

**Amitraz (5%) Formulation**

|         |                |               |                                 |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number:   | Date of last issue: 30.09.2023  |
| 5.0     | 14.04.2025     | 1829415-00016 | Date of first issue: 11.07.2017 |

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**SECTION 1. IDENTIFICATION**

Product name : Amitraz (5%) Formulation

**Manufacturer or supplier's details**

Company : MSD

Address : Talcahuano 750, 6th floor, Ciudad Autonoma  
Buenos Aires, Argentina C1013AAP

Telephone : 908-740-4000

Emergency telephone : 1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

**Recommended use of the chemical and restrictions on use**

Recommended use : Veterinary product

Restrictions on use : Not applicable

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**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 5

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 2A

Germ cell mutagenicity : Category 1B

Carcinogenicity : Category 1B

Reproductive toxicity : Category 1B

Specific target organ toxicity - single exposure : Category 3

Specific target organ toxicity - repeated exposure : Category 2 (Kidney, Heart, Gastrointestinal tract, Lymph nodes)

Aspiration hazard : Category 1

Short-term (acute) aquatic hazard : Category 1

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Long-term (chronic) aquatic hazard : Category 1

**GHS label elements**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapor.  
H303 May be harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H340 May cause genetic defects.  
H350 May cause cancer.  
H360F May damage fertility.  
H373 May cause damage to organs (Kidney, Heart, Gastrointestinal tract, Lymph nodes) through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P260 Do not breathe mist or vapors.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
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.  
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 POISON CENTER/ 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.  
P312 Call a POISON CENTER/ doctor if you feel unwell.  
P331 Do NOT induce vomiting.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ at-

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tention.  
 P362 + P364 Take off contaminated clothing and wash it before reuse.  
 P391 Collect spillage.

**Storage:**

P405 Store locked up.

**Disposal:**

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

**Other hazards which do not result in classification**

Vapors may form explosive mixture with air.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

| Chemical name                               | CAS-No.     | Concentration (% w/w) |
|---|-------------|-----------------------|
| Solvent naphtha (petroleum), light aromatic | 64742-95-6  | >= 70 -< 90           |
| 4-Nonylphenol, branched, ethoxylated        | 127087-87-0 | >= 10 -< 20           |
| Amitraz (ISO)                               | 33089-61-1  | >= 5 -< 10            |
| Bis(2,6-diisopropylphenyl)carbodiimide      | 2162-74-5   | >= 1 -< 2,5           |

**Alternative CAS Numbers for some regions**

| Chemical name                        | Alternative CAS Number(s) |
|--------------------------------------|---------------------------|
| 4-Nonylphenol, branched, ethoxylated | 68412-54-4                |

**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.  
 Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
 Get medical attention.  
 Wash clothing before reuse.  
 Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
 If easy to do, remove contact lens, if worn.  
 Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.  
 If vomiting occurs have person lean forward.  
 Call a physician or poison control center immediately.  
 Rinse mouth thoroughly with water.  
 Never give anything by mouth to an unconscious person.

Most important symptoms : May be harmful if swallowed.

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|                                     |   |  |
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| and effects, both acute and delayed |   | May be fatal if swallowed and enters airways.<br>Causes skin irritation.<br>Causes serious eye irritation.<br>May cause drowsiness or dizziness.<br>May cause genetic defects.<br>May cause cancer.<br>May damage fertility.<br>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<br>Alcohol-resistant foam<br>Carbon dioxide (CO <sub>2</sub> )<br>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.<br>Flash back possible over considerable distance.<br>Vapors may form explosive mixtures with air.<br>Exposure to combustion products may be a hazard to health.             |
| Hazardous combustion products                  | : | Carbon oxides<br>Nitrogen oxides (NO <sub>x</sub> )   |
| Specific extinguishing methods                 | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |
| Special protective equipment for fire-fighters | : | In the event of fire, wear self-contained breathing apparatus.<br>Use personal protective equipment.  |

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

|   |   |   |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Remove all sources of ignition.<br>Use personal protective equipment.<br>Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8). |
| Environmental precautions   | : | Avoid release to the environment.<br>Prevent further leakage or spillage if safe to do so.<br>Prevent spreading over a wide area (e.g., by containment or oil barriers).                |

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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.

**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.  
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.

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

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Self-reactive substances and mixtures  
 Organic peroxides  
 Flammable solids  
 Pyrophoric liquids  
 Pyrophoric solids  
 Self-heating substances and mixtures  
 Substances and mixtures which in contact with water emit flammable gases  
 Explosives  
 Gases  
 Very acutely toxic substances and mixtures

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Ingredients with workplace control parameters

| Components                                  | CAS-No.    | Value type<br>(Form of exposure) | Control parameters / Permissible concentration     | Basis    |
|---|------------|----------------------------------|--|----------|
| Solvent naphtha (petroleum), light aromatic | 64742-95-6 | TWA                              | 200 mg/m <sup>3</sup><br>(total hydrocarbon vapor) | ACGIH    |
| Amitraz (ISO)                               | 33089-61-1 | TWA                              | 10 µg/m <sup>3</sup> (OEB 3)                       | Internal |
|   |            | Wipe limit                       | 1250 µg/100 cm <sup>2</sup>                        | Internal |

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

## Personal protective equipment

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

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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.  
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

**Color** : yellow

**Odor** : characteristic, aromatic, hydrocarbon-like

**Odor Threshold** : No data available

**pH** : No data available

**Melting point/freezing point** : Not applicable

**Initial boiling point and boiling range** : No data available

**Flash point** : 53 °C

**Evaporation rate** : No data available

**Flammability (solid, gas)** : Not applicable

**Flammability (liquids)** : Not applicable

**Upper explosion limit / Upper flammability limit** : 7 %(V)

**Lower explosion limit / Lower flammability limit** : 0,8 %(V)

**Vapor pressure** : No data available

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|  |   |  |
|--|---|--|
| Relative vapor density                 | : | No data available  |
| Relative density                       | : | No data available  |
| Density                                | : | No data available  |
| Solubility(ies)                        | : |  |
| Water solubility                       | : | emulsifiable   |
| Partition coefficient: n-octanol/water | : | No data available  |
| 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. |
| Molecular weight                       | : | Not applicable   |
| Particle characteristics               | : |  |
| 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.<br>Vapors may form explosive mixture with air.<br>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<br>Skin contact<br>Ingestion<br>Eye contact |
|--|---|--|

**Acute toxicity**

May be harmful if swallowed.

**Product:**

|                     |   |  |
|---------------------|---|--|
| Acute oral toxicity | : | Acute toxicity estimate: 2.376 mg/kg<br>Method: Calculation method |
|---------------------|---|--|



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

|                           |   |
|---------------------------|---|
| Acute oral toxicity       | : LD50 (Rat): > 5.000 mg/kg   |
| Acute inhalation toxicity | : LC50 (Rat): > 5,61 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor |
| Acute dermal toxicity     | : LD50 (Rabbit): > 2.000 mg/kg  |

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

|                       |  |
|-----------------------|--|
| Acute oral toxicity   | : LD50 (Rat): > 300 - 2.000 mg/kg<br>Remarks: Based on data from similar materials |
| Acute dermal toxicity | : LD50 (Rabbit): > 2.000 mg/kg   |

**Amitraz (ISO):**

|                           |  |
|---------------------------|--|
| Acute oral toxicity       | : LD50 (Rat): > 400 mg/kg<br>LD50 (Mouse): > 1.085 mg/kg<br>LD50 (Guinea pig): > 400 mg/kg |
| Acute inhalation toxicity | : Remarks: No data available   |
| Acute dermal toxicity     | : LD50 (Rat): > 1.600 mg/kg  |

**Bis(2,6-diisopropylphenyl)carbodiimide:**

|                       |   |
|-----------------------|---|
| Acute oral toxicity   | : LD50 (Rat): > 300 - 2.000 mg/kg<br>Method: OECD Test Guideline 423  |
| Acute dermal toxicity | : LD50 (Rat): > 2.000 mg/kg<br>Method: OECD Test Guideline 402<br>Assessment: The substance or mixture has no acute dermal toxicity |

**Skin corrosion/irritation**

Causes skin irritation.

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

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

**Amitraz (ISO):**

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

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**Bis(2,6-diisopropylphenyl)carbodiimide:**

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

**Serious eye damage/eye irritation**

Causes serious eye irritation.

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

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

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

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

**Amitraz (ISO):**

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

**Bis(2,6-diisopropylphenyl)carbodiimide:**

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

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

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

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

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

|                    |  |
|--------------------|--|
| Test Type          | : Human repeat insult patch test (HRIPT) |
| Routes of exposure | : Skin contact                           |
| Result             | : negative                               |
| Remarks            | : Based on data from similar materials   |

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**Amitraz (ISO):**

|                    |                          |
|--------------------|--------------------------|
| Test Type          | : Maximization Test      |
| Routes of exposure | : Dermal                 |
| Species            | : Guinea pig             |
| Result             | : Not a skin sensitizer. |

**Bis(2,6-diisopropylphenyl)carbodiimide:**

|                    |                           |
|--------------------|---------------------------|
| Test Type          | : Maximization Test       |
| Routes of exposure | : Skin contact            |
| Species            | : Guinea pig              |
| Method             | : OECD Test Guideline 406 |
| Result             | : negative                |

**Germ cell mutagenicity**

May cause genetic defects.

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

|                                     |  |
|-------------------------------------|--|
| Genotoxicity in vitro               | : Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative   |
|                                     | Test Type: In vitro mammalian cell gene mutation test<br>Result: positive  |
| Genotoxicity in vivo                | : Test Type: Sister chromatid exchange analysis in spermatogonia<br>Species: Mouse<br>Application Route: Intraperitoneal injection<br>Result: positive |
| Germ cell mutagenicity - Assessment | : Positive result(s) from in vivo heritable germ cell mutagenicity tests in mammals  |

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

|                       |   |
|-----------------------|---|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative                                      |
|                       | Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)<br>Result: negative |

**Amitraz (ISO):**

|                       |   |
|-----------------------|---|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative  |
|                       | Test Type: In vitro mammalian cell gene mutation test<br>Result: negative |
|                       | Test Type: Chromosome aberration test in vitro<br>Result: negative        |

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Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)  
Result: negative

**Bis(2,6-diisopropylphenyl)carbodiimide:**

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

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

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

**Carcinogenicity**

May cause cancer.

**Components:****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

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

Species : Rat  
Application Route : Ingestion  
Exposure time : 2 Years  
Result : negative  
Remarks : Based on data from similar materials

**Amitraz (ISO):**

Species : Rat  
Application Route : Oral  
Exposure time : 2 Years  
NOAEL : > 10,18 mg/kg body weight  
Result : negative

Species : Mouse  
Exposure time : 2 Years  
LOAEL : 2,3 mg/kg body weight  
Result : positive  
Target Organs : Liver, Stomach

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**Reproductive toxicity**

May damage fertility.

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

|                              |  |
|------------------------------|--|
| Effects on fertility         | : Test Type: Reproduction/Developmental toxicity screening test<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: negative |
| Effects on fetal development | : Test Type: Embryo-fetal development<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: negative                           |

**Amitraz (ISO):**

|                              |   |
|------------------------------|---|
| Effects on fertility         | : Test Type: Three-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Oral<br>Fertility: NOAEL: > 4,8 mg/kg body weight<br>Result: No significant adverse effects were reported   |
| Effects on fetal development | : Test Type: Embryo-fetal development<br>Species: Rat<br>Application Route: Oral<br>Developmental Toxicity: NOAEL: 3 mg/kg body weight<br>Remarks: No significant adverse effects were reported<br><br>Test Type: Embryo-fetal development<br>Species: Rabbit<br>Application Route: Oral<br>Developmental Toxicity: NOAEL: 5 mg/kg body weight<br>Result: Effects on fetal development. |

**Bis(2,6-diisopropylphenyl)carbodiimide:**

|                              |  |
|------------------------------|--|
| Effects on fertility         | : Test Type: Reproduction/Developmental toxicity screening test<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 421<br>Result: positive<br><br>Test Type: Fertility<br>Species: Rat<br>Application Route: Ingestion<br>Result: positive |
| Effects on fetal development | : Test Type: Reproduction/Developmental toxicity screening test<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 421   |

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Result: equivocal

|                                    |   |  |
|------------------------------------|---|--|
| Reproductive toxicity - Assessment | : | Clear evidence of adverse effects on sexual function and fertility, based on animal experiments. |
|------------------------------------|---|--|

**STOT-single exposure**

May cause drowsiness or dizziness.

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

|            |   |                                    |
|------------|---|------------------------------------|
| Assessment | : | May cause drowsiness or dizziness. |
|------------|---|------------------------------------|

**STOT-repeated exposure**

May cause damage to organs (Kidney, Heart, Gastrointestinal tract, Lymph nodes) through prolonged or repeated exposure.

**Components:****Amitraz (ISO):**

|               |   |  |
|---------------|---|--|
| Target Organs | : | Liver, Central nervous system                                      |
| Assessment    | : | May cause damage to organs through prolonged or repeated exposure. |

**Bis(2,6-diisopropylphenyl)carbodiimide:**

|                    |   |   |
|--------------------|---|---|
| Routes of exposure | : | Ingestion   |
| Target Organs      | : | Kidney, Heart, Gastrointestinal tract, Lymph nodes              |
| Assessment         | : | Causes damage to organs through prolonged or repeated exposure. |

**Repeated dose toxicity****Components:****Solvent naphtha (petroleum), light aromatic:**

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

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

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

**Amitraz (ISO):**

|                   |   |         |
|-------------------|---|---------|
| Species           | : | Mouse   |
| NOAEL             | : | 3 mg/kg |
| Application Route | : | Oral    |
| Exposure time     | : | 90 Days |

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|                   |                                 |
|-------------------|---------------------------------|
| Target Organs     | : Liver                         |
| Species           | : Dog                           |
| NOAEL             | : 0,25 mg/kg                    |
| Application Route | : Oral                          |
| Exposure time     | : 90 Days                       |
| Target Organs     | : Central nervous system, Liver |

**Bis(2,6-diisopropylphenyl)carbodiimide:**

|                   |                           |
|-------------------|---------------------------|
| Species           | : Rat                     |
| NOAEL             | : 4 mg/kg                 |
| LOAEL             | : 16 mg/kg                |
| Application Route | : Ingestion               |
| Exposure time     | : 28 Days                 |
| Method            | : OECD Test Guideline 407 |

**Aspiration toxicity**

May be fatal if swallowed and enters airways.

**Product:**

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

**Components:****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:****Amitraz (ISO):**

|           |   |
|-----------|---|
| Ingestion | : Target Organs: Central nervous system |
|-----------|---|

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****Solvent naphtha (petroleum), light aromatic:**

|   |  |
|---|--|
| Toxicity to fish                                    | : LC50 (Pimephales promelas (fathead minnow)): 8,2 mg/l<br>Exposure time: 96 h<br>Test substance: Water Accommodated Fraction                          |
| Toxicity to daphnia and other aquatic invertebrates | : EL50 (Daphnia magna (Water flea)): 4,5 mg/l<br>Exposure time: 48 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 202 |
| Toxicity to algae/aquatic                           | : EL50 (Pseudokirchneriella subcapitata (microalgae)): 3,1 mg/l  |

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|  |  |
|--|--|
| plants   | Exposure time: 96 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br><br>NOELR (Pseudokirchneriella subcapitata (microalgae)): 0,5 mg/l<br>Exposure time: 96 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201 |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | NOELR (Daphnia magna (Water flea)): 2,6 mg/l<br>Exposure time: 21 d<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 211  |

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

|  |  |
|--|--|
| Toxicity to fish   | : LC50 (Pimephales promelas (fathead minnow)): > 0,1 - 1 mg/l<br>Exposure time: 96 h<br>Remarks: Based on data from similar materials  |
| Toxicity to daphnia and other aquatic invertebrates                    | : EC50 (Ceriodaphnia dubia (water flea)): > 0,1 - 1 mg/l<br>Exposure time: 48 h<br>Remarks: Based on data from similar materials   |
| Toxicity to algae/aquatic plants                                       | : ErC50 (Selenastrum capricornutum (green algae)): > 1 - 10 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials<br><br>EC10 (Selenastrum capricornutum (green algae)): > 1 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |
| M-Factor (Acute aquatic toxicity)                                      | : 1  |
| Toxicity to fish (Chronic toxicity)                                    | : NOEC (Oryzias latipes (Japanese medaka)): > 0,1 - 1 mg/l<br>Exposure time: 100 d<br>Remarks: Based on data from similar materials  |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : NOEC (Mysidopsis bahia (opossum shrimp)): > 0,001 - 0,01 mg/l<br>Exposure time: 28 d<br>Remarks: Based on data from similar materials  |
| M-Factor (Chronic aquatic toxicity)                                    | : 10   |

**Amitraz (ISO):**

|   |   |
|---|---|
| Toxicity to fish                                    | : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0,45 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): 0,035 mg/l<br>Exposure time: 48 h            |



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|  |   |  |
|--|---|--|
| Toxicity to algae/aquatic plants                                       | : | NOEC (Pseudokirchneriella subcapitata (green algae)): 0,04 mg/l<br>Exposure time: 91 h |
| M-Factor (Acute aquatic toxicity)                                      | : | 10   |
| Toxicity to fish (Chronic toxicity)                                    | : | NOEC (Pimephales promelas (fathead minnow)): 0,00148 mg/l<br>Exposure time: 32 d       |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 0,0011 mg/l<br>Exposure time: 21 d                  |
| M-Factor (Chronic aquatic toxicity)                                    | : | 10   |

**Bis(2,6-diisopropylphenyl)carbodiimide:**

|   |   |   |
|---|---|---|
| Toxicity to fish                                    | : | LC50 (Oncorhynchus mykiss (rainbow trout)): > 0,1 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203<br>Remarks: No toxicity at the limit of solubility.  |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 1 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202<br>Remarks: No toxicity at the limit of solubility.             |
| Toxicity to algae/aquatic plants                    | : | ErC50 (Desmodesmus subspicatus (green algae)): > 1 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: No toxicity at the limit of solubility. |
|   |   | NOEC (Desmodesmus subspicatus (green algae)): > 1 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201  |
| Toxicity to microorganisms                          | : | EC50: > 1.000 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209   |

**Persistence and degradability****Components:****Solvent naphtha (petroleum), light aromatic:**

|                  |   |  |
|------------------|---|--|
| Biodegradability | : | Result: Inherently biodegradable.<br>Biodegradation: 94 %<br>Exposure time: 25 d |
|------------------|---|--|

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

|                  |   |   |
|------------------|---|---|
| Biodegradability | : | Result: Not readily biodegradable.<br>Remarks: Based on data from similar materials |
|------------------|---|---|

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**Bis(2,6-diisopropylphenyl)carbodiimide:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 3 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

**Bioaccumulative potential****Components:****4-Nonylphenol, branched, ethoxylated:**

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

**Amitraz (ISO):**

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): 1.333

Partition coefficient: n-octanol/water : log Pow: 5,5

**Bis(2,6-diisopropylphenyl)carbodiimide:**

Bioaccumulation : Bioconcentration factor (BCF): > 500

Partition coefficient: n-octanol/water : log Pow: > 6,2

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

Distribution among environmental compartments : log Koc: 3,3

**Other adverse effects**

No data available

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Do not dispose of waste into sewer.  
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**

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**UNRTDG**

|                           |                                |
|---------------------------|--------------------------------|
| UN number                 | : UN 3295                      |
| Proper shipping name      | : HYDROCARBONS, LIQUID, N.O.S. |
| Class                     | : 3                            |
| Packing group             | : III                          |
| Labels                    | : 3                            |
| Environmentally hazardous | : no                           |

**IATA-DGR**

|  |                                |
|--|--------------------------------|
| UN/ID No.                                | : UN 3295                      |
| Proper shipping name                     | : Hydrocarbons, liquid, n.o.s. |
| Class                                    | : 3                            |
| Packing group                            | : III                          |
| Labels                                   | : Flammable Liquids            |
| Packing instruction (cargo aircraft)     | : 366                          |
| Packing instruction (passenger aircraft) | : 355                          |

**IMDG-Code**

|                      |   |
|----------------------|---|
| UN number            | : UN 3295   |
| Proper shipping name | : HYDROCARBONS, LIQUID, N.O.S.<br>(Amitraz (ISO)) |
| Class                | : 3   |
| Packing group        | : III   |
| Labels               | : 3   |
| 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.

**Special precautions for user**

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

**SECTION 15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture**

|   |                  |
|---|------------------|
| Argentina. Carcinogenic Substances and Agents Registry. | : Not applicable |
|---|------------------|

|   |   |
|---|---|
| Control of precursors and essential chemicals for the preparation of drugs. | : Solvent naphtha (petroleum), light aromatic |
|---|---|

**The ingredients of this product are reported in the following inventories:**

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

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**SECTION 16. OTHER INFORMATION**

Revision Date : 14.04.2025  
Date format : dd.mm.yyyy

**Further information**

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

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

**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

ACGIH / TWA : 8-hour, time-weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; 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; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided

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relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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