

Deltamethrin (with Xylene) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 24.03.2020
2.4	10.10.2020	2972466-00007	Date of first issue: 02.07.2018

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

1.3 Details of the supplier of the safety data sheet

Company : MSD
20 Spartan Road
1619 Spartan, South Africa

Telephone : +27119239300

Telefax : 908-735-1496

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.
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.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

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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.

Precautionary statements :

Prevention:

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.

Response:

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.

2.3 Other hazards

Vapours may form explosive mixture with air.

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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 Chronic 3; H412	>= 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 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):	>= 3 - < 10

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2,6-Di-tert-butyl-p-cresol	128-37-0 204-881-4	1.000.000 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 01-2119433307-44	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370 (Eye, 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.
- 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.

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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 : 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.

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 products : Carbon oxides
Nitrogen oxides (NO_x)
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.

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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.

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.

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.

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

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- 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 should consult their physician regarding working with respiratory irritants or sensitisers.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
Do not eat, drink or smoke when using this product.
Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before re-use.
The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

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
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

7.3 Specific end use(s)

- Specific use(s) : No data available

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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	TWA OEL-RL	100 ppm 435 mg/m ³	ZA OEL
Further information: Recommended Limit				
		STEL OEL-RL	125 ppm 545 mg/m ³	ZA OEL
Further information: Recommended Limit				
		TWA	100 ppm 442 mg/m ³	2000/39/EC
		STEL	200 ppm 884 mg/m ³	2000/39/EC
Xylene	1330-20-7	STEL OEL-RL	150 ppm 650 mg/m ³	ZA OEL
Further information: Absorption through the skin, Recommended Limit				
		TWA OEL-RL	100 ppm 435 mg/m ³	ZA OEL
Further information: Absorption through the skin, Recommended Limit				
		TWA	50 ppm 221 mg/m ³	2000/39/EC
		STEL	100 ppm 442 mg/m ³	2000/39/EC
deltamethrin (ISO)	52918-63-5	TWA	15 µg/m ³ (OEB 3)	Internal
Further information: DSEN, Skin				
		Wipe limit	150 µg/100 cm ²	Internal
2,6-Di-tert-butyl-p-cresol	128-37-0	TWA OEL-RL	10 mg/m ³	ZA OEL
Further information: Recommended Limit				
Methanol	67-56-1	TWA OEL-RL	200 ppm 260 mg/m ³	ZA OEL
Further information: Absorption through the skin, Recommended Limit				
		STEL OEL-RL	250 ppm 310 mg/m ³	ZA OEL
Further information: Absorption through the skin, Recommended Limit				
		TWA	200 ppm 260 mg/m ³	2006/15/EC

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
Ethylbenzene	100-41-4	Ethyl benzene: (end exhaled air)		ZA BEI
		Mandelic acid: 1.5 g/g creatinine (Urine)	End of shift at end of workweek	ZA BEI
Xylene	1330-20-7	Methylhippuric acid: 1.5 g/g creatinine	End of shift	ZA BEI

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		(Urine)		
		Methylhippuric acid: 2 mg/l (Urine)	Last 4 hours of shift	ZA BEI
Methanol	67-56-1	Methanol: 15 mg/l (Urine)	End of shift	ZA BEI
		Formic acid: 80 mg/g Creatinine (Urine)	Prior to last shift of workweek	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 ³
	Workers	Inhalation	Acute local effects	293 mg/m ³
	Workers	Skin contact	Long-term systemic effects	180 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	15 mg/m ³
Xylene	Consumers	Ingestion	Long-term systemic effects	1,6 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	221 mg/m ³
	Workers	Inhalation	Acute systemic effects	442 mg/m ³
	Workers	Inhalation	Long-term local effects	221 mg/m ³
	Workers	Inhalation	Acute local effects	442 mg/m ³
	Workers	Skin contact	Long-term systemic effects	212 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	65,3 mg/m ³
	Consumers	Inhalation	Acute systemic effects	260 mg/m ³
	Consumers	Inhalation	Long-term local effects	65,3 mg/m ³
	Consumers	Inhalation	Acute local effects	260 mg/m ³
	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/m ³
	Workers	Dermal	Long-term systemic effects	0,5 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,86 mg/m ³
	Consumers	Dermal	Long-term systemic effects	0,25 mg/kg bw/day
Methanol	Consumers	Ingestion	Long-term systemic effects	0,25 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	260 mg/m ³

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	Workers	Inhalation	Acute systemic effects	260 mg/m ³
	Workers	Inhalation	Long-term local effects	260 mg/m ³
	Workers	Inhalation	Acute local effects	260 mg/m ³
	Workers	Skin contact	Long-term systemic effects	40 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	40 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	50 mg/m ³
	Consumers	Inhalation	Acute systemic effects	50 mg/m ³
	Consumers	Inhalation	Long-term local effects	50 mg/m ³
	Consumers	Inhalation	Acute local effects	50 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	8 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	8 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	8 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	8 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 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.)

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	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
Methanol	Fresh water	20,8 mg/l
	Marine water	2,08 mg/l
	Intermittent use/release	1540 mg/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	77 mg/kg
	Marine sediment	7,7 mg/kg
	Soil	100 mg/kg

8.2 Exposure controls

Engineering measures

Use explosion-proof electrical, ventilating and lighting equipment.

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.

Personal protective equipment

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

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

9.2 Other information

Flammability (liquids)	: Not applicable
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.

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 exposure : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

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: 13,69 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

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

Components:**Ethylbenzene:**

Acute oral toxicity : LD50 (Rat): 3.500 mg/kg

Acute inhalation toxicity : LC50 (Rat): 17,8 mg/l
Exposure time: 4 h

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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 harmonised classification in EU regulation 1272/2008, Annex VI

Acute dermal toxicity : Acute toxicity estimate: 1.100 mg/kg
Method: Expert judgement
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

4-Nonylphenol, branched, ethoxylated:

Acute oral toxicity : LD50 (Mouse): 4.290 mg/kg

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

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

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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 harmonised classification in EU regulation 1272/2008, Annex VI
Acute dermal toxicity	: Acute toxicity estimate (Humans): 300 mg/kg Method: Expert judgement

Skin corrosion/irritation

Causes skin irritation.

Components:**Xylene:**

Species	: Rabbit
Result	: Skin irritation

deltamethrin (ISO):

Species	: Rabbit
Result	: No skin irritation

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
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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.

Components:**Xylene:**

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

deltamethrin (ISO):

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

Deltamethrin (with Xylene) Formulation

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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) 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
----------------------	--

Xylene:

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

Test Type: Chromosome aberration test in vitro

Deltamethrin (with Xylene) Formulation

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- 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
- deltamethrin (ISO):**
- 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
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

Deltamethrin (with Xylene) Formulation

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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

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.

Deltamethrin (with Xylene) Formulation

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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
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
------------------------------	--

Methanol:

Species	: Mouse
Application Route	: inhalation (vapour)
Exposure time	: 18 Months
Result	: negative

Reproductive toxicity

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

Components:**Ethylbenzene:**

Deltamethrin (with Xylene) Formulation

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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
Symptoms: No effects on fertility, Embryo-foetal toxicity
Remarks: Significant toxicity observed in testing

Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Oral
Early Embryonic Development: LOAEL: 84 - 149 mg/kg body weight
Symptoms: No effects on fertility, Embryo-foetal toxicity

Test Type: Fertility
Species: Rat, male
Application Route: Oral
Fertility: LOAEL: 1 mg/kg body weight
Symptoms: Effects on fertility
Target Organs: Testes

Effects on foetal development : Test Type: Development
Species: Mouse
Application Route: oral (gavage)
Developmental Toxicity: LOAEL: 1 mg/kg body weight
Result: Skeletal malformations
Remarks: Maternal toxicity observed.

Test Type: Development

Deltamethrin (with Xylene) Formulation

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Species: Rat, female
 Developmental Toxicity: NOAEL: 10 mg/kg body weight
 Symptoms: No effects on foetal development

Test Type: Development
 Species: Rabbit, female
 Application Route: oral (gavage)
 Developmental Toxicity: NOAEL: 16 mg/kg body weight
 Symptoms: No effects on foetal development

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

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

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

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

Solvent naphtha (petroleum), light aromatic:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
 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

Methanol:

Effects on fertility : Test Type: Fertility/early embryonic development
 Species: Mouse
 Application Route: Ingestion
 Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
 Species: Mouse
 Application Route: Ingestion
 Result: positive
 Remarks: The effects were seen only at maternally toxic doses.

STOT - single exposure

May cause respiratory irritation.

Deltamethrin (with Xylene) Formulation

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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 : Eye, 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
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.

Deltamethrin (with Xylene) Formulation

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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

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 ³
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

Deltamethrin (with Xylene) Formulation

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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

Methanol:

Species	:	Rat
NOAEL	:	1,06 mg/l
Application Route	:	inhalation (vapour)
Exposure time	:	90 Days

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.

Deltamethrin (with Xylene) Formulation

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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 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

Deltamethrin (with Xylene) Formulation

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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 : 44 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 : 68 mg/l
 Exposure time: 48 h

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 (Mysidopsis 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
 Exposure time: 36 d
 Species: Pimephales promelas (fathead minnow)

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	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
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
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
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
Toxicity to daphnia and other aquatic invertebrates	: EL50 (Daphnia magna (Water flea)): 4,5 mg/l Exposure time: 48 h

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	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
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata (green algae)): 22.000 mg/l Exposure time: 96 h Method: OECD Test Guideline 201
Toxicity to microorganisms	: IC50 : > 1.000 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	: NOEC: 15.800 mg/l Exposure time: 200 h Species: Oryzias latipes (Orange-red killifish)

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 % Exposure time: 28 d Method: OECD Test Guideline 301F
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Remarks: Based on data from similar materials

4-Nonylphenol, branched, ethoxylated:

Biodegradability : Result: Not readily biodegradable.

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

deltamethrin (ISO):

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

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

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:

Deltamethrin (with Xylene) Formulation

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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

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

No data available

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.

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

SECTION 14: Transport information**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.

Deltamethrin (with Xylene) Formulation

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(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)

ADN : 3

ADR : 3

RID : 3

IMDG : 3

IATA : 3

14.4 Packing group

ADN

Packing group : III

Classification Code : FT1

Hazard Identification Number : 36

Labels : 3 (6.1)

ADR

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

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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.
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.

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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
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. Hazardous Chemical Substances Regulations, Biological Exposure Indices.
ZA OEL	:	South Africa. Hazardous Chemical Substances Regulations, 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 / TWA OEL-RL	:	Long term occupational exposure limits - recommended limit
ZA OEL / STEL OEL-RL	:	Short term occupational exposure limits - recommended limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European 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

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- 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; 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:

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

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

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

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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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