

# **Dichlofenthion Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 8.0
 28.09.2024
 1552592-00017
 Date of first issue: 14.04.2017

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

1.1 Product identifier

Trade name : Dichlofenthion Formulation

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

Use of the Sub- : Veterinary product

stance/Mixture

Recommended restrictions

on use

Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD

20 Spartan Road

1619 Spartan, South Africa

Telephone : +27119239300

E-mail address of person

responsible for the SDS

EHSDATASTEWARD@msd.com

# 1.4 Emergency telephone number

+1-908-423-6000

# **SECTION 2: Hazards identification**

# 2.1 Classification of the substance or mixture

### Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3 H226: Flammable liquid and vapour.

Acute toxicity, Category 4 H302: Harmful if swallowed.

Skin corrosion, Sub-category 1B H314: Causes severe skin burns and eye damage.

Serious eye damage, Category 1

Skin sensitisation, Category 1

Germ cell mutagenicity, Category 2

Carcinogenicity, Category 1A

H318: Causes serious eye damage.

H317: May cause an allergic skin reaction.

H341: Suspected of causing genetic defects.

H350: May cause cancer if swallowed.

Reproductive toxicity, Category 2 H361d: Suspected of damaging the unborn child.

Specific target organ toxicity - single ex- H370: Causes damage to organs.

posure, Category 1

Specific target organ toxicity - single ex-

posure, Category 3

Specific target organ toxicity - repeated

exposure, Category 2

Opening target organitoxicity - repeated

Aspiration hazard, Category 1

, 5,

H373: May cause damage to organs through prolonged or repeated exposure. H304: May be fatal if swallowed and enters air-

H335: May cause respiratory irritation.

wavs

Short-term (acute) aguatic hazard, Cate- H400: Very toxic to aguatic life.

gory 1



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Long-term (chronic) aquatic hazard, Cat-

egory 1

H410: Very toxic to aquatic life with long lasting

effects.

#### 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms











Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

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. H361d Suspected of damaging the unborn child.

H370 Causes damage to organs.

H373 May cause damage to organs through prolonged or

repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard

Statements

EUH071

Corrosive to the respiratory tract.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

Response:

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. P391 Collect spillage.

Hazardous components which must be listed on the label:

Tar, wood Rosin Tar, coal Ethylbenzene Dichlofenthion (ISO) Sodium hydroxide Phenol

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### **Additional Labelling**

Restricted to professional users.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Vapours may form explosive mixture with air.

# **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	EC-No. Index-No.	
Tar, wood	91722-33-7 294-436-0	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317 Aquatic Chronic 3; H412	>= 10 - < 20
Rosin	8050-09-7 232-475-7 650-015-00-7	Skin Sens. 1; H317	>= 10 - < 20
Tar, coal	8007-45-2 232-361-7 648-081-00-7	Acute Tox. 4; H302 Eye Dam. 1; H318 Skin Sens. 1; H317 Muta. 2; H341 Carc. 1A; H350 STOT SE 1; H370 (Nervous system) STOT SE 3; H335 STOT RE 2; H373 (Respiratory Tract) Aquatic Chronic 2; H411	>= 10 - < 20
Ethylbenzene	100-41-4 202-849-4 601-023-00-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 STOT RE 2; H373 (Auditory system) Asp. Tox. 1; H304 Aquatic Chronic 3; H412	>= 2,5 - < 10
Xylene	1330-20-7 215-535-7 601-022-00-9	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 STOT RE 2; H373	>= 2,5 - < 10



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Dight leforth in 1900	07.47.0	(Auditory system) Asp. Tox. 1; H304 Aquatic Chronic 3; H412	0 10
Dichlofenthion (ISO)	97-17-6 202-564-5 015-068-00-7	Acute Tox. 3; H301 Acute Tox. 4; H332 Acute Tox. 3; H311 Repr. 2; H361d STOT RE 1; H372 (Nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 3 - < 10
		M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100	
Sodium hydroxide	1310-73-2 215-185-5 011-002-00-6	Met. Corr. 1; H290 Skin Corr. 1A; H314 Eye Dam. 1; H318	>= 2 - < 3
Phenol	108-95-2 203-632-7 604-001-00-2	Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Muta. 2; H341 STOT RE 2; H373 (Central nervous system, Kidney, Liver, Skin) Aquatic Chronic 2; H411	>= 1 - < 2,5
m-Cresol	108-39-4 203-577-9 604-004-00-9	Acute Tox. 3; H301 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 1 - < 2,5
p-Cresol	106-44-5 203-398-6 604-004-00-9	Acute Tox. 3; H301 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 1 - < 2,5

For explanation of abbreviations see section 16.



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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

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).

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.

# 4.2 Most important symptoms and effects, both acute and delayed

Risks : Harmful if swallowed.

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 damaging the unborn child.

Causes damage to organs.

May cause damage to organs through prolonged or repeated

exposure.

Causes severe burns.

Corrosive to the respiratory tract.

Causes digestive tract burns.

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



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Treatment : Treat symptomatically and supportively.

### **SECTION 5: Firefighting measures**

5.1 Extinguishing media

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

5.2 Special hazards arising from the substance or mixture

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.

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod: :

ucts

Carbon oxides Metal oxides

Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment:

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances 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.

#### **SECTION 6: Accidental release measures**

# 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

6.2 Environmental precautions

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



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cannot be contained.

### 6.3 Methods and material for containment and cleaning up

Methods for 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 absor-

bent

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 the control of th

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

### **SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling

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-

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 as-

sessment

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 respira-

tory 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



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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.

#### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

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.

Advice on common storage : Do not store with the following product types:

Strong oxidizing agents

Self-reactive substances and mixtures

Organic peroxides Flammable solids Pyrophoric liquids Pyrophoric solids

Self-heating substances and mixtures

Substances and mixtures, which in contact with water, emit

flammable gases

Explosives Gases

Very acutely toxic substances and mixtures

7.3 Specific end use(s)

Specific use(s) : No data available

### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethylbenzene	100-41-4	OEL-RL	40 ppm	ZA OEL
	Further information: danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents, denotes carcinogenicity, which is based on GHS categorisation, including category 1A, 1B			
		TWA	100 ppm 442 mg/m3	2000/39/EC
		STEL	200 ppm 884 mg/m3	2000/39/EC
Xylene	1330-20-7	OEL-RL	200 ppm	ZA OEL
	Further information: danger of cutaneous absorption, Occupational Exposure			
	Limits - Restricted Limits For Hazardous Chemical Agents			
		OEL- RL STEL/C	300 ppm	ZA OEL
	Further information: danger of cutaneous absorption, Occupational Exposure			



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I	Limits - Restr	icted Limits For Haza	ardous Chemical Agents		
		TWA	50 ppm 221 mg/m3	2000/39/EC	
		STEL	100 ppm 442 mg/m3	2000/39/EC	
Dichlofenthion (ISO)	97-17-6	TWA	20 μg/m3 (OEB 3)	Internal	
	Further inform	nation: Skin			
		Wipe limit	200 μg/100 cm <sup>2</sup>	Internal	
Sodium hydroxide	1310-73-2	OEL- RL STEL/C	4 mg/m3	ZA OEL	
		Further information: Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
Phenol	108-95-2	OEL-RL	10 ppm	ZA OEL	
	Further information: danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents				
		TWA	2 ppm 8 mg/m3	2009/161/EU	
		STEL	4 ppm 16 mg/m3	2009/161/EU	
m-Cresol	108-39-4	OEL-RL (inhala- ble fraction and vapour)	40 mg/m3	ZA OEL	
	Further information: danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			onal Exposure	
p-Cresol	106-44-5	OEL-RL (inhala- ble fraction and vapour)	40 mg/m3	ZA OEL	
	Further information: danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents				

# **Biological occupational exposure limits**

Substance name	CAS-No.	Control parameters	Sampling time	Basis
Ethylbenzene	100-41-4	Sum of mandelic acid and phenyl- glyoxylic acid: 0.15 g/g creatinine (Urine)	End of shift	ZA BEI
Xylene	1330-20-7	Methylhippuric acids: 1.5 g/g cre- atinine (Urine)	End of shift	ZA BEI
Phenol	108-95-2	Phenol: 250 mg/g creatinine (Urine)	End of shift	ZA BEI

# Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health ef-	Value
			fects	
Sodium hydroxide	Consumers	Inhalation	Long-term local ef-	1 mg/m3
			fects	
	Workers	Inhalation	Long-term local ef-	1 mg/m3
			fects	
Tar, wood	Workers	Inhalation		70,53 mg/m3



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	Consumers	Inhalation		355,56 mg/m3
	Consumers	Ingestion		10 mg/kg
Dhanal	\\/ -     -   -   -	lab alatia a	I am a tama a mata asia	bw/day
Phenol	Workers	Inhalation	Long-term systemic effects	8 mg/m3
	Workers	Inhalation	Acute local effects	16 mg/m3
	Workers	Skin contact	Long-term systemic effects	1,23 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1,32 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0,4 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,4 mg/kg bw/day
m-Cresol	Workers	Inhalation	Long-term systemic effects	3,5 mg/m3
	Workers	Inhalation	Acute systemic ef- fects	343 mg/m3
	Workers	Skin contact	Long-term systemic effects	0,5 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	1,47 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,75 mg/m3
	Consumers	Inhalation	Acute systemic ef- fects	222 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0,25 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	0,74 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,25 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	0,74 mg/kg bw/day
p-Cresol	Workers	Inhalation	Long-term systemic effects	3,5 mg/m3
	Workers	Inhalation	Acute systemic effects	7 mg/m3
	Workers	Skin contact	Long-term systemic effects	0,5 mg/kg bw/day
	Workers	Skin contact	Acute systemic ef- fects	1 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,75 mg/m3
	Consumers	Inhalation	Acute systemic effects	1,5 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0,25 mg/kg bw/day
	Consumers	Skin contact	Acute systemic ef- fects	0,5 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,25 mg/kg bw/day
Xylene	Workers	Inhalation	Long-term systemic effects	221 mg/m3



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	Workers	Inhalation	Acute systemic effects	442 mg/m3
	Workers	Inhalation	Long-term local ef- fects	221 mg/m3
	Workers	Inhalation	Acute local effects	442 mg/m3
	Workers	Skin contact	Long-term systemic effects	212 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	65,3 mg/m3
	Consumers	Inhalation	Acute systemic ef- fects	260 mg/m3
	Consumers	Inhalation	Long-term local ef- fects	65,3 mg/m3
	Consumers	Inhalation	Acute local effects	260 mg/m3
	Consumers	Skin contact	Long-term systemic effects	125 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	12,5 mg/kg bw/day
Ethylbenzene	Workers	Inhalation	Long-term systemic effects	77 mg/m3
	Workers	Inhalation	Acute local effects	293 mg/m3
	Workers	Skin contact	Long-term systemic effects	180 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	15 mg/m3
	Consumers	Ingestion	Long-term systemic effects	1,6 mg/kg bw/day

# Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
Tar, wood	Fresh water	0,003 mg/l
	Marine water	0,0003 mg/l
	Fresh water sediment	0,006 mg/kg dry
		weight (d.w.)
	Marine sediment	0,0006 mg/kg dry
		weight (d.w.)
	Soil	0,002 mg/kg dry
		weight (d.w.)
Phenol	Fresh water	0,0077 mg/l
	Marine water	0,00077 mg/l
	Intermittent use/release	0,031 mg/l
	Sewage treatment plant	2,1 mg/l
	Fresh water sediment	0,0915 mg/kg
	Marine sediment	0,00915 mg/kg
	Soil	0,136 mg/kg
m-Cresol	Fresh water	0,1 mg/l
	Marine water	0,01 mg/l
	Intermittent use/release	0,076 mg/l
	Sewage treatment plant	1,14 mg/l
	Fresh water sediment	0,71 mg/kg
	Marine sediment	0,071 mg/kg
	Soil	0,0831 mg/kg
p-Cresol	Fresh water	0,1 mg/l
	Marine water	0,01 mg/l



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	Intermittent use/release	0,044 mg/l
	Sewage treatment plant	1,65 mg/l
	Fresh water sediment	0,85 mg/kg
	Marine sediment	0,085 mg/kg
	Soil	0,111 mg/kg
Xylene	Fresh water	0,327 mg/l
	Intermittent use/release	0,327 mg/l
	Marine water	0,327 mg/l
	Sewage treatment plant	6,58 mg/l
	Fresh water sediment	12,46 mg/kg dry weight (d.w.)
	Marine sediment	12,46 mg/kg dry weight (d.w.)
	Soil	2,31 mg/kg dry weight (d.w.)
Ethylbenzene	Fresh water	0,1 mg/l
-	Freshwater - intermittent	0,1 mg/l
	Marine water	0,01 mg/l
	Sewage treatment plant	9,6 mg/l
	Fresh water sediment	13,7 mg/kg dry weight (d.w.)
	Marine sediment	1,37 mg/kg dry weight (d.w.)
	Soil	2,68 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	20 mg/kg food

### 8.2 Exposure controls

### **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

Eye/face 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

aerosols.

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving. Take note that the product is flam-

mable, which may impact the selection of hand protection.

Skin and body protection : Work uniform or laboratory coat.

Additional body garments should be used based upon the task



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being performed (e.g., sleevelets, apron, gauntlets, disposable

suits) to avoid exposed skin surfaces.

Use appropriate degowning techniques to remove potentially

contaminated clothing.

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Filter type : Combined particulates and organic vapour type (A-P)

### **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic 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

Flash point : 30 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Upper explosion limit / Upper

flammability limit

No data available

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/cm³ (20 °C)

Solubility(ies)

Water solubility : No data available Partition coefficient: n- : Not applicable

octanol/water

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available



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Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Flammability (liquids) : Not applicable

Particle size : Not applicable

### **SECTION 10: Stability and reactivity**

### 10.1 Reactivity

Not classified as a reactivity hazard.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Flammable liquid and vapour.

Vapours may form explosive mixture with air. Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

# 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

### **SECTION 11: Toxicological information**

# 11.1 Information on toxicological effects

Information on likely routes of : Inhalation exposure Skin contact

Ingestion

Eye contact

**Acute toxicity** 

Harmful if swallowed.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: 1.713 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l

Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method



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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 tox-

icity

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 : LD50 (Rat): 3.523 mg/kg

Method: Directive 67/548/EEC, Annex V, B.1.

Acute inhalation toxicity : Acute toxicity estimate: 11 mg/l

Exposure time: 4 h
Test atmosphere: vapour
Method: Expert judgement

Remarks: Based on national or regional regulation.

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



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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 inhalation toxicity : Assessment: Corrosive to the respiratory tract.

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 : LC0 (Rat): 0,9 mg/l

Exposure time: 8 h

Test atmosphere: dust/mist

Assessment: Corrosive to the respiratory tract.

Acute toxicity estimate (Humans): > 0,9 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Expert judgement

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 : Assessment: Corrosive to the respiratory tract.

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



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Skin corrosion/irritation

Causes severe burns.

**Components:** 

Tar, wood:

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.



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**Components:** 

Tar, wood:

Result : Irritation to eyes, reversing within 7 days

Rosin:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

Tar, coal:

Species : Human

Result : Irreversible effects on the eye

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

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

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



# **Dichlofenthion Formulation**

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Result : positive

Assessment : Probability or evidence of low to moderate skin sensitisation

rate in humans

Rosin:

Assessment : Probability or evidence of skin sensitisation in humans

Remarks : Based on national or regional regulation.

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



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#### 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

Rosin:

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

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

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

Germ cell mutagenicity- As-

sessment

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.

Ethylbenzene:

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

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

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

Result: negative



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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- As-

sessment

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

p-Cresol:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro



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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.

#### **Components:**

#### Tar, coal:

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

Carcinogenicity - Assess-

ment

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 hu-

mans.

# 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

Result : negative

### m-Cresol:

Species : Mouse, males
Application Route : Ingestion
Exposure time : 105 weeks



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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 - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

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 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 develop-

ment

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 develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Inhalation Method: OECD Test Guideline 414

Result: negative

Xylene:



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Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: inhalation (vapour)

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (vapour)

Result: negative

Dichlofenthion (ISO):

Effects on foetal develop-

ment

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 tera-

togenic effects

Remarks: Based on data from similar materials

Reproductive toxicity - As-

sessment

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 develop-

ment

Test Type: Embryo-foetal development

Species: Mouse

Application Route: Ingestion Method: OECD Test Guideline 414

Result: negative

m-Cresol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

**Application Route: Ingestion** 

Result: negative

Effects on foetal develop-

ment

Test Type: Prenatal development toxicity study (teratogenicity)

Species: Rat

Application Route: Ingestion

Result: negative



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p-Cresol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

**Application Route: Ingestion** 

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion

Result: negative

STOT - single exposure

May cause respiratory irritation. Causes damage to organs. Corrosive to the respiratory tract.

**Components:** 

Tar, coal:

Exposure routes : Ingestion
Target Organs : Nervous system

Assessment : Shown to produce significant health effects in animals at con-

centrations of 300 mg/kg bw or less.

Xylene:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

**Components:** 

Tar, coal:

Target Organs : Respiratory Tract

Assessment : Shown to produce significant health effects in animals at con-

centrations 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 con-

centrations 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 con-

centrations 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 con-



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centrations 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:

П

Target Organs : Central nervous system, Kidney, Liver, Skin

Assessment : May cause damage to organs through prolonged or repeated

exposure.

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

Species: RatNOAEL: 75 mg/kgLOAEL: 250 mg/kgApplication 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



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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

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.



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### 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 ef-

fects

Ingestion : Symptoms: Nausea, Diarrhoea, Vomiting, sweating, Lachry-

mation, constriction of pupils, Central nervous system depression, Gastrointestinal disturbance, bronchospasm, central

nervous system effects, Oedema

# **SECTION 12: Ecological information**

### 12.1 Toxicity

### **Components:**

#### Tar, wood:

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 28 mg/l

aquatic invertebrates Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic : EC50 (Desmodesmus subspicatus (green algae)): 17 mg/l

plants 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



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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

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

Exposure time. 46 ft

EC50 (Pseudokirchneriella subcapitata (green algae)): 3,6 mg/l

Exposure time: 96 h

NOEC (Pseudokirchneriella subcapitata (green algae)): 3,4

ma/l

Exposure time: 96 h

Toxicity to microorganisms : EC50 (Nitrosomonas sp.): 96 mg/l



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Exposure time: 24 h

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC: 0,96 mg/l Exposure time: 7 d

Species: Ceriodaphnia dubia (water flea)

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 microorganisms : NOEC : > 100 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

Toxicity to fish (Chronic tox-

icitv)

NOEC: > 0,1 - < 1 mg/l

Exposure time: 35 d

Species: Danio rerio (zebra fish) Method: OECD Test Guideline 210

Remarks: Based on data from similar materials

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

EL10: > 1 - 10 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

Dichlofenthion (ISO):

Toxicity to fish : LC50 (No species specified): 0,64 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

LC50 (Lepomis macrochirus (Bluegill sunfish)): 1,23 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0,0011 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

M-Factor (Acute aquatic tox- :

icity)

100

M-Factor (Chronic aquatic

toxicity)

: 100



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Phenol:

Toxicity to fish LC50 (Pimephales promelas (fathead minnow)): 24,9 mg/l

Exposure time: 96 h

Toxicity to daphnia and other:

aquatic invertebrates

EC50 (Ceriodaphnia dubia (water flea)): 3,1 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

EC50 (Selenastrum capricornutum (green algae)): 61,1 mg/l

Exposure time: 96 h

Toxicity to microorganisms IC50 (Nitrosomonas sp.): 21 mg/l

Exposure time: 24 h

Toxicity to fish (Chronic tox-

icity)

NOEC: 0,077 mg/l

Exposure time: 60 d

Toxicity to daphnia and other: aquatic invertebrates (Chron-

ic toxicity)

NOEC: 10 mg/l Exposure time: 16 d

Species: Daphnia magna (Water flea)

m-Cresol:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 8,6 mg/l

Exposure time: 96 h

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia pulex (Water flea)): > 99,5 mg/l

Exposure time: 48 h

Toxicity to fish (Chronic tox-

icity)

: NOEC: 1,35 mg/l Exposure time: 32 d

Species: Pimephales promelas (fathead minnow) Remarks: Based on data from similar materials

Toxicity to daphnia and other: aquatic invertebrates (Chron-

ic toxicity)

NOEC: 1 mg/l

Exposure time: 21 d Species: Daphnia magna (Water flea)

Remarks: Based on data from similar materials

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 microorganisms IC50 (Nitrosomonas sp.): 260 mg/l

Exposure time: 24 h



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Toxicity to fish (Chronic tox-

NOEC: 1,35 mg/l

Exposure time: 32 d

Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other: aquatic invertebrates (Chron-

NOEC: 1 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea) ic toxicity)

### 12.2 Persistence and degradability

### **Components:**

Tar, wood:

Biodegradability Result: Not readily biodegradable.

Biodegradation: 47 % Exposure time: 28 d

Method: OECD Test Guideline 301B

Rosin:

Biodegradability Result: Readily biodegradable.

> Biodegradation: 71 % Exposure time: 28 d

Method: OECD Test Guideline 301D

Ethylbenzene:

Biodegradability Result: Readily biodegradable.

Biodegradation: 70 - 80 %

Exposure time: 28 d

Xylene:

Biodegradability Result: Readily biodegradable.

Biodegradation: > 70 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

Remarks: Based on data from similar materials

Phenol:

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:



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Biodegradability : Result: Readily biodegradable.

Biodegradation: 100 % Exposure time: 8 d

### 12.3 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:

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



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#### 12.4 Mobility in soil

No data available

#### 12.5 Results of PBT and vPvB assessment

#### **Product:**

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher.

#### 12.6 Other adverse effects

#### **Product:**

Endocrine disrupting poten-

tial

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

According to the European Waste Catalogue, Waste Codes

are not product specific, but application specific.

Waste codes should be assigned by the user, preferably in

discussion with the waste disposal authorities.

Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling 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**

#### 14.1 UN number

ADN : UN 2920
ADR : UN 2920
RID : UN 2920
IMDG : UN 2920
IATA : UN 2920

14.2 UN proper shipping name

**ADN** : CORROSIVE LIQUID, FLAMMABLE, N.O.S.

(Sodium hydroxide, Ethylbenzene)



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ADR : CORROSIVE LIQUID, FLAMMABLE, N.O.S.

(Sodium hydroxide, Ethylbenzene)

RID : CORROSIVE LIQUID, FLAMMABLE, N.O.S.

(Sodium hydroxide, Ethylbenzene)

IMDG : CORROSIVE LIQUID, FLAMMABLE, N.O.S.

(Sodium hydroxide, Ethylbenzene, Dichlofenthion (ISO))

**IATA** : Corrosive liquid, flammable, n.o.s.

(Sodium hydroxide, Ethylbenzene)

14.3 Transport hazard class(es)

Class Subsidiary risks **ADN** 8 3 **ADR** 8 3 3 RID 8 **IMDG** 3 8 3 **IATA** 8

# 14.4 Packing group

ADN

Packing group : II
Classification Code : CF1
Hazard Identification Number : 83
Labels : 8 (3)

**ADR** 

Packing group : II
Classification Code : CF1
Hazard Identification Number : 83
Labels : 8 (3)
Tunnel restriction code : (D/E)

**RID** 

Packing group : II
Classification Code : CF1
Hazard Identification Number : 83
Labels : 8 (3)

**IMDG** 

Packing group : II
Labels : 8 (3)
EmS Code : F-E, S-C

IATA (Cargo)

Packing instruction (cargo : 855

aircraft)

Packing instruction (LQ) : Y840 Packing group : II

Labels : Corrosive, Flammable Liquids

IATA (Passenger)

Packing instruction (passen-

ger aircraft)

851



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Packing instruction (LQ) : Y840 Packing group : II

Labels : Corrosive, Flammable Liquids

14.5 Environmental hazards

**ADN** 

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

**IMDG** 

Marine pollutant : yes

#### 14.6 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.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

### **SECTION 15: Regulatory information**

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

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

AICS : not determined

DSL : not determined

IECSC : not determined

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

#### **SECTION 16: Other information**

Other information : Items where changes have been made to the previous version

are highlighted in the body of this document by two vertical

lines.

**Full text of H-Statements** 

H225
Highly flammable liquid and vapour.
H226
Flammable liquid and vapour.
H290
May be corrosive to metals.

H301 : Toxic if swallowed. H302 : Harmful if swallowed.

H304 : May be fatal if swallowed and enters airways.



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H311 H312 H314 H315 H317 H318 H319 H331 H332 H335 H341 H350 H361d H370 H372			Causes skin irritat May cause an alle Causes serious ey Causes serious ey Toxic if inhaled. Harmful if inhaled. May cause respira Suspected of caus May cause cancel Suspected of dam Causes damage to Causes damage to exposure.	t with skin. in burns and eye damage. ion. ergic skin reaction. ye damage. ye irritation.  atory irritation. sing genetic defects. r if swallowed. haging the unborn child. o organs. o organs through prolonged or repeated	
H410		:		tic life with long lasting effects.	
H411		:	Toxic to aquatic life with long lasting effects.		
H412		:	Harmful to aquation	clife with long lasting effects.	
Full te	xt of other abbreviation	ons			
Acute 7	Гох.	:	Acute toxicity		
Aquatio	c Acute	:	Short-term (acute)	) aquatic hazard	

Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard

Asp. Tox. : Aspiration hazard Carc. : Carcinogenicity Eye Dam. : Serious eye damage

Eye Irrit.

Flam. Liq.

Met. Corr.

Muta.

Repr.

Skin Corr.

Skin Irrit.

Eye irritation

Flammable liquids

Corrosive to metals

Germ cell mutagenicity

Reproductive toxicity

Skin corrosion

Skin irritation

Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure
STOT SE : Specific target organ toxicity - single exposure

2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first

list of indicative occupational exposure limit values

2009/161/EU : Europe. COMMISSION DIRECTIVE 2009/161/EU establishing

a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending

Commission Directive 2000/39/EC

ZA BEI : South Africa. The Regulations for Hazardous Chemical

Agents, Biological Exposure Indices

ZA OEL : South Africa. The Regulations for Hazardous Chemical

Agents, Occupational Exposure Limits

2000/39/EC / TWA : Limit Value - eight hours 2000/39/EC / STEL : Short term exposure limit 2009/161/EU / TWA : Limit Value - eight hours 2009/161/EU / STEL : Short term exposure limit

ZA OEL / OEL-RL : Occupational Exposure Limit Restricted limit - 8- hour expo-



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sure or equivalent (12 hour shifts)

ZA OEL / OEL- RL STEL/C : Occupational Exposure Limit Restricted limit - Short term oc-

cupational exposure limits / ceiling limits

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; 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; 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; KECI - 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI -Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

#### **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/

# Classification of the mixture:

### Classification procedure:

Flam. Liq. 3	H226	Based on product data or assessment
Acute Tox. 4	H302	Calculation method
Skin Corr. 1B	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method
Muta. 2	H341	Calculation method
Carc. 1A	H350	Calculation method
Repr. 2	H361d	Calculation method



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STOT SE 1		H370	Calculation method
STOT SE 3		H335	Calculation method
STOT RE 2		H373	Calculation method
Asp. Tox. 1		H304	Based on product data or assessment
Aquatic Acute 1		H400	Calculation method
Aquatic Chronic 1		H410	Calculation method

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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.

ZA / EN