

**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

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**SECTION 1. IDENTIFICATION**

Product name : Amitraz (12.5%) EC Formulation

Other means of identification : COOPERS AMITIK EC CATTLE AND PIG SPRAY (45044)

**Manufacturer or supplier's details**

Company : MSD

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

Telephone : 908-740-4000

Emergency telephone : 1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

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

Recommended use : Veterinary product

Restrictions on use : Not applicable

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

Acute toxicity (Oral) : Category 4

Serious eye damage/eye irritation : Category 1

Skin sensitization : Category 1

Germ cell mutagenicity : Category 2

Specific target organ toxicity - single exposure : Category 3

Specific target organ toxicity - repeated exposure : Category 2 (Liver, Central nervous system)

Aspiration hazard : Category 1

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

**GHS label elements**

## Amitraz (12.5%) EC Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

Hazard pictograms

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Signal Word

: Danger

Hazard Statements

: H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H336 May cause drowsiness or dizziness.  
H341 Suspected of causing genetic defects.  
H373 May cause damage to organs (Liver, Central nervous system) through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

: **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe mist or vapors.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
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.  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P305 + P351 + P338 + 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.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P331 Do NOT induce vomiting.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P391 Collect spillage.

**Storage:**

P405 Store locked up.

**Disposal:**

## Amitraz (12.5%) EC Formulation

Version 3.0      Revision Date: 14.04.2025      SDS Number: 11182734-00005      Date of last issue: 27.11.2023  
 Date of first issue: 21.03.2023

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

**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.	Concentration (% w/w)
Hydrocarbons, C10, aromatics, <1% naphthalene	64742-94-5	>= 50 -< 70
Nonylphenol, ethoxylated	9016-45-9	>= 20 -< 25
Amitraz (ISO)	33089-61-1	>= 10 -< 20
7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	2386-87-0	>= 2,5 -< 5

**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.  
 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 : Prolonged or repeated contact may dry skin and cause irritation.  
 Harmful if swallowed.  
 May be fatal if swallowed and enters airways.  
 May cause an allergic skin reaction.  
 Causes serious eye damage.  
 May cause drowsiness or dizziness.  
 Suspected of causing genetic defects.  
 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

**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

Notes to physician : when the potential for exposure exists (see section 8).  
: 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
- 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.  
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

## Amitraz (12.5%) EC Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

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.
- 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  
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	CMP (Mist)	5 mg/m <sup>3</sup>	AR OEL
		CMP - CPT (Mist)	10 mg/m <sup>3</sup>	AR OEL
		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

**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

design and operated in accordance with GMP principles to protect products, workers, and the environment. Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices). Minimize open handling.

**Personal protective equipment**

- |                          |   |  |
|--------------------------|---|--|
| Respiratory protection   | : | If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.   |
| Filter type              | : | Combined particulates and organic vapor type   |
| Hand protection          | : |  |
| Material                 | : | Chemical-resistant gloves  |
| Remarks                  | : | Consider double gloving.   |
| Eye protection           | : | Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.   |
| Skin and body protection | : | Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces. Use appropriate degowning techniques to remove potentially contaminated clothing.  |
| Hygiene measures         | : | If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use. The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls. |

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- |                |   |                   |
|----------------|---|-------------------|
| Appearance     | : | liquid            |
| Color          | : | clear             |
|                |   | light yellow      |
| Odor           | : | characteristic    |
| Odor Threshold | : | No data available |

**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

---

pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
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	:	0,952 (15 °C)
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available
Particle characteristics		
Particle size	:	Not applicable

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**SECTION 10. STABILITY AND REACTIVITY**

**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

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**

Harmful if swallowed.

**Product:**

Acute oral toxicity : Acute toxicity estimate: 1.446 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

**Nonylphenol, ethoxylated:**

Acute oral toxicity	:	LD50 (Rat): 500 - 2.000 mg/kg
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**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



**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

Acute dermal toxicity : LD50 (Rat): > 1.600 mg/kg

**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Acute oral toxicity : LD50 (Rat, male): > 2.959 - 5.000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): >= 5,19 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 436  
Assessment: The substance or mixture has no acute inhalation toxicity

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.

**Nonylphenol, ethoxylated:**

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

**Amitraz (ISO):**

Species : Rabbit  
Result : No skin irritation

**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

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

## Amitraz (12.5%) EC Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

**Nonylphenol, ethoxylated:**

Species	: Rabbit
Result	: Irreversible effects on the eye
Method	: OECD Test Guideline 405

**Amitraz (ISO):**

Species	: Rabbit
Result	: No eye irritation

**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

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

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

May cause an allergic skin reaction.

**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

**Nonylphenol, ethoxylated:**

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.

**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Test Type	: Maximization Test
Routes of exposure	: Skin contact
Species	: Guinea pig
Result	: positive

Assessment	: Probability or evidence of skin sensitization in humans
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**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

---

**Germ cell mutagenicity**

Suspected of causing genetic defects.

**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

**Nonylphenol, ethoxylated:**

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative Remarks: Based on data from similar materials
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**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
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**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: positive  Test Type: In vitro mammalian cell gene mutation test Result: positive  Test Type: In vitro sister chromatid exchange assay in mammalian cells Result: positive  Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
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## Amitraz (12.5%) EC Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

	Result: positive
Genotoxicity in vivo	: Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo Species: Rat Application Route: Ingestion Method: OECD Test Guideline 486 Result: negative
	Test Type: Micronucleus test Species: Mouse Application Route: Intraperitoneal injection Result: negative
	Test Type: Transgenic rodent somatic cell gene mutation assay Species: Mouse Application Route: Ingestion Method: OECD Test Guideline 488 Result: positive
Germ cell mutagenicity - Assessment	: Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.

**Carcinogenicity**

Not classified based on available information.

**Components:****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

**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Species	: Mouse
Application Route	: Skin contact
Exposure time	: 29 Months
Result	: negative

**Reproductive toxicity**

Not classified based on available information.

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

## Amitraz (12.5%) EC Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

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

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

**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: negative

**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) through prolonged or repeated exposure.

**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

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

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

**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Routes of exposure	: Ingestion
Target Organs	: nasal cavity
Assessment	: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

**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

**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Species	: Rat
NOAEL	: 5 mg/kg
LOAEL	: 50 mg/kg
Application Route	: Ingestion
Exposure time	: 90 Days
Method	: OECD Test Guideline 408

**Aspiration toxicity**

May be fatal if swallowed and enters airways.

**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

**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

**Nonylphenol, 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

## Amitraz (12.5%) EC Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

	EC10 ( <i>Selenastrum capricornutum</i> (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 ( <i>Oryzias latipes</i> (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 ( <i>Mysidopsis bahia</i> (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 ( <i>Lepomis macrochirus</i> (Bluegill sunfish)): 0,45 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 ( <i>Daphnia magna</i> (Water flea)): 0,035 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	: NOEC ( <i>Pseudokirchneriella subcapitata</i> (green algae)): 0,04 mg/l Exposure time: 91 h
M-Factor (Acute aquatic toxicity)	: 10
Toxicity to fish (Chronic toxicity)	: NOEC ( <i>Pimephales promelas</i> (fathead minnow)): 0,00148 mg/l Exposure time: 32 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC ( <i>Daphnia magna</i> (Water flea)): 0,0011 mg/l Exposure time: 21 d
M-Factor (Chronic aquatic toxicity)	: 10

**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Toxicity to fish	: LC50 ( <i>Oncorhynchus mykiss</i> (rainbow trout)): 24 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 ( <i>Daphnia magna</i> (Water flea)): 40 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: ErC50 ( <i>Raphidocelis subcapitata</i> (freshwater green alga)): > 110 mg/l Exposure time: 72 h Method: OECD Test Guideline 201



## Amitraz (12.5%) EC Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

	NOEC (Raphidocelis subcapitata (freshwater green alga)): 30 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	: EC10 (activated sludge): 409 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
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**Nonylphenol, ethoxylated:**

Biodegradability	: Result: Not readily biodegradable. Remarks: Based on data from similar materials
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**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Biodegradability	: Result: Not readily biodegradable. Biodegradation: 71 % Exposure time: 28 d Method: OECD Test Guideline 301B
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**Bioaccumulative potential****Components:****Nonylphenol, ethoxylated:**

Partition coefficient: n-octanol/water	: log Pow: 4,48
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**Amitraz (ISO):**

Bioaccumulation	: Species: Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 1.333
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Partition coefficient: n-octanol/water	: log Pow: 5,5
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**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Partition coefficient: n-octanol/water	: log Pow: 1,34 Method: OECD Test Guideline 107
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**Mobility in soil****Components:****Amitraz (ISO):**

**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

Distribution among environmental compartments : log Koc: 3,3

**Other adverse effects**

No data available

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

Waste from residues	: Do not dispose of waste into sewer. Dispose of in accordance with local regulations.
Contaminated packaging	: Empty containers should be taken to an approved waste handling site for recycling or disposal. 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. (Nonylphenol, ethoxylated, 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. (Nonylphenol, ethoxylated, 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. (Nonylphenol, ethoxylated, 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.

**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

**Special precautions for user**

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

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

Argentina. Carcinogenic Substances and Agents Registry. : Not applicable

Control of precursors and essential chemicals for the preparation of drugs. : Hydrocarbons, C10, aromatics, <1% naphthalene

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

AICS : not determined

DSL : not determined

IECSC : not determined

**SECTION 16. OTHER INFORMATION**

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

**Further information**

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

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

**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
AR OEL : Argentina. Occupational Exposure Limits

ACGIH / TWA : 8-hour, time-weighted average  
AR OEL / CMP : TLV (Threshold Limit Value)  
AR OEL / CMP - CPT : STEL (Short Term Limit Value)

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 Sys-

**Amitraz (12.5%) EC Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 27.11.2023
3.0	14.04.2025	11182734-00005	Date of first issue: 21.03.2023

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tem; 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; 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

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.

AR / Z8