

## Amitraz (12.5%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
6.1	30.09.2023	1829147-00016	Date of first issue: 11.07.2017

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### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Amitraz (12.5%) 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

#### 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 in accordance with ABNT NBR 14725 Standard

Acute toxicity (Oral) : Category 4

Eye irritation : Category 2A

Reproductive toxicity : Category 1B

Specific target organ toxicity -  
single exposure : Category 3

Specific target organ toxicity -  
repeated exposure : Category 2 (Liver, Central nervous system, Kidney, Heart, Gas-  
trointestinal 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

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- Hazard pictograms : 
- Signal Word : Danger
- Hazard Statements : H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H360F May damage fertility.  
H373 May cause damage to organs (Liver, Central nervous system, 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.  
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.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P391 Collect spillage.

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

Repeated exposure may cause skin dryness or cracking.

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

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Hydrocarbons, C10, aromatics, <1% naphthalene	64742-94-5	Flammable liquids, Category 4 Specific target organ toxicity - single exposure, Category 3 Aspiration hazard, Category 1 Short-term (acute) aquatic hazard, Category 2 Long-term (chronic) aquatic hazard, Category 2	>= 50 -< 70
4-Nonylphenol, branched,	127087-87-0	Acute toxicity (Oral),	>= 10 -< 20

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ethoxylated		Category 4 Eye irritation, Category 2A Short-term (acute) aquatic hazard, Category 1 Long-term (chronic) aquatic hazard, Category 1	
Amitraz (ISO)	33089-61-1	Acute toxicity (Oral), Category 4 Specific target organ toxicity - repeated exposure (Liver, Cen- tral nervous system), Category 2 Short-term (acute) aquatic hazard, Category 1 Long-term (chronic) aquatic hazard, Category 1	>= 10 -< 20
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Acute toxicity (Oral), Category 4 Reproductive toxicity, Category 1B Specific target organ toxicity - repeated exposure (Kidney, Heart, Gastrointestinal tract, Lymph nodes), Category 1 Long-term (chronic) aquatic hazard, Category 4	>= 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.  
Remove contaminated clothing and shoes.

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- 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.
- If swallowed : Get medical attention.  
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 : Harmful if swallowed.  
May be fatal if swallowed and enters airways.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
May damage fertility.  
May cause 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 (CO<sub>2</sub>)  
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 (NO<sub>x</sub>)
- 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 : 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.

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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.

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### SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.

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.

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

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrocarbons, C10, aromatics, <1% naphthalene	64742-94-5	TWA (Inhalable particulate matter)	5 mg/m <sup>3</sup>	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.

#### 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

Eye protection

: Consider double gloving.  
 : 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

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contaminated clothing.

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**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 : 106 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : Not applicable

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Density : No data available

Solubility(ies)  
Water solubility : No data available

Partition coefficient: n-octanol/water : No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
Viscosity, kinematic : No data available

Explosive properties : Not explosive

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Oxidizing properties : The substance or mixture is not classified as oxidizing.  
Molecular weight : No data available  
Particle size : Not applicable

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**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.

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**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : Inhalation  
Skin contact  
Ingestion  
Eye contact

**Acute toxicity**

Harmful if swallowed.

**Product:**

Acute oral toxicity : Acute toxicity estimate: 1.505 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 toxicity  
Remarks: Based on data from similar materials

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



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Acute oral toxicity : LD50 (Rat): > 300 - 2.000 mg/kg  
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  
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 irritation.

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

Species : Rabbit  
Result : No eye irritation  
Remarks : Based on data from similar materials

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**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:****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

**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

**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

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**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

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

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

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

**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

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**Carcinogenicity**

Not classified based on available information.

**Components:****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

**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

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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.

### **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**

May cause damage to organs (Liver, Central nervous system, 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.

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**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

**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  
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.

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### 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  
 Exposure time: 96 h  
 Test substance: Water Accommodated Fraction  
 Method: OECD Test Guideline 203  
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 3 - 10 mg/l  
 Exposure time: 48 h  
 Test substance: Water Accommodated Fraction  
 Method: OECD Test Guideline 202  
 Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 3 mg/l  
 Exposure time: 72 h  
 Test substance: Water Accommodated Fraction  
 Method: OECD Test Guideline 201  
 Remarks: Based on data from similar materials

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

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 0,1 - 1 mg/l  
 Exposure time: 96 h  
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): > 0,1 - 1 mg/l  
 Exposure time: 48 h  
 Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): > 1 - 10 mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201  
 Remarks: Based on data from similar materials

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- EC10 (Selenastrum capricornutum (green algae)): > 1 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
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  
Exposure time: 100 d  
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  
Exposure time: 28 d  
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  
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
- Bis(2,6-diisopropylphenyl)carbodiimide:**
- 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



**Amitraz (12.5%) Formulation**

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Remarks: No toxicity at the limit of solubility.

NOEC (Desmodesmus subspicatus (green algae)): > 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

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

Biodegradability : Result: Not readily biodegradable.  
Remarks: Based on data from similar materials

**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

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### Mobility in soil

#### Components:

#### **Amitraz (ISO):**

Distribution among environmental compartments : log K<sub>oc</sub>: 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.  
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

Environmentally hazardous : yes

#### **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

**Amitraz (12.5%) Formulation**

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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 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(amitraz (ISO))  
Class : 9  
Packing group : III  
Labels : 9  
Hazard Identification Number : 90

**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.

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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) : Not applicable

Brazil. List of chemicals controlled by the Federal Police : Not applicable

**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 : 30.09.2023  
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/>

**Full text of other abbreviations**

**Amitraz (12.5%) Formulation**

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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 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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