SAFETY DATA SHEET

Amitraz (5%) Formulation

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Amitraz (5%) Formulation

Manufacturer or supplier’s details
Company : MSD
Address : Rua Coronel Bento Soares, 530
          Cruzeiro - Sao Paulo - Brazil  CEP 12730-340
Telephone : 908-740-4000
Emergency telephone : 1-908-423-6000
E-mail address : EHSDATASTEWARD@msd.com
Telefax : 908-735-1496

Recommended use of the chemical and restrictions on use
Recommended use : Veterinary product

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification in accordance with ABNT NBR 14725 Standard

Flammable liquids : Category 3
Acute toxicity (Oral) : Category 5
Skin irritation : Category 2
Serious eye damage : Category 1
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
Long-term (chronic) aquatic hazard : Category 1
GHS label elements in accordance with ABNT NBR 14725 Standard

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.
- H318 Causes serious eye damage.
- 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.
- P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
- 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/ doctor.
- P391 Collect spillage.

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aromatic</td>
<td>64742-95-6</td>
<td>Flammable liquids, Category 3 Skin irritation, Category 2 Germ cell mutagenicity, Category 1B</td>
<td>&gt;= 70 - &lt; 90</td>
</tr>
<tr>
<td>Substance</td>
<td>CAS Number</td>
<td>Acute toxicity (Oral), Category 4</td>
<td>Reproductive toxicity, Category 1B</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>----------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>4-Nonylphenol, branched, ethoxylated</td>
<td>127087-87-0</td>
<td>&gt;= 10 - &lt; 20</td>
<td></td>
</tr>
<tr>
<td>Amitraz (ISO)</td>
<td>33089-61-1</td>
<td>&gt;= 5 - &lt; 10</td>
<td></td>
</tr>
<tr>
<td>2,2',6,6'-Tetraisopropylphenylcarbodiimide</td>
<td>2162-74-5</td>
<td>&gt;= 1 - &lt; 2,5</td>
<td></td>
</tr>
</tbody>
</table>

**Alternative CAS Numbers for some regions**
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 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 skin irritation. Causes serious eye damage. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. May damage fertility. 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 (CO2)
Dry chemical

Unsuitable extinguishing media: High volume water jet

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
- Remove all sources of ignition.
- Use personal protective equipment.
- Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions:
- Discharge into the environment must be avoided.
- 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.

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.
- If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventila-
Advice on safe handling:
- Do not get on skin or clothing.
- Do not breathe vapors or spray mist.
- Do not swallow.
- Do not get in eyes.
- 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 and sources of ignition.
- Take precautionary measures against static discharges.
- 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.
- 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

<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>Solvent naphtha (petroleum), light aromatic</td>
<td>64742-95-6</td>
<td>TWA</td>
<td>200 mg/m³ (total hydrocarbon vapor)</td>
<td>ACGIH</td>
</tr>
<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>
SAFETY DATA SHEET

Amitraz (5%) Formulation

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.

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

Material: Consider double gloving. Take note that the product is flammable, which may impact the selection of hand protection.

Remarks: Combined particulates and organic vapor type

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

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
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FLASH POINT

- Flash point: 53 °C

EVAPORATION RATE

- Evaporation rate: No data available

FLAMMABILITY

- 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

- Vapor pressure: No data available

RELATIVE VAPOR DENSITY

- Relative vapor density: No data available

RELATIVE DENSITY

- Relative density: No data available

DENSITY

- 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 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
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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: 4.247 mg/kg
Method: Calculation method

Components:

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

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

2,2',6,6'-Tetraisopropylidiphenylcarbodiimide:
- 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
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Amitraz (5%) Formulation

Version 4.0  Revision Date: 23.03.2020  SDS Number: 1829233-00007  Date of last issue: 13.09.2019
Date of first issue: 11.07.2017

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

2,2',6,6’-Tetraisopropyldiphenylcarbodiimide:

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

Serious eye damage/eye irritation

- Causes serious eye damage.

Components:

Solvent naphtha (petroleum), light aromatic:

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

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

2,2',6,6’-Tetraisopropyldiphenylcarbodiimide:

- 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:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Routes of exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buehler Test</td>
<td>Skin contact</td>
<td>Guinea pig</td>
<td>negative</td>
</tr>
</tbody>
</table>

### Amitraz (ISO):

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Routes of exposure</th>
<th>Species</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximization Test</td>
<td>Dermal</td>
<td>Guinea pig</td>
<td>OECD Test Guideline 406</td>
<td>Not a skin sensitizer.</td>
</tr>
</tbody>
</table>

### 2,2′,6,6′-Tetraisopropyldiphenylcarbodiimide:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Routes of exposure</th>
<th>Species</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximization Test</td>
<td>Skin contact</td>
<td>Guinea pig</td>
<td>OECD Test Guideline 406</td>
<td>negative</td>
</tr>
</tbody>
</table>

### Germ cell mutagenicity

May cause genetic defects.

## Components:

### 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 |

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

2,2',6,6'-Tetraisopropyldiphenylcarbodiimide:

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

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

Reproductive toxicity

May damage fertility.

Components:

Solvent naphtha (petroleum), light aromatic:

Effects on fertility: Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: inhalation (vapor)
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Result: negative

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

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

Test Type: Embryo-fetal development
Species: Rabbit
Application Route: Oral
Developmental Toxicity: NOAEL: 5 mg/kg body weight
Result: Effects on fetal development.

2,2',6,6'-Tetraisopropylidiphenylcarbodiimide:

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.
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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.

2,2',6,6'-Tetraisopropyldiphenylcarbodiimide:
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

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

2,2',6,6'-Tetraisopropyldiphenylcarbodiimide:
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:
\[ \text{LC50 (Pimephales promelas (fathead minnow))}: 8,2 \text{ mg/l} \]
\[ \text{Exposure time: 96 h} \]
Test substance: Water Accommodated Fraction

Toxicity to daphnia and other aquatic invertebrates:
\[ \text{EL50 (Daphnia magna (Water flea))}: 4,5 \text{ mg/l} \]
\[ \text{Exposure time: 48 h} \]
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants:
\[ \text{EL50 (Pseudokirchneriella subcapitata (microalgae))}: 3,1 \text{ mg/l} \]
\[ \text{Exposure time: 96 h} \]
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

\[ \text{NOELR (Pseudokirchneriella subcapitata (microalgae))}: 0,5 \text{ mg/l} \]
\[ \text{Exposure time: 96 h} \]
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
\[ \text{NOELR (Daphnia magna (Water flea))}: 2,6 \text{ mg/l} \]
\[ \text{Exposure time: 21 d} \]
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 211
4-Nonylphenol, branched, ethoxylated:

Toxicity to fish: LC50: > 1 - 10 mg/l
   Exposure time: 96 h
   Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates: EC50: > 1 - 10 mg/l
   Exposure time: 48 h
   Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants: NOEC: 20 mg/l
   Exposure time: 96 h
   Remarks: Based on data from similar materials

Amitraz (ISO):

Toxicity to fish: LC50 (Lepomis macrochirus (Bluegill sunfish)): 0,45 mg/l
   Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 0,035 mg/l
   Exposure time: 48 h

Toxicity to algae/aquatic plants: NOEC (Pseudokirchneriella subcapitata (green algae)): 0,04 mg/l
   Exposure time: 91 h

M-Factor (Acute aquatic toxicity): 10

Toxicity to fish (Chronic toxicity): NOEC (Pimephales promelas (fathead minnow)): 0,00148 mg/l
   Exposure time: 32 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 0,0011 mg/l
   Exposure time: 21 d

M-Factor (Chronic aquatic toxicity): 10

2,2',6,6'-Tetraisopropyldiphenylcarbodiimide:

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): > 0,1 mg/l
   Exposure time: 96 h
   Method: OECD Test Guideline 203
   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)): > 1 mg/l
   Exposure time: 72 h
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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:

Solvent naphtha (petroleum), light aromatic:
Biodegradability: Result: Inherently biodegradable.
Biodegradation: 94%
Exposure time: 25 d

2,2',6,6'-Tetraisopropyldiphenylcarbodiimide:
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

2,2',6,6'-Tetraisopropyldiphenylcarbodiimide:
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 disposal facility.
SAFETY DATA SHEET

Amitraz (5%) Formulation

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 3295
Proper shipping name : HYDROCARBONS, LIQUID, N.O.S.
Class : 3
Packing group : III
Labels : 3

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. (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.

Domestic regulation

ANTT
UN number : UN 3295
Proper shipping name : HYDROCARBONS, LIQUID, N.O.S.
Class : 3
Packing group : III
Labels : 3
Hazard Identification Number : 30

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.
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SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

National List of Carcinogenic Agents for Humans - (LINACH)
Group 2B: Possibly carcinogenic to humans
Solvent naphtha (petroleum), light aromatic : 64742-95-6

Brazil. List of chemicals controlled by the Federal Police
: Solvent naphtha (petroleum), light aromatic

International Regulations

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

AICS : not determined
DSL : not determined
IECSC : not determined

SECTION 16. OTHER INFORMATION

Further information


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

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH / TWA : 8-hour, time-weighted average

AICS - Australian Inventory of Chemical Substances; 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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.

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