated under confinement.

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. DO NOT fight fire when fire reaches explosives. Evacuate area.

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Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapors/spray.

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.

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. Hazardous waste due to potential risk of explosion.

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. Keep away from sources of ignition - No smoking.

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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2,4-D (94-75-7)		
Belgium	Limit value (mg/m ³)	10 mg/m ³ (2,4-D; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	10 mg/m ³ (2,4-D; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ 2,4-D (ISO); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	20 mg/m ³ 2,4-D (ISO); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
2,4,5-T (93-76-5)		
Belgium	Limit value (mg/m ³)	10 mg/m ³ (2,4,5-T; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	10 mg/m ³ (2,4,5-T; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ (2,4,5-T; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
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)

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2,3,4,5,6-pentachlorophenol (87-86-5)		
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)
methanol (67-56-1)		
EU	IOELV TWA (mg/m ³)	260 mg/m ³ (Methanol; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	200 ppm (Methanol; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	266 mg/m ³ (Alcool méthylique; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	200 ppm (Alcool méthylique; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	333 mg/m ³ (Alcool méthylique; Belgium; Short time value)
Belgium	Short time value (ppm)	250 ppm (Alcool méthylique; Belgium; Short time value)
France	VLE (mg/m ³)	1300 mg/m ³ (Methanol; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	1000 ppm (Methanol; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m ³)	260 mg/m ³ (Methanol; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	200 ppm (Methanol; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200 ppm (Methanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	250 ppm (Methanol; USA; Short time value; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	133 mg/m ³ (Methanol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	100 ppm (Methanol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	266 mg/m ³ Methanol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	200 ppm Methanol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	333 mg/m ³ Methanol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	250 ppm Methanol; 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.

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Skin and body protection	: Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.
Respiratory protection	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
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)	: Highly flammable liquid and vapor
Relative density	: No data available
Solubility	: No data available
Explosive properties	: Risk of explosion if heated under confinement.
Oxidizing properties	: No data available
Explosion limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture. Risk of explosion if heated under confinement. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Heat. Sparks. Overheating.

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

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

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ATE CLP (oral)	101.317 mg/kg body weight
ATE CLP (dermal)	304.028 mg/kg body weight
2,4-D (94-75-7)	
LD50 oral rat	630-774,Rat; Other; Experimental value; 375 mg/kg; Rat
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Experimental value; Other)
ATE CLP (oral)	500 mg/kg body weight
2,4-DB (94-82-6)	
LD50 oral rat	700 mg/kg (Rat)
ATE CLP (oral)	700 mg/kg body weight
2,4,5-TP (93-72-1)	
LD50 oral rat	650 mg/kg (Rat)

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2,4,5-TP (93-72-1)	
LD50 dermal rabbit	> 3200 mg/kg (Rabbit)
ATE CLP (oral)	650 mg/kg body weight
2,4,5-T (93-76-5)	
LD50 oral rat	500 mg/kg (Rat; Literature study; 300 mg/kg bodyweight; Rat; Literature study)
LD50 dermal rat	1535 mg/kg (Rat; Literature study)
ATE CLP (oral)	500 mg/kg body weight
ATE CLP (dermal)	1535 mg/kg body weight
dinoseb (88-85-7)	
LD50 oral rat	25 - 40 mg/kg (Rat)
LD50 dermal rat	80 - 134 mg/kg (Rat)
LD50 dermal rabbit	80 mg/kg (Rabbit)
ATE CLP (oral)	25 mg/kg body weight
ATE CLP (dermal)	80 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
Acifluorfen (50594-66-6)	
ATE CLP (oral)	500 mg/kg body weight
bentazone (25057-89-0)	
LD50 oral rat	1100 mg/kg (Rat)
LD50 dermal rat	2500 mg/kg (Rat)
LD50 dermal rabbit	4000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	5.1 mg/l/4h (Rat)
ATE CLP (oral)	1100 mg/kg body weight
ATE CLP (dermal)	2500 mg/kg body weight
ATE CLP (vapors)	5.1 mg/l/4h
ATE CLP (dust, mist)	5.1 mg/l/4h
Chloramben (133-90-4)	
LD50 oral rat	3500 ml/kg
LD50 dermal rabbit	3136 mg/kg
ATE CLP (dermal)	3136 mg/kg body weight
MCPA (94-74-6)	
LD50 oral rat	1160 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 700 mg/kg; Rat; Literature study)
LD50 dermal rat	> 4000 mg/kg (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	> 6.4 mg/l/4h (Rat; Experimental value)
ATE CLP (oral)	1160 mg/kg body weight
MCPP (93-65-2)	
LD50 oral rat	650 mg/kg (Rat; Literature study)
ATE CLP (oral)	650 mg/kg body weight
methanol (67-56-1)	
LD50 oral rat	> 5000 mg/kg (Rat; BASF test; Literature study; 1187-2769 mg/kg bodyweight; Rat; Weight of evidence)
LD50 dermal rabbit	15800 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	85 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	64000 ppm/4h (Rat; Literature study)
ATE CLP (oral)	100 mg/kg body weight
ATE CLP (dermal)	300 mg/kg body weight
ATE CLP (gases)	700 ppmV/4h
ATE CLP (vapors)	3 mg/l/4h
ATE CLP (dust, mist)	0.5 mg/l/4h

Skin corrosion/irritation

: Not classified

Based on available data, the classification criteria are not met

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Serious eye damage/irritation	: Not classified Based on available data, the classification criteria are not met
Respiratory or skin sensitization	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: May cause cancer. May cause cancer
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity – single exposure	: Causes damage to organs.
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	: Toxic if swallowed. Toxic in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

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

2,4-D (94-75-7)	
EC50 Daphnia 1	90 mg/l (EC50; 48 h; Daphnia magna)
LC50 fish 2	82 mg/l (LC50; 96 h; Salmo gairdneri)
2,4-DB (94-82-6)	
LC50 fish 1	6.3 mg/l (LC50; 96 h)
EC50 Daphnia 1	6.5 mg/l (LC50; 96 h)
2,4,5-TP (93-72-1)	
LC50 fish 1	0.6 - 70 mg/l (LC50; 96 h)
EC50 Daphnia 1	> 140 mg/l (EC50; 48 h)
Threshold limit algae 1	70 mg/l (EC50; 336 h)
2,4,5-T (93-76-5)	
LC50 fish 1	0.15 mg/l (LC50; 96 h)
EC50 Daphnia 1	0.73 mg/l (EC50; 72 h)
Threshold limit algae 2	52 mg/l (EC50)
dinoseb (88-85-7)	
LC50 fish 1	0.08 - 0.15 mg/l (LC50; 96 h)
EC50 Daphnia 1	0.68 mg/l (LC50)
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)
Chloramben (133-90-4)	
LC50 fish 1	> 10 mg/l Oncorhynchus mykiss (rainbow trout) 96 h
MCPA (94-74-6)	
LC50 fish 1	50 mg/l (LC50; 96 h; Salmo gairdneri; Flow-through system)
EC50 Daphnia 1	3.2 mg/l (EC50; 48 h; Daphnia magna)
Threshold limit algae 1	0.152 mg/l (EC50; 336 h; Lemna gibba)
MCPP (93-65-2)	
EC50 Daphnia 1	400 - 450 mg/l (EC50; 48 h; Daphnia magna)
LC50 fish 2	240 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Salmo gairdneri; Static system)
Threshold limit algae 2	220 mg/l (ErC50; 96 h; Chlorella sp.)
methanol (67-56-1)	
LC50 fish 1	15400 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	> 10000 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	10800 mg/l (LC50; 96 h; Salmo gairdneri)

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12.2. Persistence and degradability

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Persistence and degradability	May cause long-term adverse effects in the environment.
2,4-D (94-75-7)	
Persistence and degradability	Readily biodegradable in water. Inhibition of nitrification. Biodegradable in the soil. No (test)data on mobility of the substance available.
2,4,5-TP (93-72-1)	
Persistence and degradability	Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
2,4,5-T (93-76-5)	
Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.000093 g O ₂ /g substance
Chemical oxygen demand (COD)	0.000014 g O ₂ /g substance
dinoseb (88-85-7)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
2,3,4,5,6-pentachlorophenol (87-86-5)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil.
bentazone (25057-89-0)	
Persistence and degradability	Not readily biodegradable in water.
MCPA (94-74-6)	
Persistence and degradability	Not readily biodegradable in water. No significant hydrolysis. Not readily biodegradable in the soil. Adsorbs into the soil.
MCPP (93-65-2)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil. Photodegradation in the air.
methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O ₂ /g substance
Chemical oxygen demand (COD)	1.42 g O ₂ /g substance
ThOD	1.5 g O ₂ /g substance
BOD (% of ThOD)	0.8 (Literature study)

12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
2,4-D (94-75-7)	
BCF fish 1	< 10 (BCF; Other; 3 days; Leuciscus idus; Fresh water)
Log Pow	2.58 - 2.83 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
2,4-DB (94-82-6)	
Log Pow	3.53
2,4,5-TP (93-72-1)	
Log Pow	2.44 - 3.93
2,4,5-T (93-76-5)	
BCF fish 1	26 (BCF; 768 h)
BCF fish 2	264 (BCF)
Log Pow	0.85 - 4
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
dinoseb (88-85-7)	
BCF fish 1	< 2.5 (BCF)
BCF fish 2	1 (BCF)
Log Pow	3.09 - 4.12
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).
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)

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2,3,4,5,6-pentachlorophenol (87-86-5)	
Log Pow	4.07 - 5.19
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
bentazone (25057-89-0)	
Log Pow	2.34
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
MCPA (94-74-6)	
BCF fish 1	1 (BCF; 672 h; Pisces)
Log Pow	2.86 (Experimental value; Other; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
MCPP (93-65-2)	
BCF fish 1	1.2 - 5.5 (BCF; 672 h; Lepomis macrochirus)
Log Pow	1.17 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
methanol (67-56-1)	
BCF fish 1	< 10 (BCF; 72 h; Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

2,4,5-TP (93-72-1)	
Ecology - soil	Not toxic to bees. May be harmful to plant growth, blooming and fruit formation.
2,4,5-T (93-76-5)	
Ecology - soil	Toxic to flora. Not toxic to bees.
dinoseb (88-85-7)	
Ecology - soil	Toxic to bees.
bentazone (25057-89-0)	
Ecology - soil	Not toxic to bees.
MCPA (94-74-6)	
Ecology - soil	Toxic to flora.
methanol (67-56-1)	
Surface tension	0.023 N/m (20 °C)
Log Koc	Koc,PCKOCWIN v1.66; 1; Calculated value

12.5. Results of PBT and vPvB assessment

Component	
dinoseb (88-85-7)	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.
Additional information : Handle empty containers with care because residual vapors are flammable. Hazardous waste due to potential risk of explosion.
Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

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

14.1. UN number

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

14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, TOXIC, N.O.S.
Proper Shipping Name (IATA) : Flammable liquid, toxic, n.o.s.

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

14.3. Packing group

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



Hazard labels (IATA) : 3, 6.1



Hazard labels (IMDG) : 3, 6.1



Hazard labels (ADN) : 3, 6.1



14.4. Packing group

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

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 336
Classification code (ADR) : FT1
Orange plates :



Special provision (ADR) : 274
Transport category (ADR) : 2
Tunnel restriction code (ADR) : D/E
Limited quantities (ADR) : 1I
Excepted quantities (ADR) : E2

14.6.2. Transport by sea

Special provision (IMDG) : 274
Limited quantities (IMDG) : 1 L

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Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2, TP13
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: B
Properties and observations (IMDG)	: Flammable toxic liquid which is not specified by name in this class or, on account of its characteristics, in some other class. Toxic if swallowed, by skin contact or by inhalation.

14.6.3. Air transport

CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
PCA packing instructions (IATA)	: 352
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA max net quantity (IATA)	: 1L
PCA Excepted quantities (IATA)	: E2
Special provision (IATA)	: A3
ERG code (IATA)	: 3HP

14.6.4. Inland waterway transport

Special provision (ADN)	: 274, 802
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, EX, TOX, A
Ventilation (ADN)	: VE01, VE02
Number of blue cones/lights (ADN)	: 2
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: Dinoseb (6-sec-butyl-2,4-dinitrophenol) (EC 201-861-7, CAS 88-85-7)

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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