

**Amitraz (5%) Formulation**

Version 5.1      Revision Date: 30.09.2023      SDS Number: 1829205-00016      Date of last issue: 04.04.2023  
Date of first issue: 11.07.2017

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name : Amitraz (5%) Formulation

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Use of the Sub-stance/Mixture : Veterinary product

Recommended restrictions on use : Not applicable

**1.3 Details of the supplier of the safety data sheet**

Company : MSD  
20 Spartan Road  
1619 Spartan, South Africa

Telephone : +27119239300

E-mail address of person responsible for the SDS : EHSDATASTEWARD@msd.com

**1.4 Emergency telephone number**

+1-908-423-6000

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**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**





Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, Category 1B	H340: May cause genetic defects.
Carcinogenicity, Category 1B	H350: May cause cancer.
Reproductive toxicity, Category 1B	H360F: May damage fertility.
Specific target organ toxicity - single exposure, Category 3	H336: May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

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## 2.2 Label elements

## Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :    

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H336 May cause drowsiness or dizziness.  
 H340 May cause genetic defects.  
 H350 May cause cancer.  
 H360F May damage fertility.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
 P201 Obtain special instructions before use.  
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 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.  
 P391 Collect spillage.

Hazardous components which must be listed on the label:

Solvent naphtha (petroleum), light aromatic  
 amitraz (ISO)  
 Bis(2,6-diisopropylphenyl)carbodiimide

**Additional Labelling**

Restricted to professional users.

## 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Vapours may form explosive mixture with air.

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## SECTION 3: Composition/information on ingredients

## 3.2 Mixtures

## Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Solvent naphtha (petroleum), light aromatic	64742-95-6 265-199-0 649-356-00-4	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Muta. 1B; H340 Carc. 1B; H350 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 70 - < 90
4-Nonylphenol, branched, ethoxylated	127087-87-0	Acute Tox. 4; H302 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10	>= 10 - < 20
amitraz (ISO)	33089-61-1 251-375-4 612-086-00-2	Acute Tox. 4; H302 Skin Sens. 1B; H317 STOT RE 2; H373 (Liver, Central nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 2,5 - < 10
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5 218-487-5	Acute Tox. 4; H302 Repr. 1B; H360F STOT RE 1; H372 (Kidney, Heart, Gastrointestinal tract, Lymph nodes) Aquatic Chronic 4; H413	>= 1 - < 2,5

## Alternative CAS Numbers for some regions

Chemical name	Alternative CAS Number(s)
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4-Nonylphenol, branched, ethoxylated	68412-54-4
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For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of 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.
- 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).
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Get medical attention.
- If swallowed : If swallowed, DO NOT induce vomiting.  
If vomiting occurs have person lean forward.  
Call a physician or poison control centre immediately.  
Rinse mouth thoroughly with water.  
Never give anything by mouth to an unconscious person.

#### 4.2 Most important symptoms and effects, both acute and delayed

- Risks : May be fatal if swallowed and enters airways.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
May cause genetic defects.  
May cause cancer.  
May damage fertility.  
May cause damage to organs through prolonged or repeated exposure.

#### 4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically and supportively.

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**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : High volume water jet

**5.2 Special hazards arising from the substance or mixture**

Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire.  
Flash back possible over considerable distance.  
Vapours may form explosive mixtures with air.  
Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)

**5.3 Advice for firefighters**

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****6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Remove all sources of ignition.  
Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

**6.2 Environmental precautions**

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.

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### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Non-sparking tools should be used.  
Soak up with inert absorbent material.  
Suppress (knock down) gases/vapours/mists with a water spray jet.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

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

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.  
Use explosion-proof electrical, ventilating and lighting equipment.

Advice on safe handling : Do not get on skin or clothing.  
Do not breathe mist or vapours.  
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  
Non-sparking tools should be used.  
Keep container tightly closed.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
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.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.  
The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the

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use of administrative controls.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Advice on common storage : Do not store with the following product types:  
 Strong oxidizing agents  
 Self-reactive substances and mixtures  
 Organic peroxides  
 Flammable solids  
 Pyrophoric liquids  
 Pyrophoric solids  
 Self-heating substances and mixtures  
 Substances and mixtures, which in contact with water, emit flammable gases  
 Explosives  
 Gases  
 Very acutely toxic substances and mixtures

### 7.3 Specific end use(s)

Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	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

#### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Bis(2,6-diisopropylphenyl)carbodiimide	Workers	Inhalation	Long-term systemic effects	0,094 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	0,013 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,023 mg/m <sup>3</sup>
	Consumers	Skin contact	Long-term systemic effects	0,007 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	20 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,007 mg/kg bw/day

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	Consumers	Ingestion	Acute systemic effects	0,021 mg/kg bw/day
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### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Bis(2,6-diisopropylphenyl)carbodiimide	Fresh water	0,0001 mg/l
	Marine water	0,00001 mg/l
	Intermittent use/release	0,001 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	5,461 mg/kg dry weight (d.w.)
	Soil	4,445 mg/kg dry weight (d.w.)

## 8.2 Exposure controls

### Engineering measures

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).

Minimize open handling.

Use explosion-proof electrical, ventilating and lighting equipment.

### Personal protective equipment

- Eye/face 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.
- Hand protection
- Material : Chemical-resistant gloves
- Remarks : Consider double gloving. Take note that the product is flammable, which may impact the selection of hand protection.
- 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.
- 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 vapour type (A-P)

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties



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Appearance : liquid  
Colour : yellow  
Odour : characteristic, aromatic, hydrocarbon-like  
Odour Threshold : No data available

pH : No data available

Melting point/freezing point : Not applicable

Initial boiling point and boiling range : No data available  
Flash point : 53 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Upper explosion limit / Upper flammability limit : 7 %(V)

Lower explosion limit / Lower flammability limit : 0,8 %(V)

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : No data available

Solubility(ies)  
Water solubility : emulsifiable  
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.

**9.2 Other information**

Flammability (liquids) : Not applicable

Molecular weight : Not applicable

Particle size : Not applicable

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**SECTION 10: Stability and reactivity****10.1 Reactivity**

Not classified as a reactivity hazard.

**10.2 Chemical stability**

Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

Hazardous reactions : Flammable liquid and vapour.  
Vapours may form explosive mixture with air.  
Can react with strong oxidizing agents.

**10.4 Conditions to avoid**

Conditions to avoid : Heat, flames and sparks.

**10.5 Incompatible materials**

Materials to avoid : Oxidizing agents

**10.6 Hazardous decomposition products**

No hazardous decomposition products are known.

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**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

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

**Acute toxicity**

Not classified based on available information.

**Product:**

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg  
Method: Calculation method

**Components:****Solvent naphtha (petroleum), light aromatic:**

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5,61 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

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

Acute oral toxicity : LD50 (Rat): > 300 - 2.000 mg/kg  
Remarks: Based on data from similar materials

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Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

**amitraz (ISO):**

Acute oral toxicity : LD50 (Rat): > 400 mg/kg  
LD50 (Mouse): > 1.085 mg/kg  
LD50 (Guinea pig): > 400 mg/kg

Acute inhalation toxicity : Remarks: No data available

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

**Bis(2,6-diisopropylphenyl)carbodiimide:**

Acute oral toxicity : LD50 (Rat): > 300 - 2.000 mg/kg  
Method: OECD Test Guideline 423

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation**

Causes skin irritation.

**Components:****Solvent naphtha (petroleum), light aromatic:**

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

**amitraz (ISO):**

Species : Rabbit  
Result : No skin irritation

**Bis(2,6-diisopropylphenyl)carbodiimide:**

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

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Components:****Solvent naphtha (petroleum), light aromatic:**

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

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

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days

**amitraz (ISO):**

Species : Rabbit  
Result : No eye irritation

**Bis(2,6-diisopropylphenyl)carbodiimide:**

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

**Respiratory or skin sensitisation****Skin sensitisation**

May cause an allergic skin reaction.

**Respiratory sensitisation**

Not classified based on available information.

**Components:****Solvent naphtha (petroleum), light aromatic:**

Test Type : Buehler Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Result : negative

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

Test Type : Human repeat insult patch test (HRIPT)  
Exposure routes : Skin contact  
Result : negative  
Remarks : Based on data from similar materials

**amitraz (ISO):**

Test Type : Maximisation Test  
Exposure routes : Dermal  
Species : Guinea pig  
Result : Sensitiser

**Bis(2,6-diisopropylphenyl)carbodiimide:**

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : negative

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### Germ cell mutagenicity

May cause genetic defects.

### Components:

#### **Solvent naphtha (petroleum), light aromatic:**

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

Test Type: In vitro mammalian cell gene mutation test  
Result: positive

Genotoxicity in vivo : Test Type: Sister chromatid exchange analysis in spermatogonia  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: positive

Germ cell mutagenicity- Assessment : Positive result(s) from in vivo heritable germ cell mutagenicity tests in mammals

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

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

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

#### **amitraz (ISO):**

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

Test Type: In vitro mammalian cell gene mutation test  
Result: negative

Test Type: Chromosome aberration test in vitro  
Result: negative

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

#### **Bis(2,6-diisopropylphenyl)carbodiimide:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative

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Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

**Carcinogenicity**

May cause cancer.

**Components:****Solvent naphtha (petroleum), light aromatic:**

Species : Mouse  
Application Route : Skin contact  
Exposure time : 2 Years  
Result : positive

Carcinogenicity - Assessment : Sufficient evidence of carcinogenicity in animal experiments

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

Species : Rat  
Application Route : Ingestion  
Exposure time : 2 Years  
Result : negative  
Remarks : Based on data from similar materials

**amitraz (ISO):**

Species : Rat  
Application Route : Oral  
Exposure time : 2 Years  
NOAEL : > 10,18 mg/kg body weight  
Result : negative

Species : Mouse  
Exposure time : 2 Years  
LOAEL : 2,3 mg/kg body weight  
Result : positive  
Target Organs : Liver, Stomach

**Reproductive toxicity**

May damage fertility.

**Components:****Solvent naphtha (petroleum), light aromatic:**

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

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

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**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 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

**Bis(2,6-diisopropylphenyl)carbodiimide:**

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 421  
Result: positive

Test Type: Fertility  
Species: Rat  
Application Route: Ingestion  
Result: positive

Effects on foetal development : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 421  
Result: equivocal

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, based on animal experiments.

**STOT - single exposure**

May cause drowsiness or dizziness.

**Components:****Solvent naphtha (petroleum), light aromatic:**

Assessment : May cause drowsiness or dizziness.

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**STOT - repeated exposure**

May cause damage to organs 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.

**Bis(2,6-diisopropylphenyl)carbodiimide:**

Exposure routes                             : Ingestion  
Target Organs                                : Kidney, Heart, Gastrointestinal tract, Lymph nodes  
Assessment                                    : Causes damage to organs through prolonged or repeated exposure.

**Repeated dose toxicity****Components:****Solvent naphtha (petroleum), light aromatic:**

Species                                        : Rat  
LOAEL                                         : 500 mg/kg  
Application Route                            : Ingestion  
Exposure time                                : 28 Days

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

Species                                        : Rat  
LOAEL                                         : > 100 mg/kg  
Application Route                            : Ingestion  
Exposure time                                : 90 Days  
Remarks                                      : Based on data from similar materials

**amitraz (ISO):**

Species                                        : Mouse  
NOAEL                                         : 3 mg/kg  
Application Route                            : Oral  
Exposure time                                : 90 Days  
Target Organs                                : Liver

Species                                        : Dog  
NOAEL                                         : 0,25 mg/kg  
Application Route                            : Oral  
Exposure time                                : 90 Days  
Target Organs                                : Central nervous system, Liver

**Bis(2,6-diisopropylphenyl)carbodiimide:**

Species                                        : Rat  
NOAEL                                         : 4 mg/kg  
LOAEL                                         : 16 mg/kg  
Application Route                            : Ingestion  
Exposure time                                : 28 Days



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Method : OECD Test Guideline 407

### Aspiration toxicity

May be fatal if swallowed and enters airways.

### Product:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

### Components:

#### Solvent naphtha (petroleum), light aromatic:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

### Experience with human exposure

### Components:

#### amitraz (ISO):

Ingestion : Target Organs: Central nervous system

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## SECTION 12: Ecological information

### 12.1 Toxicity

### Components:

#### Solvent naphtha (petroleum), light aromatic:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 8,2 mg/l  
Exposure time: 96 h  
Test substance: Water Accommodated Fraction

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

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

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

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: 2,6 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Test substance: Water Accommodated Fraction

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Method: OECD Test Guideline 211

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

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

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

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

EC10 (Selenastrum capricornutum (green algae)): > 1 mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201  
 Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC: > 0,1 - 1 mg/l  
 Exposure time: 100 d  
 Species: Oryzias latipes (Japanese medaka)  
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0,001 - 0,01 mg/l  
 Exposure time: 28 d  
 Species: Mysidopsis bahia (opossum shrimp)  
 Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity) : 10

**amitraz (ISO):**

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

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

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

M-Factor (Acute aquatic toxicity) : 10

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

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

M-Factor (Chronic aquatic toxicity) : 10

**Bis(2,6-diisopropylphenyl)carbodiimide:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0,1 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: No toxicity at the limit of solubility

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 1 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: No toxicity at the limit of solubility

NOEC (Desmodesmus subspicatus (green algae)): > 1 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 : > 1.000 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209

**12.2 Persistence and degradability****Components:****Solvent naphtha (petroleum), light aromatic:**

Biodegradability : Result: Inherently biodegradable.  
Biodegradation: 94 %  
Exposure time: 25 d

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

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

**Bis(2,6-diisopropylphenyl)carbodiimide:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 3 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

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**12.3 Bioaccumulative potential****Components:****4-Nonylphenol, branched, ethoxylated:**

Partition coefficient: n-octanol/water : log Pow: < 4

**amitraz (ISO):**

Bioaccumulation : Species: *Lepomis macrochirus* (Bluegill sunfish)  
Bioconcentration factor (BCF): 1.333

Partition coefficient: n-octanol/water : log Pow: 5,5

**Bis(2,6-diisopropylphenyl)carbodiimide:**

Bioaccumulation : Bioconcentration factor (BCF): > 500

Partition coefficient: n-octanol/water : log Pow: > 6,2

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

Distribution among environmental compartments : log Koc: 3,3

**12.5 Results of PBT and vPvB assessment****Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects****Product:**

Endocrine disrupting potential : This substance/mixture contains components considered to have endocrine disrupting properties for environment, according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

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

Endocrine disrupting potential : The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for the environment.

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

- Product : Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. Do not dispose of waste into sewer.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

### SECTION 14: Transport information

#### 14.1 UN number

- ADN : UN 3295
- ADR : UN 3295
- RID : UN 3295
- IMDG : UN 3295
- IATA : UN 3295

#### 14.2 UN proper shipping name

- ADN : HYDROCARBONS, LIQUID, N.O.S.
- ADR : HYDROCARBONS, LIQUID, N.O.S.
- RID : HYDROCARBONS, LIQUID, N.O.S.
- IMDG : HYDROCARBONS, LIQUID, N.O.S.  
(amitraz (ISO))
- IATA : Hydrocarbons, liquid, n.o.s.

#### 14.3 Transport hazard class(es)

- |      | Class | Subsidiary risks |
|------|-------|------------------|
| ADN  | : 3   |                  |
| ADR  | : 3   |                  |
| RID  | : 3   |                  |
| IMDG | : 3   |                  |
| IATA | : 3   |                  |

#### 14.4 Packing group

- ADN  
Packing group : III

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Classification Code : F1  
Hazard Identification Number : 30  
Labels : 3

**ADR**

Packing group : III  
Classification Code : F1  
Hazard Identification Number : 30  
Labels : 3  
Tunnel restriction code : (D/E)

**RID**

Packing group : III  
Classification Code : F1  
Hazard Identification Number : 30  
Labels : 3

**IMDG**

Packing group : III  
Labels : 3  
EmS Code : F-E, S-D

**IATA (Cargo)**

Packing instruction (cargo aircraft) : 366  
Packing instruction (LQ) : Y344  
Packing group : III  
Labels : Flammable Liquids

**IATA (Passenger)**

Packing instruction (passenger aircraft) : 355  
Packing instruction (LQ) : Y344  
Packing group : III  
Labels : Flammable Liquids

**14.5 Environmental hazards****ADN**

Environmentally hazardous : yes

**ADR**

Environmentally hazardous : yes

**RID**

Environmentally hazardous : yes

**IMDG**

Marine pollutant : yes

**14.6 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.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Remarks : Not applicable for product as supplied.

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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

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

**15.2 Chemical safety assessment**

A Chemical Safety Assessment has not been carried out.

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**SECTION 16: Other information**

Other information	:	Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.
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**Full text of H-Statements**

H226	:	Flammable liquid and vapour.
H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H336	:	May cause drowsiness or dizziness.
H340	:	May cause genetic defects.
H350	:	May cause cancer.
H360F	:	May damage fertility.
H372	:	Causes damage to organs through prolonged or repeated exposure.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
H413	:	May cause long lasting harmful effects to aquatic life.

**Full text of other abbreviations**

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Carc.	:	Carcinogenicity
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Muta.	:	Germ cell mutagenicity
Repr.	:	Reproductive toxicity
Skin Irrit.	:	Skin irritation

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Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; 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

**Further information**

Sources 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/>

**Classification of the mixture:**

Flam. Liq. 3	H226
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317
Muta. 1B	H340
Carc. 1B	H350
Repr. 1B	H360F
STOT SE 3	H336

**Classification procedure:**

Based on product data or assessment
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method



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STOT RE 2	H373	Calculation method
Asp. Tox. 1	H304	Based on product data or assessment
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

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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