according to the Globally Harmonized System



Amitraz Liquid Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 4.0
 28.09.2024
 1644324-00019
 Date of first issue: 09.05.2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Amitraz Liquid Formulation

Manufacturer or supplier's details

Company : MSD

Address : Briahnager - Off Pune Nagar Road

Wagholi - Pune - India 412 207

Telephone : +1-908-740-4000

Emergency telephone number: +1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product Restrictions on use : Not applicable

2. HAZARDS IDENTIFICATION

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

Classification

Highly flammable liquids

GHS Classification

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 5

Skin corrosion/irritation : Category 2

Skin sensitisation : Category 1

Germ cell mutagenicity : Category 1B

Carcinogenicity : Category 1B

Reproductive toxicity : Category 2

Specific target organ toxicity - : single exposure

Category 3

om grown o

Specific target organ toxicity - :

repeated exposure

Category 2 (Liver, Central nervous system)

Aspiration hazard : Category 1

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

Short-term (acute) aquatic

hazard

Category 1

Long-term (chronic) aquatic

hazard

Category 1

GHS label elements

Hazard pictograms









Signal word Danger

Hazard statements H226 Flammable liquid and vapour.

H303 May be harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction. H336 May cause drowsiness or dizziness.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child. 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:

P203 Obtain, read and follow all safety instructions before use. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 Do not breathe mist or vapours.

P264 Wash hands thoroughly after handling.

P271 Use only outdoors or with adequate ventilation.

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 protec-

tion/ face protection.

Response:

P301 + P316 IF SWALLOWED: Get emergency medical help immediately.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water. P304 + P340 + P319 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help if you feel unwell.

P318 IF exposed or concerned, get medical advice.

P331 Do NOT induce vomiting.

P333 + P317 If skin irritation or rash occurs: Get medical help. P362 + P364 Take off contaminated clothing and wash it before

reuse.

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Other hazards which do not result in classification

Vapours may form explosive mixture with air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (%	
		w/w)	
Solvent naphtha (petroleum), light aromatic	64742-95-6	>= 60 - <= 70	
4-Nonylphenol, branched, ethoxylated	127087-87-0	>= 10 - <= 20	
amitraz (ISO)	33089-61-1	12.5	
7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-	2386-87-0	< 10	
oxabicyclo[4.1.0]heptane-3-carboxylate			

4. FIRST AID MEASURES

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

vice 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

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 : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

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.

Most important symptoms and effects, both acute and

May be harmful if swallowed.

May be fatal if swallowed and enters airways.

delayed Causes skin irritation.

May cause an allergic skin reaction. May cause drowsiness or dizziness.

May cause genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

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.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

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 prod-

ucts

Carbon oxides

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances 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 firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emer-

gency procedures

Remove all sources of ignition.

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up

Non-sparking tools should be used.
 Soak up with inert absorbent material.

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

Suppress (knock down) gases/vapours/mists with a water spray let.

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 the control of th

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

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

ventilation.

Use explosion-proof electrical, ventilating and lighting equip-

ment.

Advice on safe handling : Do not get on skin or clothing.

Do not breathe mist or vapours.

Do not swallow.

Avoid contact with eyes.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

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.

Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : 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.

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

Self-reactive substances and mixtures

Organic peroxides Oxidizing agents Flammable gases Pyrophoric liquids Pyrophoric solids

Self-heating substances and mixtures

Poisonous gases Explosives

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Solvent naphtha (petroleum), light aromatic	64742-95-6	TWA	300 ppm 900 mg/m3	IN OEL
		STEL	500 ppm 1,500 mg/m3	IN OEL
		TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH
amitraz (ISO)	33089-61-1	TWA	10 μg/m3 (OEB 3)	Internal
		Wipe limit	1250 µg/100 cm ²	Internal

Engineering measures: Use appropriate engineering controls and manufacturing

technologies to control airborne concentrations (e.g., drip-less

quick connections).

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to

protect products, workers, and the environment.

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

ment devices).

Minimize open handling.

Use explosion-proof electrical, ventilating and lighting equip-

ment.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Filter type Hand protection Combined particulates and organic vapour type

Material : Chemical-resistant gloves

Remarks : Consider double gloving. Take note that the product is flam-

mable, which may impact the selection of hand protection.

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

according to the Globally Harmonized System



Amitraz Liquid Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 4.0
 28.09.2024
 1644324-00019
 Date of first issue: 09.05.2017

contaminated clothing.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye

flushing systems and safety showers close to the working

place.

When using do not eat, drink or smoke.

Contaminated work clothing should not be allowed out of the

workplace.

Wash contaminated clothing before re-use.

The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the

use of administrative controls.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : Colorless to pale yellow

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 : 56 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : Not applicable

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 0.92 - 1.20 g/cm³

Solubility(ies)

according to the Globally Harmonized System



Amitraz Liquid Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 4.0
 28.09.2024
 1644324-00019
 Date of first issue: 09.05.2017

Water solubility : No data available

Partition coefficient: n- : No data available

octanol/water

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

10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.
Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

Flammable liquid and vapour.

Vapours may form explosive mixture with air. Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition : No hazardo

products

No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of:

exposure

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

May be harmful if swallowed.

Product:

Acute oral toxicity : Acute toxicity estimate: 3,449 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

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

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): > 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

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

Acute oral toxicity : LD50 (Rat, male): > 2,959 - 5,000 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): >= 5.19 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 436

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Skin corrosion/irritation

Causes skin irritation.

Components:

Solvent naphtha (petroleum), light aromatic:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Skin irritation

4-Nonylphenol, branched, ethoxylated:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Remarks : Based on data from similar materials

according to the Globally Harmonized System



Amitraz Liquid Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 4.0
 28.09.2024
 1644324-00019
 Date of first issue: 09.05.2017

amitraz (ISO):

Species : Rabbit

Result : No skin irritation

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

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Solvent naphtha (petroleum), light aromatic:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

4-Nonylphenol, branched, ethoxylated:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

Remarks : Based on data from similar materials

amitraz (ISO):

Species : Rabbit

Result : No eye irritation

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

Species : Rabbit

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

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

4-Nonylphenol, branched, ethoxylated:

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

Remarks : Based on data from similar materials

amitraz (ISO):

Test Type : Maximisation Test

Exposure routes : Dermal Species : Guinea pig

Result : Not a skin sensitizer.

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

Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Result : positive

Assessment : Probability or evidence of skin sensitisation in humans

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 spermato-

gonia

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)

Method: OECD Test Guideline 471

Result: negative

Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

according to the Globally Harmonized System



Amitraz Liquid Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 4.0
 28.09.2024
 1644324-00019
 Date of first issue: 09.05.2017

Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Remarks: Based on data from similar materials

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 syn-

thesis in mammalian cells (in vitro)

Result: negative

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

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

Method: OECD Test Guideline 471

Result: positive

Test Type: In vitro mammalian cell gene mutation test

Result: positive

Test Type: In vitro sister chromatid exchange assay in mam-

malian cells Result: positive

Test Type: DNA damage and repair, unscheduled DNA syn-

thesis in mammalian cells (in vitro)

Result: positive

Genotoxicity in vivo : Test Type: Unscheduled DNA synthesis (UDS) test with

mammalian liver cells in vivo

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 486

Result: negative

Test Type: Micronucleus test

Species: Mouse

Application Route: Intraperitoneal injection

Result: negative

Test Type: Transgenic rodent somatic cell gene mutation as-

say

Species: Mouse

Application Route: Ingestion

according to the Globally Harmonized System



Amitraz Liquid Formulation

Revision Date: Version SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

Method: OECD Test Guideline 488

Result: positive

Germ cell mutagenicity -

Assessment

: Positive result(s) from in vivo mammalian somatic cell muta-

genicity tests.

Carcinogenicity

May cause cancer.

Components:

Solvent naphtha (petroleum), light aromatic:

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

Carcinogenicity - Assess-

ment

: Sufficient evidence of carcinogenicity in animal experiments

amitraz (ISO):

Species Rat Application Route Oral Exposure time : 2 Years

NOAEL : > 10.18 mg/kg body weight

Result : negative

Mouse Species Exposure time 2 Years

LOAEL : 2.3 mg/kg body weight

Result : positive Target Organs Liver, Stomach

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

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

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Components:

Solvent naphtha (petroleum), light aromatic:

Effects on fertility Test Type: Reproduction/Developmental toxicity screening

Species: Rat

Application Route: inhalation (vapour)

Result: negative

Effects on foetal develop-

Test Type: Embryo-foetal development Species: Rat

ment

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

Application Route: inhalation (vapour)

Result: negative

4-Nonylphenol, branched, ethoxylated:

Reproductive toxicity - As-

sessment

: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

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 develop-

ment

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

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

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion
Method: OECD Test Guideline 414

Result: negative

STOT - single exposure

May cause drowsiness or dizziness.

Components:

Solvent naphtha (petroleum), light aromatic:

Assessment : May cause drowsiness or dizziness.

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.

according to the Globally Harmonized System



Amitraz Liquid Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 4.0
 28.09.2024
 1644324-00019
 Date of first issue: 09.05.2017

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

Exposure routes : Ingestion
Target Organs : nasal cavity

Assessment : Shown to produce significant health effects in animals at con-

centrations of >10 to 100 mg/kg bw.

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 : 150 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Method : OPPTS 870.3100

Remarks : Based on data from similar materials

amitraz (ISO):

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

Species : Dog
NOAEL : 0.25 mg/kg
Application Route : Oral
Exposure time : 90 Days

Target Organs : Central nervous system, Liver

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

Species: RatNOAEL: 5 mg/kgLOAEL: 50 mg/kgApplication Route: IngestionExposure time: 90 Days

Method : OECD Test Guideline 408

Aspiration toxicity

May be fatal if swallowed and enters airways.

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

aquatic invertebrates

Toxicity to daphnia and other : 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/aguatic

plants

ic toxicity)

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 (Chron-

NOELR: 2.6 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 211

4-Nonylphenol, branched, ethoxylated:

Toxicity to fish LC50 (Pimephales promelas (fathead minnow)): > 0.1 - 1 mg/l

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

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 tox-

icity)

1

Toxicity to fish (Chronic tox-

icity)

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 (Chron-

ic 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 tox-

icity)

10

Toxicity to fish (Chronic tox-

icity)

NOEC: 0.00148 mg/l

Exposure time: 32 d

Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other : aquatic invertebrates (Chron-

NOEC: 0.0011 mg/l Exposure time: 21 d

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

ic toxicity) Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic

toxicity)

: 10

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

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 24 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other:

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 40 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)): >

110 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Raphidocelis subcapitata (freshwater green alga)): 30

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to microorganisms : EC10 (activated sludge): 409 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Persistence and degradability

Components:

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

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

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 71 % Exposure time: 28 d

Method: OECD Test Guideline 301B

Bioaccumulative potential

Components:

amitraz (ISO):

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): 1,333

Partition coefficient: n-

octanol/water

: log Pow: 5.5

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

Partition coefficient: n- : log Pow: 1.34

octanol/water Method: OECD Test Guideline 107

Mobility in soil

Components:

amitraz (ISO):

Distribution among environ-

mental compartments

log Koc: 3.3

Other adverse effects

No data available

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 han-

dling 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.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 1993

Proper shipping name : FLAMMABLE LIQUID, N.O.S.

(Solvent naphtha (petroleum), light aromatic)

Class : 3
Packing group : III
Labels : 3
Environmentally hazardous : yes

IATA-DGR

UN/ID No. : UN 1993

Proper shipping name : Flammable liquid, n.o.s.

(Solvent naphtha (petroleum), light aromatic)

Class : 3

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

Packing group

Labels Flammable Liquids

Packing instruction (cargo 366

aircraft)

Packing instruction (passen-355

ger aircraft)

Environmentally hazardous yes

IMDG-Code

UN number UN 1993

Proper shipping name FLAMMABLE LIQUID. N.O.S.

(Solvent naphtha (petroleum), light aromatic, amitraz (ISO))

Class 3 Packing group Ш Labels 3 **EmS Code** F-E, <u>S-E</u> 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.

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

Revision Date 28.09.2024

Further information

Sheet

Sources of key data used to

compile the Safety Data

cy, http://echa.europa.eu/

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

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 abbreviations

according to the Globally Harmonized System



Amitraz Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 28.09.2024 1644324-00019 Date of first issue: 09.05.2017

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

IN OEL : India. Permissible levels of certain chemical substances in

work environment.

ACGIH / TWA : 8-hour, time-weighted average

IN OEL / TWA : Time-Weighted Average Concentration (TWA) (8 hrs.)

IN OEL / STEL : Short-term exposure Limit STEL (15 min)

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 Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

IN / EN