

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
Date of first issue: 14.04.2017

Section 1: Identification

Product name : Dichlofenthion Formulation

Manufacturer or supplier's details

Company : MSD

Address : 33 Whakatiki Street - Private Bag 908
Upper Hutt - New Zealand

Telephone : 0800 800 543

Emergency telephone number : 0800 764 766 (0800 POISON) 0800 243 622 (0800 CHEMCALL)

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use :
Not applicable

Section 2: Hazard identification

GHS Classification

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Skin corrosion/irritation : Category 1B

Serious eye damage/eye irritation : Category 1

Skin sensitisation : Category 1

Germ cell mutagenicity : Category 2

Carcinogenicity (Oral) : Category 1

Carcinogenicity : Category 2

Reproductive toxicity : Category 2


Specific target organ toxicity - single exposure : Category 1 (Nervous system)

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

Specific target organ toxicity - single exposure : Category 3
 Specific target organ toxicity - repeated exposure : Category 2
 Aspiration hazard : Category 1
 Hazardous to the aquatic environment - acute hazard : Category 1
 Hazardous to the aquatic environment - chronic hazard : Category 1

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.
 H302 + H332 Harmful if swallowed or if inhaled.
 H304 May be fatal if swallowed and enters airways.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H341 Suspected of causing genetic defects.
 H350 May cause cancer if swallowed.
 H351 Suspected of causing cancer.
 H361 Suspected of damaging fertility or the unborn child.
 H370 Causes damage to organs (Nervous system).
 H373 May cause damage to organs through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
 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.
 P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
 P242 Use non-sparking tools.
 P243 Take action to prevent static discharges.
 P261 Avoid breathing vapours.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing should not be allowed out of the workplace.

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P330 + P331 + P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/ doctor.

P303 + P361 + P353 + P310 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER/ doctor.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P391 Collect spillage.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

Vapours may form explosive mixture with air.

Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Tar, wood	91722-33-7	>= 10 -< 20
Rosin	8050-09-7	>= 10 -< 20
Tar, coal	8007-45-2	>= 10 -< 20
Ethylbenzene	100-41-4	>= 2.5 -< 10
Xylene	1330-20-7	>= 2.5 -< 10
Dichlofenthion (ISO)	97-17-6	>= 2.5 -< 10
Sodium hydroxide	1310-73-2	>= 1 -< 3
Phenol	108-95-2	>= 1 -< 2.5
m-Cresol	108-39-4	>= 1 -< 2.5
p-Cresol	106-44-5	>= 1 -< 2.5

Section 4: First-aid measures

Dichlofenthion Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
7.0	04.04.2023	1552596-00014	Date of first issue: 14.04.2017

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention immediately.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention immediately.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.
If vomiting occurs have person lean forward.
Call a physician or poison control centre immediately.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : Causes digestive tract burns.
Harmful if swallowed or if inhaled.
May be fatal if swallowed and enters airways.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause respiratory irritation.
Suspected of causing genetic defects.
May cause cancer if swallowed.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
Causes damage to organs.
May cause damage to organs through prolonged or repeated exposure.
Causes severe burns.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

Section 5: Fire-fighting measures

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.

Dichlofenthion Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
7.0	04.04.2023	1552596-00014	Date of first issue: 14.04.2017

Exposure to combustion products may be a hazard to health.

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|-----------------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazardous combustion products | : | Carbon oxides
Metal oxides
Nitrogen oxides (NO _x) |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area. |
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment. |
| Hazchem Code | : | 3W |
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Section 6: Accidental release measures

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|---------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency procedures | : | Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8). |
| Environmental precautions | : | Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained. |
| Methods and materials for containment and cleaning up | : | Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapours/mists with a water spray jet.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. |
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Section 7: Handling and storage

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|-------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical measures | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : | If sufficient ventilation is unavailable, use with local exhaust ventilation.
Use explosion-proof electrical, ventilating and lighting equip- |

Dichlofenthion Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
7.0	04.04.2023	1552596-00014	Date of first issue: 14.04.2017

- ment.
- Advice on safe handling : Do not get on skin or clothing.
Do not breathe vapours.
Do not swallow.
Do not get in eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Non-sparking tools should be used.
Keep container tightly closed.
Already sensitised individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitisers.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
Do not eat, drink or smoke when using this product.
Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
When using do not eat, drink or smoke.
Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before re-use.
The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.
- Conditions for safe storage : Keep in properly labelled containers.
Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Keep away from heat and sources of ignition.
- Materials to avoid : Do not store with the following product types:
Self-reactive substances and mixtures
Organic peroxides
Oxidizing agents
Flammable gases
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Poisonous gases
Explosives

Section 8: Exposure controls/personal protection
Components with workplace control parameters

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
Date of first issue: 14.04.2017

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Rosin	8050-09-7	TWA (Inhalable particulate matter)	0.001 mg/m ³ (total Resin acids)	ACGIH
Ethylbenzene	100-41-4	WES-TWA	20 ppm 88 mg/m ³	NZ OEL
		Further information: Ototoxin, Skin absorption		
		WES-STEL	40 ppm 176 mg/m ³	NZ OEL
		Further information: Ototoxin, Skin absorption		
		TWA	20 ppm	ACGIH
Xylene	1330-20-7	WES-TWA	50 ppm 217 mg/m ³	NZ OEL
		Further information: Ototoxin		
		TWA	20 ppm	ACGIH
Dichlofenthion (ISO)	97-17-6	TWA	20 µg/m ³ (OEB 3)	Internal
		Further information: Skin		
		Wipe limit	200 µg/100 cm ²	Internal
Sodium hydroxide	1310-73-2	WES-Ceiling	2 mg/m ³	NZ OEL
		C	2 mg/m ³	ACGIH
Phenol	108-95-2	WES-TWA	1 ppm 3.8 mg/m ³	NZ OEL
		Further information: Skin absorption		
		WES-STEL	2 ppm 7.7 mg/m ³	NZ OEL
		Further information: Skin absorption		
		TWA	5 ppm	ACGIH
m-Cresol	108-39-4	WES-TWA	5 ppm 22 mg/m ³	NZ OEL
		Further information: Skin absorption		
		TWA (Inhalable fraction and vapor)	20 mg/m ³	ACGIH
p-Cresol	106-44-5	WES-TWA	5 ppm 22 mg/m ³	NZ OEL
		Further information: Skin absorption		
		TWA (Inhalable fraction and vapor)	20 mg/m ³	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Phenol	108-95-2	Total phenol	Urine	End of shift	100 mg/l	NZ BEI
		Phenol	Urine	End of shift (As soon as possible)	250 mg/g Creatinine	ACGIH BEI

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

				after exposure ceases)		
Xylene	1330-20-7	Methylhippuric acid	Urine	End of shift	1.5 g/l	NZ BEI
		Methylhippuric acids	Urine	End of shift (As soon as possible after exposure ceases)	1.5 g/g creatinine	ACGIH BEI
Ethylbenzene	100-41-4	Sum of mandelic acid and phenylglyoxylic acids	Urine	End of exposure or end of shift	0.25 g/g creatinine	NZ BEI
		Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15 g/g creatinine	ACGIH BEI

Engineering measures : Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).
 All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.
 Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).
 Minimize open handling.
 Use explosion-proof electrical, ventilating and lighting equipment.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Combined particulates and organic vapour type

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving. Take note that the product is flammable, which may impact the selection of hand protection.

Eye protection : Wear safety glasses with side shields or goggles.
 If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
 Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or

Dichlofenthion Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
7.0	04.04.2023	1552596-00014	Date of first issue: 14.04.2017

Skin and body protection : aerosols.
: Work uniform or laboratory coat.
Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.
Use appropriate degowning techniques to remove potentially contaminated clothing.

Section 9: Physical and chemical properties

Appearance	:	viscous liquid
Colour	:	dark, brown
Odour	:	strong
Odour Threshold	:	No data available
pH	:	Not applicable
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	30 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	1,009 - 1,051 g/cm ³ (20 °C)
Solubility(ies)	:	
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available

Dichlofenthion Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
7.0	04.04.2023	1552596-00014	Date of first issue: 14.04.2017

Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle size	:	Not applicable

Section 10: Stability and reactivity

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Flammable liquid and vapour. Vapours may form explosive mixture with air. Can react with strong oxidizing agents.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

Section 11: Toxicological information

Exposure routes	:	Inhalation Skin contact Ingestion Eye contact
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Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity	:	Acute toxicity estimate: 1,226 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 11 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method

Components:

Tar, wood:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 423 Assessment: The substance or mixture has no acute oral toxicity
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Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
Date of first issue: 14.04.2017

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Rosin:

Acute oral toxicity : LD50 (Rat): 2,800 mg/kg
Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Tar, coal:

Acute oral toxicity : LD50 (Rat): 1,700 mg/kg
Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Ethylbenzene:

Acute oral toxicity : LD50 (Rat): 3,500 mg/kg
Acute inhalation toxicity : LC50 (Rat): 17.8 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Xylene:

Acute oral toxicity : Acute toxicity estimate: 500 mg/kg
Method: Expert judgement
Remarks: Based on national or regional regulation.
Acute inhalation toxicity : LC50 (Rat): 27.571 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Acute dermal toxicity : Acute toxicity estimate: 1,100 mg/kg
Method: Expert judgement
Remarks: Based on national or regional regulation.

Dichlofenthion (ISO):

Acute oral toxicity : LD50 (Rat): 172 mg/kg
LD50 (Rat): 270 mg/kg
Acute inhalation toxicity : LC50 (Rat): 1.75 mg/l
Acute dermal toxicity : LD50 (Rat): 355 mg/kg
LD50 (Rabbit): 6,000 mg/kg

Sodium hydroxide:

Acute oral toxicity : Acute toxicity estimate: 500 mg/kg
Method: Expert judgement

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

Remarks: Based on national or regional regulation.

Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : Acute toxicity estimate: 1,100 mg/kg
 Method: Expert judgement
 Remarks: Based on national or regional regulation.

Phenol:

Acute oral toxicity : LD50 (Rat): 650 mg/kg
 Method: OECD Test Guideline 401

Acute toxicity estimate (Humans): 140 - 290 mg/kg
 Method: Expert judgement

Acute inhalation toxicity : Acute toxicity estimate: 0.0501 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist
 Method: Expert judgement
 Remarks: Based on national or regional regulation.

Acute dermal toxicity : LD50 (Rabbit): 660 mg/kg
 Method: OECD Test Guideline 402

Acute toxicity estimate (Humans): 300 mg/kg
 Method: Expert judgement

m-Cresol:

Acute oral toxicity : LD50 (Rat): 121 mg/kg
 Remarks: Based on data from similar materials

Acute inhalation toxicity : Acute toxicity estimate: 0.5001 mg/l
 Exposure time: 4 h
 Test atmosphere: vapour
 Method: Expert judgement
 Remarks: Based on national or regional regulation.

Acute dermal toxicity : LD50 (Rabbit): 301 mg/kg
 Remarks: Based on data from similar materials

p-Cresol:

Acute oral toxicity : LD50 (Rat): 172 - 250 mg/kg

Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rabbit): 213 - 426 mg/kg

Skin corrosion/irritation

Causes severe burns.

Components:

Tar, wood:

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

Species : reconstructed human epidermis (RhE)
 Method : OECD Test Guideline 439

Species : reconstructed human epidermis (RhE)
 Method : OECD Test Guideline 431

Result : Skin irritation

Rosin:

Species : Rabbit
 Method : OECD Test Guideline 404
 Result : No skin irritation

Tar, coal:

Species : Rabbit
 Result : Mild skin irritation

Xylene:

Species : Rabbit
 Result : Skin irritation

Dichlofenthion (ISO):

Result : Mild skin irritation
 Remarks : Based on data from similar materials

Sodium hydroxide:

Result : Corrosive after 3 minutes or less of exposure

Phenol:

Species : Rabbit
 Result : Corrosive after 3 minutes to 1 hour of exposure

m-Cresol:

Species : Rabbit
 Result : Corrosive after 3 minutes to 1 hour of exposure

p-Cresol:

Species : Rabbit
 Result : Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation

Causes serious eye damage.

Components:**Tar, wood:**

Result : Irritation to eyes, reversing within 7 days

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
Date of first issue: 14.04.2017

Rosin:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

Tar, coal:

Species : Human
Result : Irreversible effects on the eye

Ethylbenzene:

Result : Irritation to eyes, reversing within 21 days
Remarks : Based on national or regional regulation.

Xylene:

Species : Rabbit
Result : Irritation to eyes, reversing within 21 days

Sodium hydroxide:

Result : Irreversible effects on the eye
Remarks : Based on skin corrosivity.

Phenol:

Species : Rabbit
Result : Irreversible effects on the eye
Method : OECD Test Guideline 405

m-Cresol:

Species : Rabbit
Result : Irreversible effects on the eye

p-Cresol:

Species : Rabbit
Result : Irreversible effects on the eye

Respiratory or skin sensitisation**Skin sensitisation**

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:**Tar, wood:**

Test Type : Local lymph node assay (LLNA)
Exposure routes : Skin contact
Species : Mouse
Method : OECD Test Guideline 429
Result : positive

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
Date of first issue: 14.04.2017

Assessment : Probability or evidence of low to moderate skin sensitisation rate in humans

Rosin:

Test Type : Local lymph node assay (LLNA)
Exposure routes : Skin contact
Species : Mouse
Method : OECD Test Guideline 429
Result : negative

Tar, coal:

Test Type : Local lymph node assay (LLNA)
Exposure routes : Skin contact
Species : Mouse
Method : OECD Test Guideline 429
Result : positive
Remarks : Based on data from similar materials

Assessment : Probability or evidence of skin sensitisation in humans

Xylene:

Test Type : Local lymph node assay (LLNA)
Exposure routes : Skin contact
Species : Mouse
Result : negative

Dichlofenthion (ISO):

Exposure routes : Dermal
Assessment : Does not cause skin sensitisation.
Result : Weak sensitizer
Remarks : Based on data from similar materials

Sodium hydroxide:

Test Type : Human repeat insult patch test (HRIPT)
Exposure routes : Skin contact
Result : negative

Phenol:

Test Type : Buehler Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : negative

p-Cresol:

Test Type : Draize Test
Exposure routes : Skin contact
Species : Guinea pig
Result : negative

Dichlofenthion Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
7.0	04.04.2023	1552596-00014	Date of first issue: 14.04.2017

Chronic toxicity**Germ cell mutagenicity**

Suspected of causing genetic defects.

Components:**Tar, wood:**

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
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Rosin:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
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	:	Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
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	:	Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative
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Tar, coal:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: positive Remarks: Based on data from similar materials
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Germ cell mutagenicity - Assessment	:	Positive result(s) from in vivo non-mammalian somatic cell mutagenicity tests, supported by positive results from in vitro mutagenicity assays. Remarks: Based on national or regional regulation.
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Ethylbenzene:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative
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	:	Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
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	:	Test Type: Chromosome aberration test in vitro Result: negative
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Genotoxicity in vivo	:	Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo Species: Mouse Application Route: Inhalation Method: OECD Test Guideline 486
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Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

Result: negative

Xylene:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
 Result: negative

Test Type: Chromosome aberration test in vitro
 Result: negative

Test Type: In vitro mammalian cell gene mutation test
 Result: negative

Test Type: In vitro sister chromatid exchange assay in mam-
 malian cells
 Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)
 Species: Mouse
 Application Route: Skin contact
 Result: negative

Phenol:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
 Method: OECD Test Guideline 473
 Result: positive

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo
 cytogenetic assay)
 Species: Mouse
 Application Route: Intraperitoneal injection
 Method: OECD Test Guideline 474
 Result: positive
 Remarks: Annex VI From 1272/2008

Germ cell mutagenicity -
 Assessment : Positive result(s) from in vivo mammalian somatic cell muta-
 genicity tests.

m-Cresol:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
 Method: OECD Test Guideline 473
 Result: positive

Test Type: Bacterial reverse mutation assay (AMES)
 Method: OECD Test Guideline 471
 Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow
 cytogenetic test, chromosomal analysis)
 Species: Mouse
 Application Route: Ingestion
 Method: OECD Test Guideline 475
 Result: negative

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

p-Cresol:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
 Method: OECD Test Guideline 473
 Result: positive

Test Type: In vitro mammalian cell gene mutation test
 Method: OECD Test Guideline 476
 Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)
 Species: Mouse
 Application Route: Ingestion
 Method: OECD Test Guideline 478
 Result: negative

Carcinogenicity

May cause cancer if swallowed.
 Suspected of causing cancer.

Components:**Tar, coal:**

Species : Mouse
 Application Route : Ingestion
 Exposure time : 2 Years
 Result : positive

Carcinogenicity - Assessment : Positive evidence from human epidemiological studies (oral)
 Remarks: Based on national or regional regulation.

Ethylbenzene:

Species : Rat
 Application Route : inhalation (vapour)
 Exposure time : 104 weeks
 Result : positive
 Remarks : The mechanism or mode of action may not be relevant in humans.

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies
 Remarks: Based on national or regional regulation.

Xylene:

Species : Rat
 Application Route : Ingestion
 Exposure time : 103 weeks
 Result : negative

Phenol:

Species : Mouse
 Application Route : Ingestion
 Exposure time : 103 weeks
 Method : OECD Test Guideline 451

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

Result : negative

m-Cresol:

Species : Mouse, males
 Application Route : Ingestion
 Exposure time : 105 weeks
 Result : equivocal
 Remarks : Based on data from similar materials

Species : Mouse, female
 Application Route : Ingestion
 Exposure time : 106 - 107 weeks
 Result : positive
 Remarks : Based on data from similar materials

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

p-Cresol:

Species : Mouse
 Application Route : Ingestion
 Exposure time : 106 - 107 weeks
 Result : negative
 Remarks : Based on data from similar materials

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Components:**Rosin:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
 Species: Rat
 Application Route: Ingestion
 Method: OECD Test Guideline 422
 Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
 Species: Rat
 Application Route: Ingestion
 Method: OECD Test Guideline 414
 Result: negative

Ethylbenzene:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
 Species: Rat
 Application Route: inhalation (vapour)
 Method: OECD Test Guideline 416
 Result: negative

Effects on foetal development : Test Type: Embryo-foetal development

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

ment Species: Rat
 Application Route: Inhalation
 Method: OECD Test Guideline 414
 Result: negative

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.
 Remarks: Based on national or regional regulation.

Xylene:

Effects on fertility : Test Type: One-generation reproduction toxicity study
 Species: Rat
 Application Route: inhalation (vapour)
 Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
 Species: Rat
 Application Route: inhalation (vapour)
 Result: negative

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.
 Remarks: Based on national or regional regulation.

Dichlofenthion (ISO):

Effects on foetal development : Test Type: Development
 Species: Mouse
 Application Route: Intraperitoneal
 Developmental Toxicity: LOAEL: 80 mg/kg body weight
 Result: Reduced foetal weight, Embryotoxic effects.
 Remarks: Based on data from similar materials

Test Type: Development
 Species: Rat
 Application Route: Intraperitoneal
 Developmental Toxicity: LOAEL: 10 mg/kg body weight
 Result: Reduced foetal weight, Embryotoxic effects., No teratogenic effects
 Remarks: Based on data from similar materials

Reproductive toxicity - Assessment : Suspected of damaging the unborn child.

Phenol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
 Species: Rat
 Application Route: Ingestion
 Method: OECD Test Guideline 416
 Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
 Species: Mouse
 Application Route: Ingestion
 Method: OECD Test Guideline 414

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

Reproductive toxicity - Assessment : Result: negative
 : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.
 Remarks: Based on national or regional regulation.

m-Cresol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
 Species: Rat
 Application Route: Ingestion
 Result: negative

Effects on foetal development : Test Type: Prenatal development toxicity study (teratogenicity)
 Species: Rat
 Application Route: Ingestion
 Result: negative

p-Cresol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
 Species: Rat
 Application Route: Ingestion
 Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
 Species: Rat
 Application Route: Ingestion
 Result: negative

STOT - single exposure

May cause respiratory irritation.
 Causes damage to organs (Nervous system).

Components:**Tar, coal:**

Exposure routes : Ingestion
 Target Organs : Nervous system
 Assessment : Shown to produce significant health effects in animals at concentrations of 300 mg/kg bw or less.

Xylene:

Assessment : May cause respiratory irritation.

m-Cresol:

Assessment : May cause respiratory irritation.
 Remarks : Based on national or regional regulation.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

Components:**Tar, coal:**

Target Organs : Respiratory Tract
 Assessment : Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

Exposure routes : inhalation (dust/mist/fume)
 Target Organs : Respiratory Tract
 Assessment : Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

Ethylbenzene:

Exposure routes : inhalation (vapour)
 Target Organs : Auditory system
 Assessment : Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d.

Xylene:

Exposure routes : inhalation (vapour)
 Target Organs : Auditory system
 Assessment : Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d.

Dichlofenthion (ISO):

Target Organs : Nervous system
 Assessment : Causes damage to organs through prolonged or repeated exposure.
 Remarks : Based on human experience.

Phenol:

Assessment : Causes damage to organs through prolonged or repeated exposure.
 Remarks : Based on national or regional regulation.

Repeated dose toxicity**Components:****Rosin:**

Species : Rat, male
 NOAEL : 335 mg/kg
 Application Route : Ingestion
 Exposure time : 90 Days
 Method : OECD Test Guideline 408

Ethylbenzene:

Species : Rat
 LOAEL : 0.868 mg/l
 Application Route : inhalation (vapour)
 Exposure time : 13 Weeks

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
Date of first issue: 14.04.2017

Species : Rat
NOAEL : 75 mg/kg
LOAEL : 250 mg/kg
Application Route : Ingestion
Method : OECD Test Guideline 408

Xylene:

Species : Rat
LOAEL : > 0.2 - 1 mg/l
Application Route : inhalation (vapour)
Exposure time : 13 Weeks
Remarks : Based on data from similar materials

Species : Rat
LOAEL : 150 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Dichlofenthion (ISO):

Species : Rat
NOAEL : 0.75 mg/kg
Application Route : Oral
Exposure time : 90 d

Species : Dog
NOAEL : 0.75 mg/kg
Application Route : Oral
Exposure time : 90 d

Phenol:

Species : Rat
LOAEL : 300 mg/kg
Application Route : Ingestion
Exposure time : 90 Days
Method : OECD Test Guideline 408

Species : Rat
NOAEL : ≥ 0.1 mg/l
Application Route : inhalation (vapour)
Exposure time : 74 Days

Species : Rabbit
LOAEL : 260 mg/kg
Application Route : Skin contact
Exposure time : 18 Days

m-Cresol:

Species : Rat
NOAEL : 150 mg/kg
Application Route : Ingestion
Exposure time : 13 Weeks

Dichlofenthion Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
7.0	04.04.2023	1552596-00014	Date of first issue: 14.04.2017

|| Method : OECD Test Guideline 408

p-Cresol:

|| Species : Rat
 || NOAEL : 50 mg/kg
 || LOAEL : 175 mg/kg
 || Application Route : Ingestion
 || Exposure time : 90 Days
 || Method : OECD Test Guideline 408

Aspiration toxicity

May be fatal if swallowed and enters airways.

Product:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Components:**Ethylbenzene:**

|| The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Xylene:

|| The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Experience with human exposure**Components:****Dichlofenthion (ISO):**

|| Skin contact : Symptoms: irritating, central nervous system effects, sweating
 Remarks: Can be absorbed through skin.
 May cause sensitisation by skin contact.
 || Eye contact : Symptoms: constriction of pupils, central nervous system effects
 || Ingestion : Symptoms: Nausea, Diarrhoea, Vomiting, sweating, Lachrymation, constriction of pupils, Central nervous system depression, Gastrointestinal disturbance, bronchospasm, central nervous system effects, Oedema

Section 12: Ecological information**Ecotoxicity****Components:****Tar, wood:**

|| Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 28 mg/l
 Exposure time: 48 h
 Method: OECD Test Guideline 202

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 17 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201

EC10 (Desmodesmus subspicatus (green algae)): 14 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201

Rosin:

Toxicity to fish : LL50 (Danio rerio (zebra fish)): > 1 - 10 mg/l
 Exposure time: 96 h
 Test substance: Water Accommodated Fraction
 Method: OECD Test Guideline 203
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 911 mg/l
 Exposure time: 48 h
 Test substance: Water Accommodated Fraction
 Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EL50 (Raphidocelis subcapitata (freshwater green alga)): > 1,000 mg/l
 Exposure time: 72 h
 Test substance: Water Accommodated Fraction
 Method: OECD Test Guideline 201

NOELR (Raphidocelis subcapitata (freshwater green alga)): 1,000 mg/l
 Exposure time: 72 h
 Test substance: Water Accommodated Fraction
 Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (activated sludge): > 10,000 mg/l
 Exposure time: 3 h
 Method: OECD Test Guideline 209

Tar, coal:

Toxicity to fish : LL50 (Danio rerio (zebra fish)): > 250 mg/l
 Exposure time: 96 h
 Test substance: Water Accommodated Fraction
 Method: OECD Test Guideline 203
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 2.8 mg/l
 Exposure time: 48 h
 Test substance: Water Accommodated Fraction
 Method: OECD Test Guideline 202
 Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Desmodesmus subspicatus (green algae)): 36 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

NOELR (Desmodesmus subspicatus (green algae)): 5 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials

Ethylbenzene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.8 - 2.4 mg/l
 Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 3.6 mg/l
 Exposure time: 96 h

NOEC (Pseudokirchneriella subcapitata (green algae)): 3.4 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (water flea)): 0.96 mg/l
 Exposure time: 7 d

Toxicity to microorganisms : EC50 (Nitrosomonas sp.): 96 mg/l
 Exposure time: 24 h

Xylene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 13.5 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
 Exposure time: 24 h
 Method: OECD Test Guideline 202
 Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Skeletonema costatum (marine diatom)): 10 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): > 0.1 - < 1 mg/l
 Exposure time: 35 d
 Method: OECD Test Guideline 210
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EL10 (Daphnia magna (Water flea)): > 1 - 10 mg/l
 Exposure time: 21 d
 Method: OECD Test Guideline 211
 Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 100 mg/l
 Exposure time: 3 h
 Method: OECD Test Guideline 209
 Remarks: Based on data from similar materials

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

II

Dichlofenthion (ISO):

Toxicity to fish	:	LC50 (No species specified): 0.64 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
		LC50 (<i>Lepomis macrochirus</i> (Bluegill sunfish)): 1.23 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (<i>Daphnia magna</i> (Water flea)): 0.0011 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
M-Factor (Acute aquatic toxicity)	:	100
M-Factor (Chronic aquatic toxicity)	:	100

Phenol:

Toxicity to fish	:	LC50 (<i>Pimephales promelas</i> (fathead minnow)): 24.9 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (<i>Ceriodaphnia dubia</i> (water flea)): 3.1 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (<i>Selenastrum capricornutum</i> (green algae)): 61.1 mg/l Exposure time: 96 h
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.077 mg/l Exposure time: 60 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (<i>Daphnia magna</i> (Water flea)): 10 mg/l Exposure time: 16 d
Toxicity to microorganisms	:	IC50 (<i>Nitrosomonas</i> sp.): 21 mg/l Exposure time: 24 h

m-Cresol:

Toxicity to fish	:	LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 8.6 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (<i>Daphnia pulex</i> (Water flea)): > 99.5 mg/l Exposure time: 48 h
Toxicity to fish (Chronic toxicity)	:	NOEC (<i>Pimephales promelas</i> (fathead minnow)): 1.35 mg/l Exposure time: 32 d Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (<i>Daphnia magna</i> (Water flea)): 1 mg/l Exposure time: 21 d Remarks: Based on data from similar materials

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

p-Cresol:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 7.4 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 7.7 mg/l Exposure time: 48 h Method: DIN 38412
Toxicity to algae/aquatic plants	: EC50 (Desmodesmus subspicatus (green algae)): 7.8 mg/l Exposure time: 48 h EC10 (Desmodesmus subspicatus (green algae)): 2.3 mg/l Exposure time: 48 h
Toxicity to fish (Chronic toxicity)	: NOEC (Pimephales promelas (fathead minnow)): 1.35 mg/l Exposure time: 32 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): 1 mg/l Exposure time: 21 d
Toxicity to microorganisms	: IC50 (Nitrosomonas sp.): 260 mg/l Exposure time: 24 h

Persistence and degradability**Components:****Tar, wood:**

Biodegradability	: Result: Not readily biodegradable. Biodegradation: 47 % Exposure time: 28 d Method: OECD Test Guideline 301B
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Rosin:

Biodegradability	: Result: Readily biodegradable. Biodegradation: 71 % Exposure time: 28 d Method: OECD Test Guideline 301D
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Ethylbenzene:

Biodegradability	: Result: Readily biodegradable. Biodegradation: 70 - 80 % Exposure time: 28 d
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Xylene:

Biodegradability	: Result: Readily biodegradable. Biodegradation: > 70 % Exposure time: 28 d Method: OECD Test Guideline 301F Remarks: Based on data from similar materials
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Phenol:

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
 Date of first issue: 14.04.2017

Biodegradability : Result: Readily biodegradable.
 Biodegradation: 62 %
 Exposure time: 10 d
 Method: OECD Test Guideline 301C

m-Cresol:

Biodegradability : Result: Readily biodegradable.
 Biodegradation: 90 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301D

p-Cresol:

Biodegradability : Result: Readily biodegradable.
 Biodegradation: 100 %
 Exposure time: 8 d

Bioaccumulative potential**Components:****Tar, wood:**

Partition coefficient: n-octanol/water : log Pow: 0.2 - 2.02

Rosin:

Partition coefficient: n-octanol/water : log Pow: > 3 - 6.2
 Method: OECD Test Guideline 117

Tar, coal:

Partition coefficient: n-octanol/water : Remarks: No data available

Ethylbenzene:

Partition coefficient: n-octanol/water : log Pow: 3.6

Xylene:

Partition coefficient: n-octanol/water : log Pow: 3.16
 Remarks: Calculation

Dichlofenthion (ISO):

Partition coefficient: n-octanol/water : log Pow: 5.14

Phenol:

Bioaccumulation : Species: Fish
 Bioconcentration factor (BCF): 17.5
 Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 1.47

m-Cresol:

Dichlofenthion Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
7.0	04.04.2023	1552596-00014	Date of first issue: 14.04.2017

|| Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): 17 - 20

|| Partition coefficient: n-octanol/water : log Pow: 1.96

p-Cresol:

|| Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): 17 - 20
Remarks: Based on data from similar materials

|| Partition coefficient: n-octanol/water : log Pow: 1.94

Mobility in soil

No data available

Other adverse effects

No data available

Section 13: Disposal considerations**Disposal methods**

|| Waste from residues : Dispose of in accordance with local regulations.
Do not dispose of waste into sewer.

|| Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous.
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.

Section 14: Transport information**International Regulations****UNRTDG**

UN number : UN 2920

|| Proper shipping name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.
(Sodium hydroxide, Ethylbenzene)

Class : 8

Subsidiary risk : 3

Packing group : II

Labels : 8 (3)

IATA-DGR

UN/ID No. : UN 2920

|| Proper shipping name : Corrosive liquid, flammable, n.o.s.
(Sodium hydroxide, Ethylbenzene)

Class : 8

Subsidiary risk : 3

Packing group : II

Labels : Corrosive, Flammable Liquids

Packing instruction (cargo) : 855

Dichlofenthion Formulation

Version 7.0 Revision Date: 04.04.2023 SDS Number: 1552596-00014 Date of last issue: 01.10.2022
Date of first issue: 14.04.2017

aircraft)
Packing instruction (passenger aircraft) : 851

IMDG-Code

UN number : UN 2920
Proper shipping name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.
(Sodium hydroxide, Ethylbenzene, Dichlofenthion (ISO))
Class : 8
Subsidiary risk : 3
Packing group : II
Labels : 8 (3)
EmS Code : F-E, S-C
Marine pollutant : yes

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

Not applicable for product as supplied.

National Regulations**NZS 5433**

UN number : UN 2920
Proper shipping name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.
(Sodium hydroxide, Ethylbenzene)
Class : 8
Subsidiary risk : 3
Packing group : II
Labels : 8 (3)
Hazchem Code : 3W

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

Section 15: Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****HSNO Approval Number**

HSR100758 Veterinary Medicines Non dispersive Closed System Application Group Standard

HSW Controls

Certified handler certificate not required.

Tracking hazardous substance not required.

Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

The components of this product are reported in the following inventories:

AICS : not determined

DSL : not determined

IECSC : not determined

Dichlofenthion Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
7.0	04.04.2023	1552596-00014	Date of first issue: 14.04.2017

Section 16: Other information

Revision Date : 04.04.2023

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
 ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
 NZ BEI : New Zealand. Biological Exposure Indices
 NZ OEL : New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

ACGIH / TWA : 8-hour, time-weighted average
 ACGIH / C : Ceiling limit
 NZ OEL / WES-TWA : Workplace Exposure Standard - Time Weighted average
 NZ OEL / WES-STEL : Workplace Exposure Standard - Short-Term Exposure Limit
 NZ OEL / WES-Ceiling : Workplace Exposure Standard - Ceiling

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECl - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Sub-

Dichlofenthion Formulation

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stances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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