SAFETY DATA SHEET

Amitraz (12.5%) Formulation

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Amitraz (12.5%) Formulation

Manufacturer or supplier's details
Company name of supplier : MSD
Address : 2000 Galloping Hill Road
          Kenilworth - New Jersey - U.S.A. 07033
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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Acute toxicity (Oral) : Category 5
Serious eye damage : Category 1
Reproductive toxicity : Category 1B
Specific target organ toxicity - single exposure : Category 3
Specific target organ toxicity - repeated exposure : Category 1 (Kidney, Heart, Gastrointestinal tract, Lymph nodes)
Specific target organ toxicity - repeated exposure : Category 2 (Liver, Central nervous system)
Aspiration hazard : Category 1

GHS label elements
Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H303 May be harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H360F May damage fertility.
H372 Causes damage to organs (Kidney, Heart, Gastrointestinal tract, Lymph nodes) through prolonged or repeated exposure.
H373 May cause damage to organs (Liver, Central nervous 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.
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.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
P331 Do NOT induce vomiting.

Storage:
P405 Store locked up.

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

Other hazards:
Repeated exposure may cause skin dryness or cracking.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Components:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbons, C10, aromatics, &lt;1% naphthalene</td>
<td>64742-94-5</td>
<td>&gt;= 50 - &lt; 70</td>
</tr>
<tr>
<td>4-Nonylphenol, branched, ethoxylated</td>
<td>127087-87-0</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Amitraz (ISO)</td>
<td>33089-61-1</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Bis(2,6-diisopropylphenyl)carbodiimide</td>
<td>2162-74-5</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

Alternative CAS Numbers for some regions

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Alternative CAS Number(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-Nonylphenol, branched, ethoxylated</td>
<td>68412-54-4</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES
SAFETY DATA SHEET

Amitraz (12.5%) Formulation

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. Remove 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 immediately.

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 and effects, both acute and delayed: May be harmful if swallowed. May be fatal if swallowed and enters airways. Causes serious eye damage. May cause drowsiness or dizziness. May damage fertility. Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact may dry skin and cause irritation.

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 (CO2)
Dry chemical

Unsuitable extinguishing media: None known.

Specific hazards during fire fighting: Exposure to combustion products may be a hazard to health.

Hazardous combustion products: Carbon oxides
Nitrogen oxides (NOx)

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: In the event of fire, wear self-contained breathing apparatus.
for fire-fighters Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective 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: Soak up with inert absorbent material. 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.

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. Keep container tightly closed. Do not eat, drink or smoke when using this product. Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures: If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. 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.

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.

Materials to avoid: Do not store with the following product types:
- Strong oxidizing agents
- Organic peroxides
- Explosives
- Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amitraz (ISO)</td>
<td>33089-61-1</td>
<td>TWA</td>
<td>20 µg/m³ (OEB 3)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>200 µg/100 cm²</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Engineering measures: Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., dripless 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: Chemical-resistant gloves

Remarks: Consider double gloving.
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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>characteristic, aromatic, hydrocarbon-like</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>106 °C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (liquids)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Viscosity
Viscosity, kinematic : No data available

Explosive properties : Not explosive

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

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 : Can react with strong oxidizing agents.
Conditions to avoid : None known.
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
May be harmful if swallowed.

Product:
Acute oral toxicity : Acute toxicity estimate: 2,384 mg/kg
Method: Calculation method

Components:
Hydrocarbons, C10, aromatics, <1% naphthalene:
Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 420
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 4.778 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal
4-Nonylphenol, branched, ethoxylated:
Acute oral toxicity : LD50 (Rat): 1,310 mg/kg
Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Amitraz (ISO):
Acute oral toxicity : LD50 (Rat): > 400 mg/kg
LD50 (Mouse): > 1,085 mg/kg
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
Method: OECD Test Guideline 423
Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation
Not classified based on available information.

Components:

Hydrocarbons, C10, aromatics, <1% naphthalene:
Assessment : Repeated exposure may cause skin dryness or cracking.

Amitraz (ISO):
Species : Rabbit
Result : No skin irritation

Bis(2,6-diisopropylphenyl)carbodiimide:
Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation
Causes serious eye damage.
Components:

Hydrocarbons, C10, aromatics, <1% naphthalene:
Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials

4-Nonylphenol, branched, ethoxylated:
Species: Rabbit
Result: Irreversible effects on the eye
Remarks: Based on data from similar materials

Amitraz (ISO):
Species: Rabbit
Result: No eye irritation

Bis(2,6-diisopropylphenyl)carbodiimide:
Species: Rabbit
Result: No eye irritation

Respiratory or skin sensitization
Skin sensitization
Not classified based on available information.
Respiratory sensitization
Not classified based on available information.

Components:

Hydrocarbons, C10, aromatics, <1% naphthalene:
Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative
Remarks: Based on data from similar materials

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
Not classified based on available information.

**Components:**

**Hydrocarbons, C10, aromatics, <1% naphthalene:**

Genotoxicity in vitro:
- Test Type: In vitro sister chromatid exchange assay in mammalian cells
  - Result: negative
  - Remarks: Based on data from similar materials

Genotoxicity in vivo:
- Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
  - Species: Rat
  - Application Route: inhalation (vapor)
  - Result: negative
  - Remarks: Based on data from similar materials

**Amitraz (ISO):**

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

- 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**
Not classified based on available information.

**Components:**

**Amitraz (ISO):**

- Species: Rat
- Application Route: Oral
### Amitraz (12.5%) Formulation

**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

#### Reproductive toxicity
May damage fertility.

#### Components:

**Hydrocarbons, C10, aromatics, <1% naphthalene:**

| Effects on fertility | Test Type: Three-generation reproduction toxicity study  
|----------------------|----------------------------------------------------------|
| | Species: Rat  
| | Application Route: inhalation (vapor)  
| | Result: negative  
| | Remarks: Based on data from similar materials |

| Effects on fetal development | Test Type: Embryo-fetal development  
|-----------------------------|---------------------------------|
| | Species: Rat  
| | Application Route: Ingestion  
| | Result: negative  
| | Remarks: Based on data from similar materials |

**Amitraz (ISO):**

| Effects on fertility | Test Type: Three-generation reproduction toxicity study  
|----------------------|----------------------------------------------------------|
| | Species: Rat  
| | Application Route: Oral  
| | Fertility: NOAEL: > 4.8 mg/kg body weight  
| | Result: No significant adverse effects were reported |

| Effects on fetal development | Test Type: Embryo-fetal development  
|-----------------------------|---------------------------------|
| | Species: Rat  
| | Application Route: Oral  
| | Developmental Toxicity: NOAEL: 3 mg/kg body weight  
| | Remarks: No significant adverse effects were reported  
| | Remarks: No significant adverse effects were reported |

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

| Effects on fertility | Test Type: Reproduction/Developmental toxicity screening test  
|----------------------|----------------------------------------------------------|
| | Species: Rat  
| | Application Route: Ingestion  
| | Method: OECD Test Guideline 421 |

---
Result: positive

Test Type: Fertility
Species: Rat
Application Route: Ingestion
Result: positive

Effects on fetal development:
Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 421
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:

Hydrocarbons, C10, aromatics, <1% naphthalene:
Assessment: May cause drowsiness or dizziness.
Remarks: Based on data from similar materials

STOT-repeated exposure
Causes damage to organs (Kidney, Heart, Gastrointestinal tract, Lymph nodes) through prolonged or repeated exposure.
May cause damage to organs (Liver, Central nervous system) 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:

Hydrocarbons, C10, aromatics, <1% naphthalene:
Species: Rat
NOAEL: 300 mg/kg
Application Route: Ingestion
Exposure time : 13 Weeks
Remarks : Based on data from similar materials

**Amitraz (ISO):**
Species : Mouse
NOAEL : 3 mg/kg
Application Route : Oral
Exposure time : 90 Days
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:**

**Hydrocarbons, C10, aromatics, <1% naphthalene:**
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:**

**Hydrocarbons, C10, aromatics, <1% naphthalene:**
Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l
### Amitraz (12.5%) Formulation

<table>
<thead>
<tr>
<th>Substance</th>
<th>Endpoint</th>
<th>Concentration</th>
<th>Method</th>
<th>Exposure Time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test substance: Water Accommodated Fraction</td>
<td>Toxicity to daphnia and other aquatic invertebrates</td>
<td>EL50 (Daphnia magna (Water flea)): 3 – 10 mg/l</td>
<td>OECD Test Guideline 203</td>
<td>48 h</td>
<td>Based on data from similar materials</td>
</tr>
<tr>
<td>Test substance: Water Accommodated Fraction</td>
<td>Toxicity to algae/aquatic plants</td>
<td>EL50 (Pseudokirchneriella subcapitata (green algae)): &gt; 1 - 3 mg/l</td>
<td>OECD Test Guideline 202</td>
<td>72 h</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

#### 4-Nonylphenol, branched, ethoxylated:

<table>
<thead>
<tr>
<th>Test substance</th>
<th>Toxicity to fish</th>
<th>LC50: &gt; 1 - 10 mg/l</th>
<th>OECD Test Guideline 203</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test substance: Water Accommodated Fraction</td>
<td>Toxicity to daphnia and other aquatic invertebrates</td>
<td>EC50: &gt; 1 - 10 mg/l</td>
<td>OECD Test Guideline 202</td>
</tr>
<tr>
<td>Test substance: Water Accommodated Fraction</td>
<td>Toxicity to algae/aquatic plants</td>
<td>NOEC: 20 mg/l</td>
<td>OECD Test Guideline 201</td>
</tr>
</tbody>
</table>

#### Amitraz (ISO):

| Test substance | Toxicity to fish | LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.45 mg/l | OECD Test Guideline 203 |
| Test substance: Water Accommodated Fraction | Toxicity to daphnia and other aquatic invertebrates | EC50 (Daphnia magna (Water flea)): 0.035 mg/l | OECD Test Guideline 202 |
| Test substance: Water Accommodated Fraction | Toxicity to algae/aquatic plants | NOEC (Pseudokirchneriella subcapitata (green algae)): 0.04 mg/l | OECD Test Guideline 201 |
| Test substance: Water Accommodated Fraction | Toxicity to fish (Chronic toxicity) | NOEC (Pimephales promelas (fathead minnow)): 0.00148 mg/l | OECD Test Guideline 203 |

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

<table>
<thead>
<tr>
<th>Test substance</th>
<th>Toxicity to fish</th>
<th>LC50 (Oncorhynchus mykiss (rainbow trout)): &gt; 0.1 mg/l</th>
<th>OECD Test Guideline 203</th>
</tr>
</thead>
</table>
### Remarks:
No toxicity at the limit of solubility.

#### Toxicity to daphnia and other aquatic invertebrates
- **EC50 (Daphnia magna (Water flea))**: > 1 mg/l
- **Exposure time**: 48 h
- **Method**: OECD Test Guideline 202
- **Remarks**: No toxicity at the limit of solubility.

#### Toxicity to algae/aquatic plants
- **ErC50 (Desmodesmus subspicatus (green algae))**: > 1 mg/l
- **Exposure time**: 72 h
- **Method**: OECD Test Guideline 201
- **Remarks**: No toxicity at the limit of solubility.

#### NOEC (Desmodesmus subspicatus (green algae))
- **NOEC**: > 1 mg/l
- **Exposure time**: 72 h
- **Method**: OECD Test Guideline 201

#### Toxicity to microorganisms
- **EC50**: > 1,000 mg/l
- **Exposure time**: 3 h
- **Method**: OECD Test Guideline 209

### Persistence and degradability

#### Components:

**Hydrocarbons, C10, aromatics, <1% naphthalene:**
- **Biodegradability**
  - **Result**: Not readily biodegradable.
  - **Biodegradation**: 49.56 %
  - **Exposure time**: 28 d
  - **Method**: OECD Test Guideline 301F

#### Bis(2,6-diisopropylphenyl)carbodiimide:
- **Biodegradability**
  - **Result**: Not readily biodegradable.
  - **Biodegradation**: 3 %
  - **Exposure time**: 28 d
  - **Method**: OECD Test Guideline 301B

### Bioaccumulative potential

#### Components:

**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: Dispose of in accordance with local regulations.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
UN number: UN 3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (amitraz (ISO))
Class: 9
Packing group: III
Labels: 9

IATA-DGR
UN/ID No.: UN 3082
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Amitraz (ISO))
Class: 9
Packing group: III
Labels: Miscellaneous
Packing instruction (cargo aircraft): 964
Packing instruction (passenger aircraft): 964
Environmentally hazardous: yes

IMDG-Code
UN number: UN 3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (amitraz (ISO))
Class: 9
Packing group: III
Labels: 9
EmS Code: F-A, S-F
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

**NOM-002-SCT**
- **UN number**: UN 3082
- **Proper shipping name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Amitraz (ISO))
- **Class**: 9
- **Packing group**: III
- **Labels**: 9

**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**
- **Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills.**
  - **Not applicable**

**The ingredients of this product are reported in the following inventories:**
- **AICS**: not determined
- **DSL**: not determined
- **IECSC**: not determined

### SECTION 16. OTHER INFORMATION

**Full text of other abbreviations**
- 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 Or-
SAFETY DATA SHEET

Amitraz (12.5%) Formulation

Version 3.4 Date of last issue: 02.10.2020
Revision Date: 27.08.2021 SDS Number: 1829153-00009 Date of first issue: 11.07.2017

Oganisation 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; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System


Revision Date : 27.08.2021

The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

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