

Deltamethrin (with Xylene) Formulation

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|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 03/24/2020 |
| 3.3 | 10/10/2020 | 2972480-00007 | Date of first issue: 07/02/2018 |

SECTION 1. IDENTIFICATION

Product name : Deltamethrin (with Xylene) Formulation
Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Merck & Co., Inc
Address : 2000 Galloping Hill Road
Kenilworth - New Jersey - U.S.A. 07033
Telephone : 908-740-4000
Telefax : 908-735-1496
Emergency telephone : 1-908-423-6000
E-mail address : EHSDATASTEWARD@merck.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the Hazardous Products Regulations**

Flammable liquids : Category 3
Acute toxicity (Oral) : Category 4
Acute toxicity (Inhalation) : Category 4
Skin irritation : Category 2
Eye irritation : Category 2A
Skin sensitization : Sub-category 1A
Germ cell mutagenicity : Category 1B
Carcinogenicity : Category 1B
Reproductive toxicity : Category 2
Specific target organ toxicity : Category 3
- single exposure
Specific target organ toxicity : Category 1 (Central nervous system, Immune system)
- repeated exposure (Oral)
Specific target organ toxicity : Category 1 (Central nervous system)
- repeated exposure
(Inhalation)
Specific target organ toxicity : Category 2 (Auditory system)
- repeated exposure
Aspiration hazard : Category 1

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GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements :

- H226 Flammable liquid and vapor.
- 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.
- H372 Causes damage to organs (Central nervous system, Immune system) through prolonged or repeated exposure if swallowed.
- H372 Causes damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.
- H373 May cause damage to organs (Auditory system) through prolonged or repeated exposure.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves, protective clothing, eye protection and face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical attention.

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P331 Do NOT induce vomiting.
 P333 + P313 If skin irritation or rash occurs: Get medical attention.
 P337 + P313 If eye irritation persists: Get medical attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

P405 Store locked up.

Disposal:

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

Other hazards

Vapors may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

| Chemical name | CAS-No. | Concentration (% w/w) |
|---|------------|-----------------------|
| Ethylbenzene | 100-41-4 | $\geq 30 - < 60$ * |
| Xylene | 1330-20-7 | $\geq 30 - < 60$ * |
| Deltamethrin (ISO) | 52918-63-5 | $\geq 5 - < 10$ * |
| 2,6-Di-tert-butyl-p-cresol | 128-37-0 | $\geq 1 - < 5$ * |
| Solvent naphtha (petroleum), light aromatic | 64742-95-6 | $\geq 0.1 - < 1$ * |
| Methanol | 67-56-1 | $\geq 0.1 - < 1$ * |

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. 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.

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.

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| Most important symptoms and effects, both acute and delayed | : | If vomiting occurs have person lean forward. Call a physician or poison control center immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. 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. Causes damage to organs through prolonged or repeated exposure if swallowed. Causes damage to organs through prolonged or repeated exposure if inhaled. May cause damage to organs through prolonged or repeated exposure. |
| Protection of first-aiders | : | First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8). |
| Notes to physician | : | Treat symptomatically and supportively. |

SECTION 5. FIRE-FIGHTING MEASURES

| | | |
|--|---|---|
| Suitable extinguishing media | : | Water spray Alcohol-resistant foam Carbon dioxide (CO ₂) Dry chemical |
| Unsuitable extinguishing media | : | High volume water jet |
| Specific hazards during fire fighting | : | Do not use a solid water stream as it may scatter and spread fire. Flash back possible over considerable distance. Vapors 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 |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area. |
| Special protective equipment for fire-fighters | : | In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

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

- | | | |
|-------------------------|---|--|
| 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 vapors. 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 sensitized individuals should consult their physician regarding working with respiratory irritants or sensitizers. 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 |

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environment.

Conditions for safe storage : Keep in properly labeled containers.
Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:
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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|----------------------------|---------------------------------|----------------------------------|--|-----------|
| Ethylbenzene | 100-41-4 | TWA | 100 ppm 434 mg/m ³ | CA AB OEL |
| | | STEL | 125 ppm 543 mg/m ³ | CA AB OEL |
| | | TWA | 20 ppm | CA BC OEL |
| | | TWAEV | 100 ppm 434 mg/m ³ | CA QC OEL |
| | | STEV | 125 ppm 543 mg/m ³ | CA QC OEL |
| | | TWA | 20 ppm | ACGIH |
| Xylene | 1330-20-7 | STEL | 150 ppm 651 mg/m ³ | CA AB OEL |
| | | TWA | 100 ppm 434 mg/m ³ | CA AB OEL |
| | | TWAEV | 100 ppm 434 mg/m ³ | CA QC OEL |
| | | STEV | 150 ppm 651 mg/m ³ | CA QC OEL |
| | | TWA | 100 ppm | CA BC OEL |
| | | STEL | 150 ppm | CA BC OEL |
| | | TWA | 100 ppm | ACGIH |
| | | STEL | 150 ppm | ACGIH |
| 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 | 10 mg/m ³ | CA AB OEL |
| | | TWA (Va- | 2 mg/m ³ | CA BC OEL |

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| | | pour and inhalable aerosols) | | |
| | | TWAEV | 10 mg/m ³ | CA QC OEL |
| | | TWA (Inhalable fraction and vapor) | 2 mg/m ³ | ACGIH |
| Solvent naphtha (petroleum), light aromatic | 64742-95-6 | TWA | 200 mg/m ³ (total hydrocarbon vapor) | CA AB OEL |
| | | TWA | 200 mg/m ³ (total hydrocarbon vapor) | ACGIH |
| Methanol | 67-56-1 | TWA | 200 ppm 262 mg/m ³ | CA AB OEL |
| | | STEL | 250 ppm 328 mg/m ³ | CA AB OEL |
| | | TWA | 200 ppm | CA BC OEL |
| | | STEL | 250 ppm | CA BC OEL |
| | | TWAEV | 200 ppm 262 mg/m ³ | CA QC OEL |
| | | STEV | 250 ppm 328 mg/m ³ | CA QC OEL |
| | | TWA | 200 ppm | ACGIH |
| | | STEL | 250 ppm | ACGIH |

Biological occupational exposure limits

| Components | CAS-No. | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
|--------------|-----------|--|---------------------|--|---------------------------|-----------|
| Ethylbenzene | 100-41-4 | Sum of mandelic acid and phenyl glyoxylic acid | Urine | End of shift (As soon as possible after exposure ceases) | 0.15 g/g creatinine | ACGIH BEI |
| Xylene | 1330-20-7 | Methylhippuric acids | Urine | End of shift (As soon as possible after exposure ceases) | 1.5 g/g creatinine | ACGIH BEI |
| Methanol | 67-56-1 | Methanol | Urine | End of shift (As soon as possible after exposure ceases) | 15 mg/l | ACGIH BEI |

Engineering measures : Use explosion-proof electrical, ventilating and lighting

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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

- | | | |
|--------------------------|---|--|
| 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 vapor type |
| Hand protection | : | |
| Material | : | Chemical-resistant gloves |
| Remarks | : | Consider double gloving. Take note that the product is flammable, which may impact the selection of hand protection. |
| Eye protection | : | Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols. |
| 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. |
| 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. |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

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| | | |
|--|---|--|
| Color | : | clear yellow |
| Odor | : | No data available |
| Odor 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 |
| Vapor pressure | : | No data available |
| Relative vapor 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 |
| Autoignition 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. |

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| | | |
|------------------|---|-------------------|
| Molecular weight | : | No data available |
| Particle size | : | Not applicable |

SECTION 10. STABILITY AND REACTIVITY

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

SECTION 11. TOXICOLOGICAL INFORMATION**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: 997.09 mg/kg Method: Calculation method |
| Acute inhalation toxicity | : | Acute toxicity estimate: 18.89 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method |
| Acute dermal toxicity | : | Acute toxicity estimate: > 5,000 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: vapor |
| Acute dermal toxicity | : | LD50 (Rabbit): > 5,000 mg/kg |

Xylene:

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| Acute oral toxicity | : | LD50 (Rat): 3,523 mg/kg |
|---------------------|---|-------------------------|

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

Acute inhalation toxicity : LC50 (Rat): 27.571 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rabbit): > 4,200 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

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: vapor

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Methanol:

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

LD50 (Rat, female): 12.25 ml/kg

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Acute inhalation toxicity : Acute toxicity estimate: 3 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Expert judgment
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

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

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
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

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

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

Solvent naphtha (petroleum), light aromatic:

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

Methanol:

| | | |
|---------|---|-------------------|
| Species | : | Rabbit |
| Result | : | No eye irritation |

Respiratory or skin sensitization**Skin sensitization**

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:**Xylene:**

| | | |
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| Test Type | : | Local lymph node assay (LLNA) |
| Routes of exposure | : | Skin contact |
| Species | : | Mouse |
| Result | : | negative |

Deltamethrin (ISO):

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|--------------------|---|-------------------|
| Test Type | : | Maximization Test |
| Routes of exposure | : | Dermal |
| Species | : | Guinea pig |
| Result | : | negative |

| | | |
|--------------------|---|--|
| Test Type | : | Human repeat insult patch test (HRIPT) |
| Routes of exposure | : | Dermal |
| Species | : | Humans |
| Result | : | positive |

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

| | | |
|--------------------|---|--|
| Test Type | : | Human repeat insult patch test (HRIPT) |
| Routes of exposure | : | Skin contact |
| Species | : | Humans |
| Result | : | negative |

Solvent naphtha (petroleum), light aromatic:

| | | |
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| Test Type | : | Buehler Test |
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Routes of exposure : Skin contact
Species : Guinea pig
Result : negative

Methanol:

Test Type : Maximization Test
Routes of exposure : 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
Result: negative

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

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

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

Deltamethrin (ISO):

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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

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

Deltamethrin (with Xylene) Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
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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 (vapor)
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

Deltamethrin (with Xylene) Formulation

| | | | |
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| | |
|-------------------|------------------------|
| 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 (vapor) |
| Exposure time | : 18 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 (vapor) Method: OECD Test Guideline 416 Result: negative |
|----------------------|---|

| | |
|------------------------------|---|
| Effects on fetal development | : Test Type: Embryo-fetal 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 |
|----------------------|---|

Deltamethrin (with Xylene) Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
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Application Route: inhalation (vapor)
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
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-fetal 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-fetal 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 fetal 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
Species: Rat, female
Developmental Toxicity: NOAEL: 10 mg/kg body weight
Symptoms: No effects on fetal development.

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

Deltamethrin (with Xylene) Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
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Species: Rat
Application Route: Ingestion
Result: negative

Effects on fetal development : Test Type: Embryo-fetal 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 (vapor)
Result: negative

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

Methanol:

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

Effects on fetal development : Test Type: Embryo-fetal 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.

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.

Deltamethrin (with Xylene) Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
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STOT-repeated exposure

Causes damage to organs (Central nervous system, Immune system) through prolonged or repeated exposure if swallowed.

Causes damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

May cause damage to organs (Auditory system) through prolonged or repeated exposure.

Components:**Ethylbenzene:**

| | |
|--------------------|--|
| Routes of exposure | : inhalation (vapor) |
| 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:

| | |
|--------------------|--|
| Routes of exposure | : inhalation (vapor) |
| 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):

| | |
|--------------------|---|
| Routes of exposure | : Ingestion |
| Target Organs | : Central nervous system, Immune system |
| Assessment | : Causes damage to organs through prolonged or repeated exposure. |

| | |
|--------------------|---|
| Routes of exposure | : 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 (vapor) |
| Exposure time | : 13 Weeks |

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

Deltamethrin (with Xylene) Formulation

| | | | |
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Xylene:

| | |
|-------------------|--|
| Species | : Rat |
| LOAEL | : > 0.2 - 1 mg/l |
| Application Route | : inhalation (vapor) |
| 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/m3 |
| 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, Diarrhea, 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 |

Deltamethrin (with Xylene) Formulation

| | | | |
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| | |
|-------------------|-------------|
| 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 (vapor) |
| 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.

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 |

Deltamethrin (with Xylene) Formulation

| | | | |
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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

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 daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Ceriodaphnia dubia (water flea)): 0.96 mg/l Exposure time: 7 d |
| Toxicity to microorganisms | : | EC50 (Nitrosomonas sp.): 96 mg/l Exposure time: 24 h |

Xylene:

- | | | |
|--|---|--|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 13.5 mg/l Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l Exposure time: 24 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials |
| Toxicity to algae/aquatic plants | : | EC50 (Skeletonema costatum (marine diatom)): 10 mg/l Exposure time: 72 h |
| Toxicity to fish (Chronic toxicity) | : | NOEC (Danio rerio (zebra fish)): > 0.1 - < 1 mg/l Exposure time: 35 d Method: OECD Test Guideline 210 Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | EL10 (Daphnia magna (Water flea)): > 1 - 10 mg/l Exposure time: 21 d Method: OECD Test Guideline 211 Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : | NOEC: > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials |

Deltamethrin (with Xylene) Formulation

| | | | |
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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.

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.000022 mg/l
Exposure time: 36 d

NOEC (Pimephales promelas (fathead minnow)): 0.000017 mg/l
Exposure time: 260 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.0041 µg/l
Exposure time: 21 d

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

Deltamethrin (with Xylene) Formulation

| | | | |
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| | | |
|--|---|--|
| Toxicity to fish (Chronic toxicity) | : | NOEC (<i>Oryzias latipes</i> (Japanese medaka)): 0.053 mg/l Exposure time: 30 d Method: OECD Test Guideline 210 |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (<i>Daphnia magna</i> (Water flea)): 0.316 mg/l Exposure time: 21 d |
| Toxicity to microorganisms | : | EC50: > 10,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 |

Solvent naphtha (petroleum), light aromatic:

| | | |
|--|---|---|
| Toxicity to fish | : | LC50 (<i>Pimephales promelas</i> (fathead minnow)): 8.2 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction |
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (<i>Daphnia magna</i> (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 (<i>Pseudokirchneriella subcapitata</i> (microalgae)): 3.1 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 |
| | | NOELR (<i>Pseudokirchneriella subcapitata</i> (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 (<i>Daphnia magna</i> (Water flea)): 2.6 mg/l Exposure time: 21 d Test substance: Water Accommodated Fraction Method: OECD Test Guideline 211 |

Methanol:

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (<i>Lepomis macrochirus</i> (Bluegill sunfish)): 15,400 mg/l Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (<i>Daphnia magna</i> (Water flea)): > 10,000 mg/l Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | EC50 (<i>Pseudokirchneriella subcapitata</i> (green algae)): 22,000 mg/l Exposure time: 96 h Method: OECD Test Guideline 201 |
| Toxicity to fish (Chronic toxicity) | : | NOEC (<i>Oryzias latipes</i> (Orange-red killifish)): 15,800 mg/l Exposure time: 200 h |
| Toxicity to microorganisms | : | IC50: > 1,000 mg/l Exposure time: 3 h |

Deltamethrin (with Xylene) Formulation

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

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

Xylene:

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

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

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)

Deltamethrin (with Xylene) Formulation

| | | | |
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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:Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): < 10

Partition coefficient: n-octanol/water : log Pow: -0.77

Mobility in soil**Components:****Deltamethrin (ISO):**

Distribution among environmental compartments : log Koc: 7.2

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

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

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

| | |
|----------------------|---|
| UN number | : UN 1992 |
| Proper shipping name | : FLAMMABLE LIQUID, TOXIC, N.O.S. (Ethylbenzene, Xylene) |
| Class | : 3 |
| Subsidiary risk | : 6.1 |
| Packing group | : III |
| Labels | : 3 (6.1) |

Deltamethrin (with Xylene) Formulation

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IATA-DGR

| | |
|--|---|
| UN/ID No. | : UN 1992 |
| Proper shipping name | : Flammable liquid, toxic, n.o.s. (Ethylbenzene, Xylene) |
| Class | : 3 |
| Subsidiary risk | : 6.1 |
| Packing group | : III |
| Labels | : Flammable Liquids, Toxic |
| Packing instruction (cargo aircraft) | : 366 |
| Packing instruction (passenger aircraft) | : 355 |

IMDG-Code

| | |
|----------------------|---|
| UN number | : UN 1992 |
| Proper shipping name | : FLAMMABLE LIQUID, TOXIC, N.O.S. (Ethylbenzene, Xylene, Deltamethrin (ISO)) |
| Class | : 3 |
| Subsidiary risk | : 6.1 |
| Packing group | : III |
| Labels | : 3 (6.1) |
| EmS Code | : F-E, S-D |
| Marine pollutant | : yes |

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

Not applicable for product as supplied.

Domestic regulation**TDG**

| | |
|----------------------|---|
| UN number | : UN 1992 |
| Proper shipping name | : FLAMMABLE LIQUID, TOXIC, N.O.S. (Ethylbenzene, Xylene) |
| Class | : 3 |
| Subsidiary risk | : 6.1 |
| Packing group | : III |
| Labels | : 3 (6.1) |
| ERG Code | : 131 |
| Marine pollutant | : yes(Deltamethrin (ISO)) |

Special precautions for user

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

SECTION 15. REGULATORY INFORMATION**The ingredients of this product are reported in the following inventories:**

| | |
|-------|------------------|
| AICS | : not determined |
| DSL | : not determined |
| IECSC | : not determined |

Deltamethrin (with Xylene) Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
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SECTION 16. OTHER INFORMATION

Full text of other abbreviations

| | | |
|--------------------|---|---|
| ACGIH | : | USA. ACGIH Threshold Limit Values (TLV) |
| ACGIH BEI | : | ACGIH - Biological Exposure Indices (BEI) |
| CA AB OEL | : | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| CA BC OEL | : | Canada. British Columbia OEL |
| CA QC OEL | : | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| ACGIH / TWA | : | 8-hour, time-weighted average |
| ACGIH / STEL | : | Short-term exposure limit |
| CA AB OEL / TWA | : | 8-hour Occupational exposure limit |
| CA AB OEL / STEL | : | 15-minute occupational exposure limit |
| CA BC OEL / TWA | : | 8-hour time weighted average |
| CA BC OEL / STEL | : | short-term exposure limit |
| CA QC OEL / TWA EV | : | Time-weighted average exposure value |
| CA QC OEL / STEV | : | Short-term exposure value |

AIIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Material Safety : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

Deltamethrin (with Xylene) Formulation

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|---------|----------------|---------------|---------------------------------|
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