

**Amitraz (50%) Solid Formulation**

Version 2.0      Revision Date: 04/04/2023      SDS Number: 10650654-00004      Date of last issue: 10/01/2022  
Date of first issue: 04/09/2022

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**SECTION 1. IDENTIFICATION**

Product name : Amitraz (50%) Solid Formulation

**Manufacturer or supplier's details**

Company name of supplier : Merck & Co., Inc  
Address : 126 E. Lincoln Avenue  
Rahway, New Jersey U.S.A. 07065  
Telephone : 908-740-4000  
Emergency telephone : 1-908-423-6000  
E-mail address : EHSDATASTEWARD@merck.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 the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Combustible dust

Acute toxicity (Oral) : Category 4  
Serious eye damage : Category 1  
Skin sensitization : Category 1  
Germ cell mutagenicity : Category 2  
Carcinogenicity : Category 1B  
Specific target organ toxicity : Category 2 (Liver, Central nervous system)  
- repeated exposure

**GHS label elements**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.  
H302 Harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.

**Amitraz (50%) Solid Formulation**

Version 2.0      Revision Date: 04/04/2023      SDS Number: 10650654-00004      Date of last issue: 10/01/2022  
Date of first issue: 04/09/2022

---

H373 May cause damage to organs (Liver, Central nervous system) through prolonged or repeated exposure.

Precautionary Statements :

**Prevention:**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P280 Wear protective gloves, protective clothing, eye protection and face protection.

**Response:**

P301 + P312 + P330 IF SWALLOWED: Call a doctor if you feel unwell. Rinse mouth.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
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.  
P308 + P313 IF exposed or concerned: Get medical attention.  
P333 + P313 If skin irritation or rash occurs: Get medical attention.  
P363 Wash contaminated clothing before reuse.

**Storage:**

P405 Store locked up.

**Disposal:**

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

**Other hazards**

None known.

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

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
Amitraz (ISO)	33089-61-1	50
Calcium carbonate	471-34-1	37
Nonylphenol, ethoxylated	9016-45-9	2
Paraformaldehyde	30525-89-4	1

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**SECTION 4. FIRST AID MEASURES**

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.

## Amitraz (50%) Solid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
2.0	04/04/2023	10650654-00004	Date of first issue: 04/09/2022

---

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.  
Get medical attention.  
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 cause an allergic skin reaction.  
Causes serious eye damage.  
Suspected of causing genetic defects.  
May cause cancer.  
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.

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### 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 : Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.  
Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Sulfur oxides  
Metal 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.

## Amitraz (50%) Solid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
2.0	04/04/2023	10650654-00004	Date of first issue: 04/09/2022

---

### 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. 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 : Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. 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 : Static electricity may accumulate and ignite suspended dust causing an explosion. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
- 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 dust. 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. Keep away from water. Protect from moisture. Minimize dust generation and accumulation. Keep container closed when not in use. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product. Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers. Store locked up.

## Amitraz (50%) Solid Formulation

Version 2.0      Revision Date: 04/04/2023      SDS Number: 10650654-00004      Date of last issue: 10/01/2022  
 Date of first issue: 04/09/2022

Materials to avoid : Keep tightly closed.  
 Store in accordance with the particular national regulations.  
 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

inert or nuisance dust	50 Million particles per cubic foot Value type (Form of exposure): TWA (total dust) Basis: OSHA Z-3
	15 mg/m <sup>3</sup> Value type (Form of exposure): TWA (total dust) Basis: OSHA Z-3
	5 mg/m <sup>3</sup> Value type (Form of exposure): TWA (respirable fraction) Basis: OSHA Z-3
	15 Million particles per cubic foot Value type (Form of exposure): TWA (respirable fraction) Basis: OSHA Z-3
Dust, nuisance dust and particulates	10 mg/m <sup>3</sup> Value type (Form of exposure): PEL (Total dust) Basis: CAL PEL
	5 mg/m <sup>3</sup> Value type (Form of exposure): PEL (respirable dust fraction) Basis: CAL PEL

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
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
Calcium carbonate	471-34-1	TWA (Respirable)	5 mg/m <sup>3</sup> (Calcium carbonate)	NIOSH REL
		TWA (total)	10 mg/m <sup>3</sup> (Calcium carbonate)	NIOSH REL

#### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
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## Amitraz (50%) Solid Formulation

Version 2.0      Revision Date: 04/04/2023      SDS Number: 10650654-00004      Date of last issue: 10/01/2022  
 Date of first issue: 04/09/2022

Formaldehyde	50-00-0	TWA	0.1 ppm	ACGIH
		STEL	0.3 ppm	ACGIH
		TWA	0.016 ppm	NIOSH REL
		C	0.1 ppm	NIOSH REL
		PEL	0.75 ppm	OSHA CARC
		STEL	2 ppm	OSHA CARC
		TWA	0.016 ppm (Formaldehyde)	NIOSH REL
		C	0.1 ppm (Formaldehyde)	NIOSH REL

**Engineering measures** : 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** : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

### 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

**Amitraz (50%) Solid Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
2.0	04/04/2023	10650654-00004	Date of first issue: 04/09/2022

---

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.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	:	powder
Color	:	white gray
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	May form explosive dust-air mixture during processing, handling or other means.
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	:	Not applicable
Relative vapor density	:	Not applicable
Relative density	:	No data available
Density	:	No data available
Solubility(ies) Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable

**Amitraz (50%) Solid Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
2.0	04/04/2023	10650654-00004	Date of first issue: 04/09/2022

---

Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	
Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available
Particle size	:	No data available

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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	:	May form explosive dust-air mixture during processing, handling or other means. Can react with strong oxidizing agents. Hazardous decomposition products will be formed upon contact with water or humid air.
Conditions to avoid	:	Exposure to moisture. Heat, flames and sparks. Avoid dust formation.
Incompatible materials	:	Oxidizing agents Water

**Hazardous decomposition products**

Contact with water or humid air	:	Formaldehyde
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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: 911.67 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 107 mg/l Exposure time: 4 h Test atmosphere: dust/mist

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## Amitraz (50%) Solid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
2.0	04/04/2023	10650654-00004	Date of first issue: 04/09/2022

---

Method: Calculation method

**Components:****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

**Calcium carbonate:**

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg
		Method: OECD Test Guideline 420
		Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LC50 (Rat): > 3 mg/l
		Exposure time: 4 h
		Test atmosphere: dust/mist
		Method: OECD Test Guideline 403
		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

**Nonylphenol, ethoxylated:**

Acute oral toxicity	:	LD50 (Rat): 500 - 2,000 mg/kg
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**Paraformaldehyde:**

Acute oral toxicity	:	LD50 (Rat, male): 592 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 1.07 mg/l
		Exposure time: 4 h
		Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rat): > 10,000 mg/kg

**Skin corrosion/irritation**

Not classified based on available information.

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

Species	:	Rabbit
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**Amitraz (50%) Solid Formulation**

Version 2.0      Revision Date: 04/04/2023      SDS Number: 10650654-00004      Date of last issue: 10/01/2022  
Date of first issue: 04/09/2022

---

||Result : No skin irritation

**Calcium carbonate:**

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

**Nonylphenol, ethoxylated:**

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

**Paraformaldehyde:**

||Species : Rabbit  
||Result : Skin irritation

**Serious eye damage/eye irritation**

Causes serious eye damage.

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

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

**Calcium carbonate:**

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

**Nonylphenol, ethoxylated:**

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

**Paraformaldehyde:**

||Species : Rabbit  
||Result : Irreversible effects on the eye

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

May cause an allergic skin reaction.

**Respiratory sensitization**

Not classified based on available information.

## Amitraz (50%) Solid Formulation

Version 2.0      Revision Date: 04/04/2023      SDS Number: 10650654-00004      Date of last issue: 10/01/2022  
 Date of first issue: 04/09/2022

---

### Components:

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

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

#### **Calcium carbonate:**

Test Type	: Local lymph node assay (LLNA)
Routes of exposure	: Skin contact
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: negative

#### **Nonylphenol, ethoxylated:**

Test Type	: Maximization Test
Routes of exposure	: Skin contact
Species	: Guinea pig
Result	: negative
Remarks	: Based on data from similar materials

#### **Paraformaldehyde:**

Test Type	: Local lymph node assay (LLNA)
Routes of exposure	: Skin contact
Species	: Mouse
Result	: positive
Remarks	: Based on data from similar materials

Assessment	: Probability or evidence of high skin sensitization rate in humans
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### **Germ cell mutagenicity**

Suspected of causing genetic defects.

### Components:

#### **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

#### **Calcium carbonate:**

**Amitraz (50%) Solid Formulation**

Version 2.0      Revision Date: 04/04/2023      SDS Number: 10650654-00004      Date of last issue: 10/01/2022  
Date of first issue: 04/09/2022

---

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

**Nonylphenol, ethoxylated:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative  
Remarks: Based on data from similar materials

**Paraformaldehyde:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: positive  
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test  
Result: positive  
Remarks: Based on data from similar materials

Test Type: in vitro micronucleus test  
Result: positive  
Remarks: Based on data from similar materials

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)  
Result: positive  
Remarks: Based on data from similar materials

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

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Rat  
Application Route: inhalation (vapor)  
Result: positive  
Remarks: Based on data from similar materials

Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Rat  
Application Route: Ingestion  
Result: positive  
Remarks: Based on data from similar materials

## Amitraz (50%) Solid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
2.0	04/04/2023	10650654-00004	Date of first issue: 04/09/2022

---

Germ cell mutagenicity - Assessment : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.

### Carcinogenicity

May cause cancer.

### 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

#### Paraformaldehyde:

Species : Rat  
 Application Route : Ingestion  
 Exposure time : 105 weeks  
 Result : negative

Species : Rat  
 Application Route : Inhalation  
 Exposure time : 28 Months  
 Result : positive  
 Remarks : Based on data from similar materials

Carcinogenicity - Assessment : Sufficient evidence of carcinogenicity in animal experiments

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### Reproductive toxicity

Not classified based on available information.

### Components:

#### 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

## Amitraz (50%) Solid Formulation

Version 2.0      Revision Date: 04/04/2023      SDS Number: 10650654-00004      Date of last issue: 10/01/2022  
 Date of first issue: 04/09/2022

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.

### Calcium carbonate:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
 Species: Rat  
 Application Route: Ingestion  
 Method: OECD Test Guideline 422  
 Result: negative

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

### STOT-single exposure

Not classified based on available information.

### Components:

#### Paraformaldehyde:

Assessment : May cause respiratory irritation.

### STOT-repeated exposure

May cause damage to organs (Liver, Central nervous system) through prolonged or repeated exposure.

### Components:

#### Amitraz (ISO):

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

### Repeated dose toxicity

### Components:

#### Amitraz (ISO):

Species : Mouse

## Amitraz (50%) Solid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
2.0	04/04/2023	10650654-00004	Date of first issue: 04/09/2022

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

### Calcium carbonate:

Species	: Rat
NOAEL	: > 1,000 mg/kg
Application Route	: Ingestion
Exposure time	: 28 Days
Method	: OECD Test Guideline 422

### Paraformaldehyde:

Species	: Rat, male
NOAEL	: 15 mg/kg
Application Route	: Ingestion
Exposure time	: 105 Weeks
Remarks	: Based on data from similar materials

### Aspiration toxicity

Not classified based on available information.

### Experience with human exposure

### Components:

#### Amitraz (ISO):

Ingestion	: Target Organs: Central nervous system
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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

### Components:

#### 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

## Amitraz (50%) Solid Formulation

Version 2.0      Revision Date: 04/04/2023      SDS Number: 10650654-00004      Date of last issue: 10/01/2022  
 Date of first issue: 04/09/2022

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

### Calcium carbonate:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
 Exposure time: 96 h  
 Test substance: Water Accommodated Fraction  
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 100 mg/l  
 Exposure time: 48 h  
 Test substance: Water Accommodated Fraction  
 Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : NOELR (Pseudokirchneriella subcapitata (green algae)): 50 mg/l  
 Exposure time: 72 h  
 Test substance: Water Accommodated Fraction  
 Method: OECD Test Guideline 201

EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
 Exposure time: 72 h  
 Test substance: Water Accommodated Fraction  
 Method: OECD Test Guideline 201

Toxicity to microorganisms : NOEC: 1,000 mg/l  
 Exposure time: 3 h  
 Method: OECD Test Guideline 209

EC50: > 1,000 mg/l  
 Exposure time: 3 h  
 Method: OECD Test Guideline 209

### Nonylphenol, ethoxylated:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia sp. (Water flea)): 1.82 mg/l  
 Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 20 mg/l  
 Exposure time: 48 h

### Paraformaldehyde:

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

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia pulex (Water flea)): > 1 mg/l  
 Exposure time: 48 h  
 Method: OECD Test Guideline 202



## Amitraz (50%) Solid Formulation

Version 2.0      Revision Date: 04/04/2023      SDS Number: 10650654-00004      Date of last issue: 10/01/2022  
 Date of first issue: 04/09/2022

		Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to fish (Chronic toxicity)	:	NOEC (Oryzias latipes (Orange-red killifish)): > 1 mg/l Exposure time: 28 d Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): > 1 mg/l Exposure time: 21 d Method: OECD Test Guideline 211 Remarks: Based on data from similar materials
Toxicity to microorganisms	:	EC50: > 10 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

### Persistence and degradability

#### Components:

##### **Nonylphenol, ethoxylated:**

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 97 % Exposure time: 30 d
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##### **Paraformaldehyde:**

Biodegradability	:	Result: Readily biodegradable. Remarks: Based on data from similar materials
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### Bioaccumulative potential

#### Components:

##### **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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##### **Nonylphenol, ethoxylated:**

Partition coefficient: n-octanol/water	:	log Pow: 4.48
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##### **Paraformaldehyde:**

Partition coefficient: n-octanol/water	:	log Pow: -1.40 Remarks: Calculation
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Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
2.0	04/04/2023	10650654-00004	Date of first issue: 04/09/2022

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### Mobility in soil

#### Components:

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

|| Distribution among environmental compartments : log Koc: 3.3

#### **Other adverse effects**

#### Components:

#### **Nonylphenol, ethoxylated:**

|| Results of PBT and vPvB assessment : This substance is considered to be persistent, bioaccumulating and toxic (PBT). This substance is considered to be very persistent and very bioaccumulating (vPvB).

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

|| Waste from residues : Dispose of in accordance with local regulations. Do not dispose of waste into sewer.

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.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### **UNRTDG**

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(amitraz (ISO), Nonylphenol, ethoxylated)

Class : 9

Packing group : III

Labels : 9

#### **IATA-DGR**

UN/ID No. : UN 3077

Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
(Amitraz (ISO), Nonylphenol, ethoxylated)

Class : 9

Packing group : III

Labels : Miscellaneous

Packing instruction (cargo aircraft) : 956

Packing instruction (passenger aircraft) : 956

Environmentally hazardous : yes

#### **IMDG-Code**

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

## Amitraz (50%) Solid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
2.0	04/04/2023	10650654-00004	Date of first issue: 04/09/2022

	N.O.S. (Amitraz (ISO), Nonylphenol, ethoxylated)
Class	: 9
Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F
Marine pollutant	: yes

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### Domestic regulation

#### 49 CFR

UN/ID/NA number	: UN 3077
Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Amitraz (ISO), Nonylphenol, ethoxylated)
Class	: 9
Packing group	: III
Labels	: CLASS 9
ERG Code	: 171
Marine pollutant	: yes(Amitraz (ISO), Nonylphenol, ethoxylated)
Remarks	: Above applies only to containers over 119 gallons or 450 liters. Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

### 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

### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Paraformaldehyde	30525-89-4	1000	100000

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

<b>SARA 311/312 Hazards</b>	: Combustible dust Acute toxicity (any route of exposure) Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Specific target organ toxicity (single or repeated exposure) Serious eye damage or eye irritation
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## Amitraz (50%) Solid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
2.0	04/04/2023	10650654-00004	Date of first issue: 04/09/2022

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**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

Amitraz (ISO)	33089-61-1	50 %
Nonylphenol, ethoxylated	9016-45-9	2 %

### US State Regulations

#### Pennsylvania Right To Know

Amitraz (ISO)	33089-61-1
Calcium carbonate	471-34-1
Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	9084-06-4
Paraformaldehyde	30525-89-4

#### California Prop. 65

WARNING: This product can expose you to chemicals including Amitraz (ISO), which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### California List of Hazardous Substances

Paraformaldehyde	30525-89-4
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#### California Permissible Exposure Limits for Chemical Contaminants

Calcium carbonate	471-34-1
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#### The ingredients of this product are reported in the following inventories:

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

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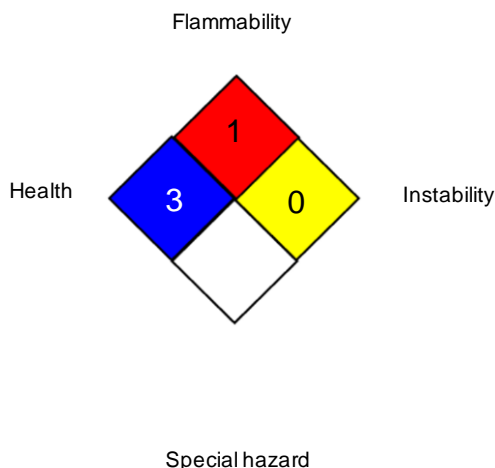
### SECTION 16. OTHER INFORMATION

#### Further information

## Amitraz (50%) Solid Formulation

Version 2.0      Revision Date: 04/04/2023      SDS Number: 10650654-00004      Date of last issue: 10/01/2022  
 Date of first issue: 04/09/2022

### NFPA 704:



### HMIS® IV:

<b>HEALTH</b>	*	<b>3</b>
<b>FLAMMABILITY</b>		<b>3</b>
<b>PHYSICAL HAZARD</b>		<b>0</b>

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CAL PEL	:	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA CARC	:	OSHA Specifically Regulated Chemicals/Carcinogens
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
CAL PEL / PEL	:	Permissible exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / C	:	Ceiling value not be exceeded at any time.
OSHA CARC / PEL	:	Permissible exposure limit (PEL)
OSHA CARC / STEL	:	Excursion limit
OSHA Z-3 / TWA	:	8-hour time weighted average

AIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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; IECS - 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

**Amitraz (50%) Solid Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
2.0	04/04/2023	10650654-00004	Date of first issue: 04/09/2022

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50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZbC - 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; 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

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/>

Revision Date : 04/04/2023

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

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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