

Amitraz Solid Formulation

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| Version | Revision Date: | SDS Number: | Date of last issue: 14.04.2025 |
| 6.0 | 17.06.2025 | 1732057-00017 | Date of first issue: 06.06.2017 |

Section 1: Identification

Product identifier : Amitraz Solid Formulation

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product
Restrictions on use : Not applicable

Manufacturer or supplier's details

Company : MSD
Address : 50 Tuas West Drive
Singapore - Singapore 638408
Telephone : +1-908-740-4000
Emergency telephone number : 65 6697 2111 (24/7/365)
E-mail address : EHSDATASTEWARD@msd.com





Section 2: Hazard identification**Classification of the substance or mixture**

Acute toxicity (Oral) : Category 4
Serious eye damage/eye irritation : Category 1
Skin sensitisation : Category 1
Germ cell mutagenicity : Category 2
Carcinogenicity : Category 1B
Specific target organ toxicity - repeated exposure : Category 2 (Liver, Central nervous system)
Short-term (acute) aquatic hazard : Category 1
Long-term (chronic) aquatic hazard : Category 1

GHS Label elements, including precautionary statements

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|--------------------------|---|---|
| Hazard pictograms | : |     |
| Signal word | : | Danger |
| Hazard statements | : | 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. 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 dust. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. 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/ hearing protection. Response: P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. P302 + P352 IF ON SKIN: Wash with plenty of 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/ doctor. P308 + P313 IF exposed or concerned: Get medical advice/ attention. 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: P501 Dispose of contents/ container to an approved waste disposal plant. |

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Additional Labelling

The following percentage of the mixture consists of ingredient(s) with unknown acute oral toxicity: 10 %

The following percentage of the mixture consists of ingredient(s) with unknown acute dermal toxicity: 10 %

The following percentage of the mixture consists of ingredient(s) with unknown acute inhalation toxicity: 10 %

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 10 %

Other hazards which do not result in classification

May form explosive dust-air mixture during processing, handling or other means.

Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

Components

| Chemical name | CAS-No. | Concentration (% w/w) |
|--|------------|-----------------------|
| amitraz (ISO) | 33089-61-1 | >= 50 -< 70 |
| Aluminium silicate | 12141-46-7 | >= 20 -< 30 |
| Calcium carbonate | 471-34-1 | >= 20 -< 30 |
| Paraformaldehyde | 30525-89-4 | >= 1 -< 3 |
| Sodium bis(2-ethylhexyl)sulfosuccinate | 577-11-7 | >= 1 -< 3 |

Section 4: First-aid measures**Description of necessary 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. 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

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| Risks | : Harmful if swallowed. May cause an allergic skin reaction. |
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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).

Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

Section 5: Fire-fighting measures**Extinguishing media**

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : None known.

Special hazards arising from the substance or mixture

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
Silicon oxides
Metal oxides
Nitrogen oxides (NO_x)
Sulphur oxides

Special protective actions for fire-fighters

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

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.

Section 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment.

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Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions

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

Methods for 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**Precautions for safe handling**

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

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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.
Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before re-use.

Conditions for safe storage, including any incompatibilities

Conditions for safe storage : Keep in properly labelled containers.
Store locked up.
Keep tightly closed.
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:
Strong oxidizing agents

Section 8: Exposure controls/personal protection

Control parameters

Occupational Exposure Limits

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|--------------------|------------|-------------------------------------|--|----------|
| amitraz (ISO) | 33089-61-1 | TWA | 10 µg/m ³ (OEB 3) | Internal |
| | | Wipe limit | 1250 µg/100 cm ² | Internal |
| Aluminium silicate | 12141-46-7 | TWA (Respirable particulate matter) | 1 mg/m ³ (Aluminium) | ACGIH |
| Calcium carbonate | 471-34-1 | PEL (long term) | 10 mg/m ³ (Calcium carbonate) | SG OEL |

Occupational exposure limits of decomposition products

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|--------------|---------|----------------------------------|--|--------|
| Formaldehyde | 50-00-0 | PEL (short term) | 0.3 ppm 0.37 mg/m ³ | SG OEL |
| | | TWA | 0.1 ppm | ACGIH |
| | | STEL | 0.3 ppm | ACGIH |

Appropriate engineering control measures : Processing may form hazardous compounds (see section 10).
Minimize workplace exposure concentrations.
Apply measures to prevent dust explosions.
Ensure that dust-handling systems (such as exhaust ducts,

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dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). If sufficient ventilation is unavailable, use with local exhaust ventilation.

Individual protection measures, such as personal protective equipment (PPE)

- | | | |
|------------------------|---|---|
| Eye/face protection | : | Wear the following personal protective equipment: Chemical resistant goggles must be worn. If splashes are likely to occur, wear: Face-shield |
| Skin protection | : | Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc). |
| 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 inorganic gas/vapour type |
| Hand protection | : | |
| Material | : | Chemical-resistant gloves |
| Remarks | : | Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. |
-

Section 9: Physical and chemical properties

- | | | |
|---|---|-------------------|
| Appearance | : | powder |
| Colour | : | white |
| Odour | : | No data available |
| Odour 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 |

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|--|---|---|
| Evaporation rate | : | No data available |
| 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 |
| Vapour pressure | : | No data available |
| Relative vapour density | : | No data available |
| Relative density | : | No data available |
| Density | : | No data available |
| Solubility(ies) | : | |
| Water solubility | : | insoluble |
| Partition coefficient: n-octanol/water | : | No data available |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity | : | |
| Viscosity, kinematic | : | No data available |
| Explosive properties | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Molecular weight | : | Not applicable |
| Particle characteristics | : | |
| Particle size | : | No data available |

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 con- |

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tact 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

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: 958.7 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
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

Aluminium silicate:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 2.18 mg/l
Exposure time: 4 h

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Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 5,000 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

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

Sodium bis(2-ethylhexyl)sulfosuccinate:

Acute oral toxicity : LD50 (Rat): 3,080 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:**amitraz (ISO):**

Species : Rabbit
Result : No skin irritation

Aluminium silicate:

Species : Rabbit

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| | |
|---------|--|
| Result | : No skin irritation |
| Remarks | : Based on data from similar materials |

Calcium carbonate:

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

Paraformaldehyde:

| | |
|---------|-------------------|
| Species | : Rabbit |
| Result | : Skin irritation |

Sodium bis(2-ethylhexyl)sulfosuccinate:

| | |
|---------|---------------------------|
| Species | : Rabbit |
| Method | : OECD Test Guideline 404 |
| Result | : Skin irritation |

Serious eye damage/eye irritation

Causes serious eye damage.

Components:**amitraz (ISO):**

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

Aluminium silicate:

| | |
|---------|--|
| Species | : Rabbit |
| Result | : No eye irritation |
| Method | : OPPTS 870.2400 |
| Remarks | : Based on data from similar materials |

Calcium carbonate:

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

Paraformaldehyde:

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

Sodium bis(2-ethylhexyl)sulfosuccinate:

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

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Respiratory or skin sensitisation**Skin sensitisation**

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:**amitraz (ISO):**

| | |
|-----------------|--------------------------|
| Test Type | : Maximisation Test |
| Exposure routes | : Dermal |
| Species | : Guinea pig |
| Result | : Not a skin sensitizer. |

Aluminium silicate:

| | |
|-----------------|---------------------------------|
| Test Type | : Local lymph node assay (LLNA) |
| Exposure routes | : Skin contact |
| Species | : Mouse |
| Result | : negative |

Calcium carbonate:

| | |
|-----------------|---------------------------------|
| Test Type | : Local lymph node assay (LLNA) |
| Exposure routes | : Skin contact |
| Species | : Mouse |
| Method | : OECD Test Guideline 429 |
| Result | : negative |

Paraformaldehyde:

| | |
|-----------------|--|
| Test Type | : Local lymph node assay (LLNA) |
| Exposure routes | : Skin contact |
| Species | : Mouse |
| Result | : positive |
| Remarks | : Based on data from similar materials |

| | |
|------------|---|
| Assessment | : Probability or evidence of high skin sensitisation rate in humans |
|------------|---|

Sodium bis(2-ethylhexyl)sulfosuccinate:

| | |
|-----------------|--|
| Test Type | : Human repeat insult patch test (HRIPT) |
| Exposure routes | : Skin contact |
| Species | : Humans |
| Result | : negative |

Germ cell mutagenicity

Suspected of causing genetic defects.

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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 |

Aluminium silicate:

| | | |
|-----------------------|---|---|
| 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 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: Ingestion Result: negative Remarks: Based on data from similar materials |

Calcium carbonate:

| | | |
|-----------------------|---|--|
| 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 |

Paraformaldehyde:

| | | |
|-----------------------|---|--|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES) Result: positive |
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| | 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 (vapour) 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 |
| Germ cell mutagenicity - Assessment | : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests. |

Sodium bis(2-ethylhexyl)sulfosuccinate:

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|-----------------------|---|
| 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: equivocal |
| | Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative Remarks: Based on data from similar materials |

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Carcinogenicity

May cause cancer.

Components:**amitraz (ISO):**

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|-------------------|-----------------------------|
| 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 |

Aluminium silicate:

| | |
|-------------------|--|
| Species | : Rat |
| Application Route | : Ingestion |
| Exposure time | : 104 weeks |
| Result | : negative |
| Remarks | : Based on data from similar materials |

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 |
|------------------------------|--|

Reproductive toxicity

Not classified based on available information.

Components:**amitraz (ISO):**

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

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

Aluminium silicate:

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

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

Sodium bis(2-ethylhexyl)sulfosuccinate:

Effects on fertility : Test Type: Three-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

STOT - single exposure

Not classified based on available information.

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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
|| 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

Aluminium silicate:

|| Species : Rat
|| NOAEL : > 100 mg/kg
|| Application Route : Ingestion
|| Exposure time : 104 Weeks
|| Remarks : Based on data from similar materials

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

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| | |
|-------------------|--|
| NOAEL | : 15 mg/kg |
| Application Route | : Ingestion |
| Exposure time | : 105 Weeks |
| Remarks | : Based on data from similar materials |

Sodium bis(2-ethylhexyl)sulfosuccinate:

| | |
|-------------------|-------------|
| Species | : Rat |
| NOAEL | : 750 mg/kg |
| Application Route | : Ingestion |
| Exposure time | : 90 Days |

Aspiration toxicity

Not classified based on available information.

Experience with human exposure**Components:****amitraz (ISO):**

| | |
|-----------|---|
| Ingestion | : Target Organs: Central nervous system |
|-----------|---|

Section 12: Ecological information**Toxicity****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 |
| 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 |

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Aluminium silicate:**Ecotoxicology Assessment**

Chronic aquatic toxicity : No toxicity at the limit of solubility

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

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
 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

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| | |
|--|--|
| 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 |

Sodium bis(2-ethylhexyl)sulfosuccinate:

| | |
|--|---|
| Toxicity to fish | : LC50 (Danio rerio (zebra fish)): 49 mg/l Exposure time: 96 h Method: Directive 67/548/EEC, Annex V, C.1. |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): 6.6 mg/l Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : ErC50 (Desmodesmus subspicatus (green algae)): 82.5 mg/l Exposure time: 72 h EC10 (Desmodesmus subspicatus (green algae)): 22 mg/l Exposure time: 72 h |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : EC10 (Daphnia magna (Water flea)): 9 mg/l Exposure time: 21 d Method: OECD Test Guideline 211 |
| Toxicity to microorganisms | : EC50 (Pseudomonas putida): 164 mg/l Exposure time: 16 h |

Persistence and degradability**Components:****Paraformaldehyde:**

| | |
|------------------|---|
| Biodegradability | : Result: Readily biodegradable. Remarks: Based on data from similar materials |
|------------------|---|

Sodium bis(2-ethylhexyl)sulfosuccinate:

| | |
|------------------|---|
| Biodegradability | : Result: Readily biodegradable. Biodegradation: 91.2 % Exposure time: 28 d |
|------------------|---|

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Bioaccumulative potential**Components:****amitraz (ISO):**

| | | |
|-----------------|---|---|
| Bioaccumulation | : | Species: Lepomis macrochirus (Bluegill sunfish) |
| | | Bioconcentration factor (BCF): 1,333 |

| | | |
|--|---|--------------|
| Partition coefficient: n-octanol/water | : | log Pow: 5.5 |
|--|---|--------------|

Paraformaldehyde:

| | | |
|--|---|----------------------|
| Partition coefficient: n-octanol/water | : | log Pow: -1.40 |
| | | Remarks: Calculation |

Sodium bis(2-ethylhexyl)sulfosuccinate:

| | | |
|--|---|----------------------|
| Partition coefficient: n-octanol/water | : | log Pow: 1.998 |
| | | Remarks: Calculation |

Mobility in soil**Components:****amitraz (ISO):**

| | | |
|---|---|--------------|
| Distribution among environmental compartments | : | log Koc: 3.3 |
|---|---|--------------|

Other adverse effects

No data available

Section 13: Disposal considerations**Disposal methods**

| | | |
|------------------------|---|---|
| Waste from residues | : | 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 3077 |
| UN proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (amitraz (ISO)) |
| Transport hazard class(es) | : | 9 |
| Packing group | : | III |
| Labels | : | 9 |

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Environmental hazards : yes

IATA-DGR

UN/ID No. : UN 3077
UN proper shipping name : Environmentally hazardous substance, solid, n.o.s. (amitraz (ISO))
Transport hazard class(es) : 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, N.O.S. (amitraz (ISO))
Transport hazard class(es) : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

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 specific for the product in question**

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subject to the requirements in the Act/Regulations.

Environmental Protection and Management Act and : Amitraz
Environmental Protection and Management (Hazardous Substances) Regulations

Fire Safety (Petroleum and Flammable Materials) : Not applicable
Regulations

The components 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 : 17.06.2025

Further informationSources of key data used to compile the 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.

Date format : dd.mm.yyyy

Full text of other abbreviationsACGIH : USA. ACGIH Threshold Limit Values (TLV)
SG OEL : Singapore. Workplace Safety and Health (General Provisions) Regulations - First Schedule Permissible Exposure Limits of Toxic Substances.ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
SG OEL / PEL (long term) : Permissible Exposure Level (PEL) Long Term
SG OEL / PEL (short term) : Permissible Exposure Level (PEL) Short Term

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; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recom-

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mendations 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.

SG / EN