

**Deltamethrin (with Xylene) Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
8.0	14.04.2025	2972466-00019	Date of first issue: 02.07.2018

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name : Deltamethrin (with Xylene) Formulation

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

Use of the Sub-  
stance/Mixture : Veterinary product

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

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**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.
Acute toxicity, Category 4	H332: Harmful if inhaled.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, Category 1B	H340: May cause genetic defects.
Carcinogenicity, Category 1B	H350: May cause cancer.
Reproductive toxicity, Category 2	H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.
Specific target organ toxicity - single exposure, Category 3	H335: May cause respiratory irritation.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.





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gory 1 Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.
Endocrine disruptor for environment, Category 1	EUH430: May cause endocrine disruption in the environment

## 2.2 Label elements

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

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. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H340 May cause genetic defects. H350 May cause cancer. H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects. EUH430 May cause endocrine disruption in the environment
Precautionary statements	:	<b>Prevention:</b> P201 Obtain special instructions before use. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  <b>Response:</b> P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P391 Collect spillage.

Hazardous components which must be listed on the label:

Ethylbenzene  
 Xylene  
 deltamethrin (ISO)  
 Solvent naphtha (petroleum), light aromatic

## Additional Labelling

Restricted to professional users.

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**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.

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

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	Classification	Concentration (% w/w)
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	>= 30 - < 50
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 (Auditory system) Asp. Tox. 1; H304 Aquatic Chronic 3; H412	>= 30 - < 50
4-Nonylphenol, branched, ethoxylated	127087-87-0	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ED ENV 1; EUH430  M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10	>= 10 - < 20
deltamethrin (ISO)	52918-63-5 258-256-6 607-319-00-X	Acute Tox. 3; H301 Acute Tox. 3; H331 Eye Irrit. 2; H319 Skin Sens. 1A; H317 Repr. 2; H361fd STOT SE 3; H335	>= 3 - < 10

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		STOT RE 1; H372 (Central nervous system, Immune system) STOT RE 1; H372 (Central nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 1.000.000 M-Factor (Chronic aquatic toxicity): 1.000.000	
2,6-Di-tert-butyl-p-cresol	128-37-0 204-881-4	Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	$\geq 2,5 - < 10$
Solvent naphtha (petroleum), light aromatic	64742-95-6 265-199-0 649-356-00-4	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Muta. 1B; H340 Carc. 1B; H350 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	$\geq 0,25 - < 1$
Methanol	67-56-1 200-659-6 603-001-00-X	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370 (optic nerve, Central nervous system)	$\geq 0,1 - < 1$

For explanation of abbreviations see section 16.

## 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 advice immediately.  
 When symptoms persist or in all cases of doubt seek medical advice.

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- 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.
- 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.  
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.
- 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 : This product contains a pyrethroid.  
Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.
- Harmful if swallowed or if inhaled.  
May be fatal if swallowed and enters airways.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause respiratory irritation.  
May cause genetic defects.  
May cause cancer.  
Suspected of damaging fertility. Suspected of damaging the unborn child.  
May cause damage to organs through prolonged or repeated exposure.

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

- Treatment : Treat symptomatically and supportively.

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**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
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 products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Bromine compounds

**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 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.

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**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 protective 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 cannot be contained.

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**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 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.

**6.4 Reference to other sections**

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

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**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 equipment.
Advice on safe handling	:	Do not get on skin or clothing. Do not breathe mist or 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.

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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/m <sup>3</sup>	2000/39/EC
		STEL	200 ppm 884 mg/m <sup>3</sup>	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 Limits - Restricted Limits For Hazardous Chemical Agents			
		TWA	50 ppm	2000/39/EC



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			221 mg/m <sup>3</sup>	
		STEL	100 ppm 442 mg/m <sup>3</sup>	2000/39/EC
deltamethrin (ISO)	52918-63-5	TWA	15 µg/m <sup>3</sup> (OEB 3)	Internal
	Further information: DSEN, Skin			
		Wipe limit	100 µg/100 cm <sup>2</sup>	Internal
Methanol	67-56-1	OEL-RL	400 ppm	ZA OEL
	Further information: danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
		OEL- RL STEL/C	500 ppm	ZA OEL
	Further information: danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
		TWA	200 ppm 260 mg/m <sup>3</sup>	2006/15/EC

## Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
Ethylbenzene	100-41-4	Sum of mandelic acid and phenylglyoxylic acid: 0.15 g/g creatinine (Urine)	End of shift	ZA BEI
Xylene	1330-20-7	Methylhippuric acids: 1.5 g/g creatinine (Urine)	End of shift	ZA BEI
Methanol	67-56-1	Methanol: 15 mg/l (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 effects	Value
Ethylbenzene	Workers	Inhalation	Long-term systemic effects	77 mg/m <sup>3</sup>
	Workers	Inhalation	Acute local effects	293 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	180 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	15 mg/m <sup>3</sup>
	Consumers	Ingestion	Long-term systemic effects	1,6 mg/kg bw/day
Xylene	Workers	Inhalation	Long-term systemic effects	221 mg/m <sup>3</sup>
	Workers	Inhalation	Acute systemic effects	442 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term local effects	221 mg/m <sup>3</sup>
	Workers	Inhalation	Acute local effects	442 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	212 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	65,3 mg/m <sup>3</sup>
	Consumers	Inhalation	Acute systemic ef-	260 mg/m <sup>3</sup>

## SAFETY DATA SHEET



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			fects	
	Consumers	Inhalation	Long-term local effects	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
2,6-Di-tert-butyl-p-cresol	Workers	Inhalation	Long-term systemic effects	3,5 mg/m3
	Workers	Dermal	Long-term systemic effects	0,5 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,86 mg/m3
	Consumers	Dermal	Long-term systemic effects	0,25 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,25 mg/kg bw/day
Methanol	Workers	Inhalation	Long-term systemic effects	130 mg/m3
	Workers	Inhalation	Acute systemic effects	130 mg/m3
	Workers	Inhalation	Long-term local effects	130 mg/m3
	Workers	Inhalation	Acute local effects	130 mg/m3
	Workers	Skin contact	Long-term systemic effects	20 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	20 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	26 mg/m3
	Consumers	Inhalation	Acute systemic effects	26 mg/m3
	Consumers	Inhalation	Long-term local effects	26 mg/m3
	Consumers	Inhalation	Acute local effects	26 mg/m3
	Consumers	Skin contact	Long-term systemic effects	4 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	4 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	4 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	4 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
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

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		weight (d.w.)
	Soil	2,68 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	20 mg/kg food
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.)
2,6-Di-tert-butyl-p-cresol	Fresh water	0,199 µg/l
	Intermittent use/release	0,02 µg/l
	Marine water	0,02 µg/l
	Sewage treatment plant	0,17 mg/l
	Fresh water sediment	0,0996 mg/kg dry weight (d.w.)
	Marine sediment	0,00996 mg/kg dry weight (d.w.)
	Soil	0,04769 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	8,33 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 flammable, 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 being performed (e.g., sleevelets, apron, gauntlets, disposable

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Respiratory protection : suits) to avoid exposed skin surfaces.  
Use appropriate degowning techniques to remove potentially contaminated clothing.

Filter type : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.  
: Combined particulates and organic vapour type (A-P)

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Appearance	: liquid
Colour	: clear yellow
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: 38 °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	: No data available
Solubility(ies)	
Water solubility	: No data available
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	

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

**9.2 Other information**

Molecular weight	:	No data available
Particle size	:	Not applicable

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**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.
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**10.4 Conditions to avoid**

Conditions to avoid	:	Heat, flames and sparks.
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**10.5 Incompatible materials**

Materials to avoid	:	Oxidizing agents
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**10.6 Hazardous decomposition products**

No hazardous decomposition products are known.

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**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

Information on likely routes of exposure	:	Inhalation Skin contact Ingestion Eye contact
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**Acute toxicity**

**II** Harmful if swallowed or if inhaled.

**Product:**

Acute oral toxicity	:	Acute toxicity estimate: 1.314 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 11 mg/l Exposure time: 4 h

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Test atmosphere: vapour  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg  
Method: Calculation method

**Components:****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.

**4-Nonylphenol, branched, ethoxylated:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Remarks: Based on data from similar materials  
Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg  
Remarks: Based on data from similar materials

**deltamethrin (ISO):**

Acute oral toxicity : LD50 (Rat): 66,7 mg/kg  
LD50 (Rat): 9 - 139 mg/kg  
LD50 (Mouse): 19 - 34 mg/kg  
Acute inhalation toxicity : LC50 (Rat): 0,8 mg/l  
Exposure time: 2 h  
Test atmosphere: dust/mist  
Acute dermal toxicity : LD50 (Rabbit): 2.000 mg/kg  
LD50 (Rat): > 800 mg/kg

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Acute toxicity (other routes of administration) : LD50 (Rat): 2,5 mg/kg  
Application Route: Intravenous

LD50 (Mouse): 10 mg/kg  
Application Route: Intraperitoneal

**2,6-Di-tert-butyl-p-cresol:**

Acute oral toxicity : LD50 (Rat): > 6.000 mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

**Solvent naphtha (petroleum), light aromatic:**

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5,61 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

**Methanol:**

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

Acute inhalation toxicity : Acute toxicity estimate: 3 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: 300 mg/kg  
Method: Expert judgement  
Remarks: Based on national or regional regulation.

**Skin corrosion/irritation**

Causes skin irritation.

**Components:****Xylene:**

Species : Rabbit  
Result : Skin irritation

**deltamethrin (ISO):**

Species : Rabbit  
Result : No skin irritation

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**2,6-Di-tert-butyl-p-cresol:**

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: No skin irritation
Remarks	: Based on data from similar materials

**Solvent naphtha (petroleum), light aromatic:**

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: Skin irritation

**Methanol:**

Species	: Rabbit
Result	: No skin irritation

**Serious eye damage/eye irritation**

|| Causes serious eye irritation.

**Components:****Xylene:**

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

**deltamethrin (ISO):**

Species	: Rabbit
Result	: Moderate eye irritation

**2,6-Di-tert-butyl-p-cresol:**

Species	: Rabbit
Method	: OECD Test Guideline 405
Result	: No eye irritation
Remarks	: Based on data from similar materials

**Solvent naphtha (petroleum), light aromatic:**

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

**Methanol:**

Species	: Rabbit
Result	: No eye irritation

**Respiratory or skin sensitisation****Skin sensitisation**

|| May cause an allergic skin reaction.

**Respiratory sensitisation**

|| Not classified based on available information.



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**Components:****Xylene:**

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

**4-Nonylphenol, branched, ethoxylated:**

Test Type	: Human repeat insult patch test (HRIPT)
Exposure routes	: Skin contact
Species	: Humans
Result	: negative
Remarks	: Based on data from similar materials

**deltamethrin (ISO):**

Test Type	: Maximisation Test
Exposure routes	: Dermal
Species	: Guinea pig
Result	: negative

Test Type	: Human repeat insult patch test (HRIPT)
Exposure routes	: Dermal
Species	: Humans
Result	: positive

**2,6-Di-tert-butyl-p-cresol:**

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

**Solvent naphtha (petroleum), light aromatic:**

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

**Methanol:**

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

**Germ cell mutagenicity**

|| May cause genetic defects.

**Components:****Ethylbenzene:**

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES)
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		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
<b>Xylene:</b>		
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 mammalian cells Result: negative
Genotoxicity in vivo	:	Test Type: Rodent dominant lethal test (germ cell) (in vivo) Species: Mouse Application Route: Skin contact Result: negative
<b>deltamethrin (ISO):</b>		
Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative
		Test Type: DNA Repair Test system: Escherichia coli Result: negative
		Test Type: Chromosomal aberration Test system: Chinese hamster ovary cells Result: negative
		Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster lung cells Concentration: LOAEL: 20 mg/kg Result: positive
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse

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Application Route: Oral

Result: negative

Test Type: dominant lethal test

Species: Mouse

Application Route: Oral

Result: negative

Test Type: sister chromatid exchange assay

Species: Mouse

Cell type: Bone marrow

Application Route: Oral

Result: negative

**2,6-Di-tert-butyl-p-cresol:**

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

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

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

**Solvent naphtha (petroleum), light aromatic:**

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

Test Type: In vitro mammalian cell gene mutation test

Result: positive

Genotoxicity in vivo : Test Type: Sister chromatid exchange analysis in spermatogonia  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: positive

Germ cell mutagenicity- Assessment : Positive result(s) from in vivo heritable germ cell mutagenicity tests in mammals

**Methanol:**

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

Result: negative

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	Test Type: in vitro micronucleus test
	Result: negative
Genotoxicity in vivo	: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
	Species: Mouse
	Application Route: Intraperitoneal injection
	Result: negative

**Carcinogenicity**

May cause cancer.

**Components:****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.

**Xylene:**

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

**deltamethrin (ISO):**

Species	: Mouse, male and female
Application Route	: oral (feed)
Exposure time	: 104 weeks
NOAEL	: 8 mg/kg body weight
LOAEL	: 4 mg/kg body weight
Result	: positive
Target Organs	: Lymph nodes

Species	: Rat, male and female
Application Route	: oral (feed)
Exposure time	: 2 Years
Result	: negative

Species	: Dog, male and female
Application Route	: oral (feed)
Exposure time	: 2 Years
NOAEL	: 1 mg/kg body weight
Result	: negative

**2,6-Di-tert-butyl-p-cresol:**

Species	: Rat
Application Route	: Ingestion

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Exposure time	: 22 Months
Result	: negative

**Solvent naphtha (petroleum), light aromatic:**

Species	: Mouse
Application Route	: Skin contact
Exposure time	: 2 Years
Result	: positive

Carcinogenicity - Assessment	: Sufficient evidence of carcinogenicity in animal experiments
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**Methanol:**

Species	: Monkey
Application Route	: inhalation (vapour)
Exposure time	: 7 Months
Result	: negative

**Reproductive toxicity**

Suspected of damaging fertility. Suspected of damaging the unborn child.

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

**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

**deltamethrin (ISO):**

Effects on fertility	: Test Type: Three-generation reproduction toxicity study Species: Rat Application Route: oral (feed) Early Embryonic Development: NOAEL: 50 mg/kg body weight
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		<p>Symptoms: No effects on fertility, Embryo-foetal toxicity</p> <p>Remarks: Significant toxicity observed in testing</p> <p>Test Type: Two-generation reproduction toxicity study</p> <p>Species: Rat</p> <p>Application Route: Oral</p> <p>Early Embryonic Development: LOAEL: 84 - 149 mg/kg body weight</p> <p>Symptoms: No effects on fertility, Embryo-foetal toxicity</p> <p>Test Type: Fertility</p> <p>Species: Rat, male</p> <p>Application Route: Oral</p> <p>Fertility: LOAEL: 1 mg/kg body weight</p> <p>Symptoms: Effects on fertility</p> <p>Target Organs: Testes</p>
Effects on foetal development	:	<p>Test Type: Development</p> <p>Species: Mouse</p> <p>Application Route: oral (gavage)</p> <p>Developmental Toxicity: LOAEL: 1 mg/kg body weight</p> <p>Result: Skeletal malformations</p> <p>Remarks: Maternal toxicity observed.</p> <p>Test Type: Development</p> <p>Species: Rat, female</p> <p>Developmental Toxicity: NOAEL: 10 mg/kg body weight</p> <p>Symptoms: No effects on foetal development</p> <p>Test Type: Development</p> <p>Species: Rabbit, female</p> <p>Application Route: oral (gavage)</p> <p>Developmental Toxicity: NOAEL: 16 mg/kg body weight</p> <p>Symptoms: No effects on foetal development</p>
Reproductive toxicity - Assessment	:	<p>Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.</p>

**2,6-Di-tert-butyl-p-cresol:**

Effects on fertility	:	<p>Test Type: Two-generation reproduction toxicity study</p> <p>Species: Rat</p> <p>Application Route: Ingestion</p> <p>Result: negative</p>
Effects on foetal development	:	<p>Test Type: Embryo-foetal development</p> <p>Species: Rat</p> <p>Application Route: Ingestion</p> <p>Result: negative</p>

**Solvent naphtha (petroleum), light aromatic:**

Effects on fertility	:	<p>Test Type: Reproduction/Developmental toxicity screening test</p> <p>Species: Rat</p> <p>Application Route: inhalation (vapour)</p>
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Result: negative
Effects on foetal development : Test Type: Embryo-foetal development Species: Rat Application Route: inhalation (vapour) Result: negative

**Methanol:**

Effects on fertility : Test Type: One-generation reproduction toxicity study Species: Monkey Application Route: inhalation (vapour) Result: negative
Effects on foetal development : Test Type: Reproduction/Developmental toxicity screening test Species: Monkey Application Route: inhalation (vapour) Result: negative

**STOT - single exposure**

May cause respiratory irritation.

**Components:****Xylene:**

Assessment : May cause respiratory irritation.

**deltamethrin (ISO):**

Assessment : May cause respiratory irritation.

**Solvent naphtha (petroleum), light aromatic:**

Assessment : May cause drowsiness or dizziness.

**Methanol:**

Target Organs : optic nerve, Central nervous system
Assessment : Causes damage to organs.

**STOT - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

**Components:****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

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Assessment : Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d.

**deltamethrin (ISO):**

Exposure routes : Ingestion  
Target Organs : Central nervous system, Immune system  
Assessment : Causes damage to organs through prolonged or repeated exposure.

Exposure routes : inhalation (dust/mist/fume)  
Target Organs : Central nervous system  
Assessment : Causes damage to organs through prolonged or repeated exposure.

**2,6-Di-tert-butyl-p-cresol:**

Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

**Repeated dose toxicity****Components:****Ethylbenzene:**

Species : Rat  
LOAEL : 0,868 mg/l  
Application Route : inhalation (vapour)  
Exposure time : 13 Weeks

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

**4-Nonylphenol, branched, ethoxylated:**

Species : Rat  
NOAEL : > 100 mg/kg  
Application Route : Ingestion  
Exposure time : 90 Days  
Remarks : Based on data from similar materials



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**deltamethrin (ISO):**

Species	: Rat, male and female
NOAEL	: 1 mg/kg
LOAEL	: 2,5 mg/kg
Application Route	: Oral
Exposure time	: 13 Weeks
Target Organs	: Nervous system
Symptoms	: hyperexcitability

Species	: Rat
LOAEL	: 3 mg/m <sup>3</sup>
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 2 wk / 5 d/wk / 6 h/d
Symptoms	: Local irritation, respiratory tract irritation

Species	: Dog
NOAEL	: 0,1 mg/kg
LOAEL	: 1 mg/kg
Application Route	: Oral
Exposure time	: 13 Weeks
Target Organs	: Nervous system
Symptoms	: Dilatation of the pupil, Vomiting, Tremors, Diarrhoea, Salivation

Species	: Rat
NOAEL	: 14 mg/kg
LOAEL	: 54 mg/kg
Application Route	: Oral
Exposure time	: 91 d
Target Organs	: Nervous system

Species	: Mouse
LOAEL	: 6 mg/kg
Application Route	: Oral
Exposure time	: 12 Weeks
Target Organs	: Immune system
Symptoms	: immune system effects

**2,6-Di-tert-butyl-p-cresol:**

Species	: Rat
NOAEL	: 25 mg/kg
Application Route	: Ingestion
Exposure time	: 22 Months

**Solvent naphtha (petroleum), light aromatic:**

Species	: Rat
LOAEL	: 500 mg/kg
Application Route	: Ingestion
Exposure time	: 28 Days

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**Aspiration toxicity**

|| May be fatal if swallowed and enters airways.

**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.

**Solvent naphtha (petroleum), light aromatic:**

|| 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:****deltamethrin (ISO):**

Inhalation	: Symptoms: respiratory tract irritation, Dizziness, Sweating, Headache, Nausea, Vomiting, anorexia, Fatigue, tingling, Palpitation, Blurred vision, muscle twitching
Skin contact	: Symptoms: Skin irritation, Erythema, pruritis, Headache, Nausea, Vomiting, Dizziness, tingling, Sweating, muscle twitching, Blurred vision, Fatigue, anorexia, Allergic reactions
Ingestion	: Symptoms: muscle pain, Small pupils

**SECTION 12: Ecological information****12.1 Toxicity****Components:****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 microorganisms	: EC50 (Nitrosomonas sp.): 96 mg/l

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Exposure time: 24 h

Toxicity to daphnia and other aquatic invertebrates (Chronic 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 toxicity) : 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 (Chronic 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

**4-Nonylphenol, branched, ethoxylated:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 0,1 - 1 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0,1 - 1 mg/l  
Exposure time: 48 h  
Method: ISO 6341  
Remarks: The test was conducted according to guideline  
Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 1 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: The test was conducted according to guideline  
Based on data from similar materials

NOEC (Raphidocelis subcapitata (freshwater green alga)): &gt; 1

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mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201  
 Remarks: The test was conducted according to guideline  
 Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC10 (activated sludge): > 1 mg/l  
 Exposure time: 3 h  
 Method: OECD Test Guideline 209  
 Remarks: The test was conducted according to guideline  
 Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC: > 0,1 - 1 mg/l  
 Exposure time: 100 d  
 Species: Oryzias latipes (Japanese medaka)  
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0,001 - 0,01 mg/l  
 Exposure time: 28 d  
 Species: Mysis bahia (opossum shrimp)  
 Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity) : 10

**deltamethrin (ISO):**

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 0,00048 mg/l  
 Exposure time: 96 h

LC50 (Oncorhynchus mykiss (rainbow trout)): 0,00039 mg/l  
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Mysis bahia (opossum shrimp)): 0,0037 µg/l  
 Exposure time: 48 h

EC50 (Daphnia magna (Water flea)): 0,0035 mg/l  
 Exposure time: 48 h

LC50 (Gammarus fasciatus (freshwater shrimp)): 0,0003 µg/l  
 Exposure time: 96 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 9,1 mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201  
 Remarks: No toxicity at the limit of solubility

M-Factor (Acute aquatic toxicity) : 1.000.000

Toxicity to fish (Chronic toxicity) : NOEC: 0,000022 mg/l

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icity)	Exposure time: 36 d
	Species: Pimephales promelas (fathead minnow)
	NOEC: 0,000017 mg/l
	Exposure time: 260 d
	Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: 0,0041 µg/l
	Exposure time: 21 d
	Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity)	: 1.000.000
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**2,6-Di-tert-butyl-p-cresol:**

Toxicity to fish	: LC50 (Danio rerio (zebra fish)): > 0,57 mg/l
	Exposure time: 96 h
	Method: Directive 67/548/EEC, Annex V, C.1.

Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0,48 mg/l
	Exposure time: 48 h
	Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0,24 mg/l
	Exposure time: 72 h
	Method: OECD Test Guideline 201

	NOEC (Pseudokirchneriella subcapitata (green algae)): 0,24 mg/l
	Exposure time: 72 h
	Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity)	: 1
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Toxicity to microorganisms	: EC50 : > 10.000 mg/l
	Exposure time: 3 h
	Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity)	: NOEC: 0,053 mg/l
	Exposure time: 30 d
	Species: Oryzias latipes (Japanese medaka)
	Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: 0,316 mg/l
	Exposure time: 21 d
	Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity)	: 1
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**Solvent naphtha (petroleum), light aromatic:**

Toxicity to fish	: LC50 (Pimephales promelas (fathead minnow)): 8,2 mg/l
	Exposure time: 96 h
	Test substance: Water Accommodated Fraction

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Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): 4,5 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (microalgae)): 3,1 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201  NOELR (Pseudokirchneriella subcapitata (microalgae)): 0,5 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOELR: 2,6 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test substance: Water Accommodated Fraction Method: OECD Test Guideline 211

**Methanol:**

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 15.400 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 10.000 mg/l Exposure time: 48 h Method: DIN 38412
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): 22.000 mg/l Exposure time: 96 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (activated sludge): > 1.000 mg/l Exposure time: 3 h Test substance: Neutralised product Method: OECD Test Guideline 209

**12.2 Persistence and degradability****Components:****Ethylbenzene:**

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

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

**4-Nonylphenol, branched, ethoxylated:**

Biodegradability : Result: Not readily biodegradable.  
Remarks: Based on data from similar materials

**deltamethrin (ISO):**

Stability in water : Hydrolysis: 0 %(30 d)

**2,6-Di-tert-butyl-p-cresol:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 4,5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301C

**Solvent naphtha (petroleum), light aromatic:**

Biodegradability : Result: Inherently biodegradable.  
Biodegradation: 94 %  
Exposure time: 25 d

**Methanol:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 95 %  
Exposure time: 20 d

**12.3 Bioaccumulative potential****Components:****Ethylbenzene:**

Partition coefficient: n-octanol/water : log Pow: 3,6

**Xylene:**

Partition coefficient: n-octanol/water : log Pow: 3,16  
Remarks: Calculation

**4-Nonylphenol, branched, ethoxylated:**

Partition coefficient: n-octanol/water : log Pow: < 4  
Remarks: Calculation

**deltamethrin (ISO):**

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): 1.800

Partition coefficient: n-octanol/water : log Pow: 4,6

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**2,6-Di-tert-butyl-p-cresol:**

Bioaccumulation	:	Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 330 - 1.800
Partition coefficient: n-octanol/water	:	log Pow: 5,1

**Methanol:**

Bioaccumulation	:	Species: Leuciscus idus (Golden orfe) Bioconcentration factor (BCF): < 10
Partition coefficient: n-octanol/water	:	log Pow: -0,77

**12.4 Mobility in soil****Components:****deltamethrin (ISO):**

Distribution among environmental compartments	:	log Koc: 7,2
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**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.
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**12.6 Other adverse effects****Product:**

Endocrine disrupting potential	:	This substance/mixture contains components considered to have endocrine disrupting properties for environment, according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.
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**Components:****4-Nonylphenol, branched, ethoxylated:**

Endocrine disrupting potential	:	The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for the environment.
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**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
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Contaminated packaging : discussion with the waste disposal authorities.  
Do not dispose of waste into sewer.  
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****14.1 UN number**

ADN	: UN 1992
ADR	: UN 1992
RID	: UN 1992
IMDG	: UN 1992
IATA	: UN 1992

**14.2 UN proper shipping name**

ADN	: FLAMMABLE LIQUID, TOXIC, N.O.S. (Ethylbenzene, Xylene)
ADR	: FLAMMABLE LIQUID, TOXIC, N.O.S. (Ethylbenzene, Xylene)
RID	: FLAMMABLE LIQUID, TOXIC, N.O.S. (Ethylbenzene, Xylene)
IMDG	: FLAMMABLE LIQUID, TOXIC, N.O.S. (Ethylbenzene, Xylene, deltamethrin (ISO))
IATA	: Flammable liquid, toxic, n.o.s. (Ethylbenzene, Xylene)

**14.3 Transport hazard class(es)**

	Class	Subsidiary risks
ADN	: 3	6.1
ADR	: 3	6.1
RID	: 3	6.1
IMDG	: 3	6.1
IATA	: 3	6.1

**14.4 Packing group**

ADN	
Packing group	: III
Classification Code	: FT1
Hazard Identification Number	: 36
Labels	: 3 (6.1)
ADR	

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Packing group : III  
Classification Code : FT1  
Hazard Identification Number : 36  
Labels : 3 (6.1)  
Tunnel restriction code : (D/E)

**RID**

Packing group : III  
Classification Code : FT1  
Hazard Identification Number : 36  
Labels : 3 (6.1)

**IMDG**

Packing group : III  
Labels : 3 (6.1)  
EmS Code : F-E, S-D

**IATA (Cargo)**

Packing instruction (cargo aircraft) : 366  
Packing instruction (LQ) : Y343  
Packing group : III  
Labels : Flammable Liquids, Toxic

**IATA (Passenger)**

Packing instruction (passenger aircraft) : 355  
Packing instruction (LQ) : Y343  
Packing group : III  
Labels : Flammable Liquids, Toxic

**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**

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**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.
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**Full text of H-Statements**

EUH430	:	May cause endocrine disruption in the environment
H225	:	Highly flammable liquid and vapour.
H226	:	Flammable liquid and vapour.
H301	:	Toxic if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H311	:	Toxic in contact with skin.
H312	:	Harmful in contact with skin.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H331	:	Toxic if inhaled.
H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H336	:	May cause drowsiness or dizziness.
H340	:	May cause genetic defects.
H350	:	May cause cancer.
H361fd	:	Suspected of damaging fertility. Suspected of damaging the unborn child.
H370	:	Causes damage to organs.
H372	:	Causes damage to organs through prolonged or repeated exposure if swallowed.
H372	:	Causes damage to organs through prolonged or repeated exposure if inhaled.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

**Full text of other abbreviations**

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Carc.	:	Carcinogenicity
ED ENV	:	Endocrine disruptor for environment

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Eye Irrit.	: Eye irritation
Flam. Liq.	: Flammable liquids
Muta.	: Germ cell mutagenicity
Repr.	: Reproductive toxicity
Skin Irrit.	: 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
2006/15/EC	: Europe. Indicative occupational exposure limit values
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
2006/15/EC / TWA	: Limit Value - eight hours
ZA OEL / OEL-RL	: Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts)
ZA OEL / OEL- RL STEL/C	: Occupational Exposure Limit Restricted limit - Short term occupational 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; TECL - 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

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**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:**

Flam. Liq. 3	H226
Acute Tox. 4	H302
Acute Tox. 4	H332
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317
Muta. 1B	H340
Carc. 1B	H350
Repr. 2	H361fd
STOT SE 3	H335
STOT RE 2	H373
Asp. Tox. 1	H304
Aquatic Acute 1	H400
Aquatic Chronic 1	H410
ED ENV 1	EUH430

**Classification procedure:**

Based on product data or assessment
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
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.

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