

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

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

Trade name : Diazinon Formulation

1.2 Relevant identified uses of the substance or mixture and uses advised againstUse of the Sub-
stance/Mixture : Veterinary productRecommended 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

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

Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin irritation, Category 2	H315: Causes skin irritation.
Serious eye damage, Category 1	H318: Causes serious eye damage.
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.
Specific target organ toxicity - single exposure, Category 1	H370: Causes damage to organs.
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.

Diazinon Formulation





Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

Category 1
Endocrine disruptor for environment,
Category 1

effects.
EUH430: May cause endocrine disruption in the
environment

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms	:	   
Signal word	:	Danger
Hazard statements	:	H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H336 May cause drowsiness or dizziness. H340 May cause genetic defects. H350 May cause cancer. H370 Causes damage to organs. H373 May cause damage to organs through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects. EUH430 May cause endocrine disruption in the environment
Precautionary statements	:	Prevention: P201 Obtain special instructions before use. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. Response: 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 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor. P391 Collect spillage. Storage: P405 Store locked up. Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

Diazinon
Solvent naphtha (petroleum), light aromatic
Nonylphenol, ethoxylated

Diazinon Formulation

Version 6.0 Revision Date: 17.06.2025 SDS Number: 7699416-00012 Date of last issue: 14.04.2025
 Date of first issue: 22.12.2020

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

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.

SECTION 3: Composition/information on ingredients**3.2 Mixtures****Components**

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Diazinon	333-41-5 206-373-8 015-040-00-4	Acute Tox. 4; H302 Muta. 2; H341 Carc. 1B; H350 STOT SE 1; H370 (Nervous system) STOT RE 2; H373 (Nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1.000 M-Factor (Chronic aquatic toxicity): 100	>= 50 - < 70
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	>= 20 - < 25
Nonylphenol, ethoxylated	9016-45-9	Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ED ENV 1; EUH430	>= 20 - < 25

Diazinon Formulation

Version 6.0 Revision Date: 17.06.2025 SDS Number: 7699416-00012 Date of last issue: 14.04.2025
 Date of first issue: 22.12.2020

		M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10	
7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	2386-87-0 219-207-4 607-773-00-9	Skin Sens. 1; H317 Muta. 2; H341 STOT RE 2; H373 (nasal cavity) Aquatic Chronic 3; H412	>= 2,5 - < 10

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 immediately.
- 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 : Harmful if swallowed.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

May cause drowsiness or dizziness.
May cause genetic defects.
May cause cancer.
Causes damage to organs.
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.

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

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

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NO_x)
Sulphur oxides
Oxides of phosphorus

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 : 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.

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

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.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.
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.

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.
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 Keep container tightly closed. Do not eat, drink or smoke when using this product. Take care to prevent spills, waste and minimize release to the environment.
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.

Diazinon Formulation

Version 6.0 Revision Date: 17.06.2025 SDS Number: 7699416-00012 Date of last issue: 14.04.2025
 Date of first issue: 22.12.2020

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.

Advice on common storage : Do not store with the following product types:
 Strong oxidizing agents
 Self-reactive substances and mixtures
 Organic peroxides
 Explosives
 Gases

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
Diazinon	333-41-5	OEL-RL (inhalable fraction and vapour)	0,02 mg/m ³	ZA OEL
	Further information: danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents, denotes carcinogenicity, which is based on GHS categorisation, including category 1A, 1B			
	Further information: Skin			

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
Diazinon	333-41-5	Cholinesterase activity in red cells: 70 % of an individual's baseline (Blood)	Discretionary (At any time)	ZA BEI

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

Substance name	End Use	Exposure routes	Potential health effects	Value
7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	Workers	Inhalation	Long-term systemic effects	0,18 mg/m ³
	Workers	Inhalation	Long-term local effects	0,18 mg/m ³
	Workers	Skin contact	Long-term systemic	0,05 mg/kg

Diazinon Formulation

Version 6.0 Revision Date: 17.06.2025 SDS Number: 7699416-00012 Date of last issue: 14.04.2025
 Date of first issue: 22.12.2020

			effects	bw/day
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Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	Fresh water	0,024 mg/l
	Freshwater - intermittent	0,24 mg/l
	Marine water	0,0024 mg/l
	Sewage treatment plant	19,5 mg/l
	Fresh water sediment	0,211 mg/kg dry weight (d.w.)
	Marine sediment	0,0211 mg/kg dry weight (d.w.)
	Soil	0,0282 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.

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.
- 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)

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Appearance	:	liquid
Colour	:	yellow
Odour	:	characteristic
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	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	1.030 - 1.090 g/cm ³
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
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

Molecular weight	:	No data available
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Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

Particle size : Not applicable

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 : Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

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

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

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : Acute toxicity estimate: 1.192 mg/kg
Method: Calculation method

Components:**Diazinon:**

Acute oral toxicity : LD50 (Rat): 1.139 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5,437 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2.020 mg/kg

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

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

Nonylphenol, ethoxylated:

Acute oral toxicity : LD50 (Rat): 500 - 2.000 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 401Acute inhalation toxicity : LC50 (Rat): >= 5,19 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Assessment: The substance or mixture has no acute inhalation toxicityAcute 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:**Diazinon:**Species : Rabbit
Result : Mild skin irritation**Solvent naphtha (petroleum), light aromatic:**Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation**Nonylphenol, ethoxylated:**Species : Rabbit
Method : OECD Test Guideline 404
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

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

Serious eye damage/eye irritation

Causes serious eye damage.

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

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

Nonylphenol, ethoxylated:

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

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:**Diazinon:**

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

Solvent naphtha (petroleum), light aromatic:

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

Nonylphenol, ethoxylated:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Result	:	negative
Remarks	:	Based on data from similar materials

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

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

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:**Diazinon:**

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
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Rat Application Route: Intraperitoneal injection Result: positive
Germ cell mutagenicity- Assessment	:	Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.

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

Nonylphenol, ethoxylated:

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

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

- Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: positive
- Test Type: In vitro mammalian cell gene mutation test
Result: positive
- Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: positive
- Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: positive
- Genotoxicity in vivo : Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 486
Result: negative
- Test Type: Micronucleus test
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative
- Test Type: Transgenic rodent somatic cell gene mutation assay
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 488
Result: positive
- Germ cell mutagenicity- Assessment : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.

Carcinogenicity

May cause cancer.

Components:**Diazinon:**

- Species : Rat
Application Route : Ingestion
Exposure time : 104 weeks
Result : negative

- Carcinogenicity - Assessment : Sufficient evidence of carcinogenicity in animal experiments

Solvent naphtha (petroleum), light aromatic:

- Species : Mouse
Application Route : Skin contact
Exposure time : 2 Years

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

Result : positive

Carcinogenicity - Assessment : Sufficient evidence of carcinogenicity in animal experiments

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

Species : Mouse

Application Route : Skin contact

Exposure time : 29 Months

Result : negative

Reproductive toxicity

Not classified based on available information.

Components:**Diazinon:**

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

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

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

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

Effects on foetal development : 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.
Causes damage to organs.

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

Components:**Diazinon:**

Exposure routes	:	Ingestion
Target Organs	:	Nervous system
Assessment	:	Shown to produce significant health effects in animals at concentrations of 300 mg/kg bw or less.

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:**Diazinon:**

Exposure routes	:	Ingestion
Target Organs	:	Nervous system
Assessment	:	Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

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 concentrations of >10 to 100 mg/kg bw.

Repeated dose toxicity**Components:****Diazinon:**

Species	:	Rat
NOAEL	:	0,3 mg/kg
LOAEL	:	15 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days
Species	:	Rat
NOAEL	:	0,1 mg/l
LOAEL	:	0,75 mg/l
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	28 Days

Solvent naphtha (petroleum), light aromatic:

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

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

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

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

Aspiration toxicity

May be fatal if swallowed and enters airways.

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:****Diazinon:**

Inhalation	: Symptoms: carcinogenic effects
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SECTION 12: Ecological information**12.1 Toxicity****Components:****Diazinon:**

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 0,09 mg/l Exposure time: 96 h
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Toxicity to daphnia and other aquatic invertebrates	: EC50 (Ceriodaphnia dubia (water flea)): 0,000164 mg/l Exposure time: 48 h
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M-Factor (Acute aquatic toxicity)	: 1.000
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Toxicity to fish (Chronic toxicity)	: NOEC: 0,092 mg/l Exposure time: 34 d Species: Pimephales promelas (fathead minnow)
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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: 0,00017 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)
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M-Factor (Chronic aquatic toxicity)	: 100
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Solvent naphtha (petroleum), light aromatic:

Toxicity to fish	: LC50 (Pimephales promelas (fathead minnow)): 8,2 mg/l Exposure time: 96 h
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Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

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
 Method: OECD Test Guideline 211

Nonylphenol, ethoxylated:

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

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

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

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

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

ic toxicity) Species: Mysidopsis bahia (opossum shrimp)
Remarks: Based on data from similar materials

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

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

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

Nonylphenol, 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

12.3 Bioaccumulative potential**Components:****Diazinon:**

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 46,9

Partition coefficient: n-octanol/water : log Pow: 3,69

Nonylphenol, ethoxylated:

Partition coefficient: n-octanol/water : log Pow: 4,48

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

Partition coefficient: n-octanol/water : log Pow: 1,34
Method: OECD Test Guideline 107

12.4 Mobility in soil

No data available

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:**Nonylphenol, ethoxylated:**

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

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.

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information**14.1 UN number**

ADN	:	UN 3082
ADR	:	UN 3082
RID	:	UN 3082
IMDG	:	UN 3082
IATA	:	UN 3082

14.2 UN proper shipping name

ADN	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diazinon)
ADR	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diazinon)
RID	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diazinon)
IMDG	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diazinon)
IATA	:	Environmentally hazardous substance, liquid, n.o.s. (Diazinon)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	:	9
ADR	:	9
RID	:	9
IMDG	:	9
IATA	:	9

14.4 Packing group

ADN	
Packing group	: III
Classification Code	: M6
Hazard Identification Number	: 90
Labels	: 9
ADR	
Packing group	: III
Classification Code	: M6
Hazard Identification Number	: 90
Labels	: 9

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

Tunnel restriction code : (-)

RID

Packing group	: III
Classification Code	: M6
Hazard Identification Number	: 90
Labels	: 9

IMDG

Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft)	: 964
Packing instruction (LQ)	: Y964
Packing group	: III
Labels	: Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft)	: 964
Packing instruction (LQ)	: Y964
Packing group	: III
Labels	: Miscellaneous

14.5 Environmental hazards**ADN**

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : 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.

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

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:

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

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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

EUH430	:	May cause endocrine disruption in the environment
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.
H318	:	Causes serious eye damage.
H336	:	May cause drowsiness or dizziness.
H340	:	May cause genetic defects.
H341	:	Suspected of causing genetic defects.
H350	:	May cause cancer.
H370	:	Causes damage to organs.
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.
H412	:	Harmful to aquatic life with long lasting effects.

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
ED ENV	:	Endocrine disruptor for environment
Eye Dam.	:	Serious eye damage
Flam. Liq.	:	Flammable liquids
Muta.	:	Germ cell mutagenicity
Skin Irrit.	:	Skin irritation

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
ZA BEI	:	South Africa. The Regulations for Hazardous Chemical Agents, Biological Exposure Indices
ZA OEL	:	South Africa. The Regulations for Hazardous Chemical Agents, Occupational Exposure Limits
ZA OEL / OEL-RL	:	Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts)

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:

Acute Tox. 4	H302
Skin Irrit. 2	H315
Eye Dam. 1	H318
Skin Sens. 1	H317

Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method

Diazinon Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 14.04.2025
6.0	17.06.2025	7699416-00012	Date of first issue: 22.12.2020

Muta. 1B	H340	Calculation method
Carc. 1B	H350	Calculation method
STOT SE 1	H370	Calculation method
STOT SE 3	H336	Calculation method
STOT RE 2	H373	Calculation method
Asp. Tox. 1	H304	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method
ED ENV 1	EUH430	Calculation method

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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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