

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Diazinon (9%) Liquid Formulation

Other means of identification : Coopers Gold Spray-on Off-Shears Sheep Lice Treatment (86314)

Manufacturer or supplier's details

Company : MSD

Address : 50 Tuas West Drive
Singapore - Singapore 638408

Telephone : +1-908-740-4000

Emergency telephone number : 65 6697 2111 (24/7/365)

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use : Not applicable

2. HAZARDS IDENTIFICATION**GHS Classification**

Serious eye damage/eye irritation : Category 1

Skin sensitisation : Category 1

Germ cell mutagenicity : Category 2

Carcinogenicity : Category 1B

Reproductive toxicity : Category 1B

Specific target organ toxicity - single exposure : Category 2 (Nervous system)


Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

Diazinon (9%) Liquid Formulation

Version 2.0 Revision Date: 27.11.2023 SDS Number: 10842825-00005 Date of last issue: 30.09.2023
 Date of first issue: 26.08.2022

GHS label elements

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	<p>H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H341 Suspected of causing genetic defects. H350 May cause cancer. H360Df May damage the unborn child. Suspected of damaging fertility. H371 May cause damage to organs (Nervous system). H410 Very toxic to aquatic life with long lasting effects.</p>
Precautionary statements	:	<p>Prevention: P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe mist or vapours. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>Response: P302 + P352 IF ON SKIN: Wash with plenty of water. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor. P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P362 + P364 Take off contaminated clothing and wash it before reuse. P391 Collect spillage.</p> <p>Storage: P405 Store locked up.</p> <p>Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.</p>

Diazinon (9%) Liquid Formulation

Version 2.0 Revision Date: 27.11.2023 SDS Number: 10842825-00005 Date of last issue: 30.09.2023
 Date of first issue: 26.08.2022

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Dibutyl phthalate	84-74-2	>= 50 -< 70
Diazinon	333-41-5	>= 2.5 -< 10
Calcium dodecylbenzenesulphonate	26264-06-2	>= 3 -< 10
Alcohols, C12-15, ethoxylated	68131-39-5	>= 1 -< 3
7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	2386-87-0	>= 1 -< 10
4-[(1,5-Dihydro-3-methyl-5-oxo-1-phenyl-4H-pyrazol-4-ylidene)methyl]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one	4702-90-3	>= 1 -< 3

4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
Causes serious eye damage.
Suspected of causing genetic defects.
May cause cancer.
May damage the unborn child. Suspected of damaging fertility.
May cause damage to organs.
- 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).

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

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 : None known.
- 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
Metal oxides
Sulphur compounds
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
-

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
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 : 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

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

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.
- 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.
- Conditions for safe storage : Keep in properly labelled containers.
Store locked up.
Keep tightly closed.
Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:
Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Dibutyl phthalate	84-74-2	PEL (long term)	5 mg/m ³	SG OEL
		TWA	5 mg/m ³	ACGIH
Diazinon	333-41-5	PEL (long term)	0.1 mg/m ³	SG OEL
		TWA (Inhalable fraction and vapor)	0.01 mg/m ³	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Diazinon	333-41-5	red blood cell acetylcholinesterase	Blood		70 % of baseline	SG BTLV

Diazinon (9%) Liquid Formulation

Version 2.0 Revision Date: 27.11.2023 SDS Number: 10842825-00005 Date of last issue: 30.09.2023
 Date of first issue: 26.08.2022

		ase (rbc ACHE)				
		Acetylcho- linesterase activity	In red blood cells	End of shift	70 % of an individual's baseline	ACGIH BEI
		Butyrylcho- linesterase activity	In serum or plasma	End of shift	60 % of an individual's baseline	ACGIH BEI

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

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

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

Eye protection : Wear safety glasses with side shields or goggles.
 If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
 Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Skin and body protection : Work uniform or laboratory coat.
 Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.
 Use appropriate degowning techniques to remove potentially contaminated clothing.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
 When using do not eat, drink or smoke.
 Contaminated work clothing should not be allowed out of the 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,

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

industrial hygiene monitoring, medical surveillance and the use of administrative controls.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: clear, yellow, orange
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	: 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	: No data available
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

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

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

10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents.
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

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:

Dibutyl phthalate:

Acute oral toxicity	:	LD50 (Rat): 6,279 mg/kg
---------------------	---	-------------------------

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 (9%) Liquid Formulation

Version 2.0 Revision Date: 27.11.2023 SDS Number: 10842825-00005 Date of last issue: 30.09.2023
Date of first issue: 26.08.2022

Calcium dodecylbenzenesulphonate:

Acute oral toxicity : LD50 (Rat): > 500 - 2,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

Alcohols, C12-15, ethoxylated:

Acute oral toxicity : LD50 (Rat): 1,700 mg/kg
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Remarks: Based on data from similar materials

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): \geq 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 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

4-[(1,5-Dihydro-3-methyl-5-oxo-1-phenyl-4H-pyrazol-4-ylidene)methyl]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC0 (Rat): 7.39 mg/l
Exposure time: 8 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 2,500 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Not classified based on available information.

Components:

Dibutyl phthalate:

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

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

Diazinon:

Species	: Rabbit
Result	: Mild skin irritation

Calcium dodecylbenzenesulphonate:

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: Skin irritation
Remarks	: Based on data from similar materials

Alcohols, C12-15, ethoxylated:

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: No skin irritation
Remarks	: Based on data from similar materials

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

4-[(1,5-Dihydro-3-methyl-5-oxo-1-phenyl-4H-pyrazol-4-ylidene)methyl]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one:

Species	: Rabbit
Result	: No skin irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Components:**Dibutyl phthalate:**

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

Calcium dodecylbenzenesulphonate:

Species	: Rabbit
Result	: Irreversible effects on the eye
Method	: OECD Test Guideline 405
Remarks	: Based on data from similar materials

Diazinon (9%) Liquid Formulation

Version 2.0 Revision Date: 27.11.2023 SDS Number: 10842825-00005 Date of last issue: 30.09.2023
Date of first issue: 26.08.2022

Alcohols, C12-15, ethoxylated:

Species : Rabbit
Result : Irreversible effects on the eye
Remarks : Based on data from similar materials

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

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

4-[(1,5-Dihydro-3-methyl-5-oxo-1-phenyl-4H-pyrazol-4-ylidene)methyl]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one:

Species : Rabbit
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:**Dibutyl phthalate:**

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

Diazinon:

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

Calcium dodecylbenzenesulphonate:

Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : negative
Remarks : Based on data from similar materials

Alcohols, C12-15, ethoxylated:

Test Type : Magnusson-Kligman-Test

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

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:

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

Assessment	:	Probability or evidence of skin sensitisation in humans
------------	---	---

4-[(1,5-Dihydro-3-methyl-5-oxo-1-phenyl-4H-pyrazol-4-ylidene)methyl]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one:

Species	:	Guinea pig
Result	:	negative

Germ cell mutagenicity

Suspected of causing genetic defects.

Components:**Dibutyl phthalate:**

Genotoxicity in vitro	:	Test Type: Chromosome aberration test in vitro Result: negative Remarks: Based on data from similar materials
		Test Type: In vitro mammalian cell gene mutation test Result: positive
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Ingestion Result: negative
Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.

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

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

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.

Calcium dodecylbenzenesulphonate:

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

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

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

Alcohols, C12-15, ethoxylated:

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

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)

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

		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
------------------------------	--	--

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

May damage the unborn child. Suspected of damaging fertility.

Components:**Dibutyl phthalate:**

Effects on fertility		: Test Type: Two-generation study Species: Rat
----------------------	--	---

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

	Application Route: Ingestion Result: positive
Effects on foetal development	: Test Type: Development Species: Rat Application Route: Ingestion Result: positive
Reproductive toxicity - Assessment	: Clear evidence of adverse effects on development, based on animal experiments., Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

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

Calcium dodecylbenzenesulphonate:

Effects on fertility	: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 422 Result: negative Remarks: Based on data from similar materials
Effects on foetal development	: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 422 Result: negative Remarks: Based on data from similar materials

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
-------------------------------	---

4-[(1,5-Dihydro-3-methyl-5-oxo-1-phenyl-4H-pyrazol-4-ylidene)methyl]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one:

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

Effects on fertility	:	Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 422 Result: positive
Effects on foetal development	:	Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 422 Result: positive
Reproductive toxicity - Assessment	:	Some evidence of adverse effects on sexual function and fertility, based on animal experiments., Some evidence of adverse effects on development, based on animal experiments.

STOT - single exposure

May cause damage to organs (Nervous system).

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.

STOT - repeated exposure

Not classified based on available information.

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.

Calcium dodecylbenzenesulphonate:

Assessment	:	No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.
------------	---	--

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.

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

Repeated dose toxicity

Components:

Dibutyl phthalate:

Species	: Rat
NOAEL	: 152 mg/kg
LOAEL	: 752 mg/kg
Application Route	: Ingestion
Exposure time	: 90 Days
Method	: OECD Test Guideline 408

Species	: Rat
NOAEL	: 0.51 mg/l
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 4 Weeks
Method	: OECD Test Guideline 412

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

Calcium dodecylbenzenesulphonate:

Species	: Rat
LOAEL	: > 200 mg/kg
Application Route	: Ingestion
Exposure time	: 6 - 7 Weeks
Method	: OECD Test Guideline 422
Remarks	: Based on data from similar materials

Species	: Rabbit
NOAEL	: > 100 mg/kg
Application Route	: Skin contact
Exposure time	: 28 Days
Method	: OECD Test Guideline 410
Remarks	: Based on data from similar materials

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

Species	: Rat
---------	-------

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

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

Aspiration toxicity

Not classified based on available information.

Experience with human exposure**Components:****Diazinon:**

Inhalation	: Symptoms: carcinogenic effects
------------	----------------------------------

12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****Dibutyl phthalate:**

Toxicity to fish	: LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.48 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Mysidopsis bahia (opossum shrimp)): 0.5 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata (green algae)): 0.75 mg/l Exposure time: 10 d
	: NOEC (Pseudokirchneriella subcapitata (green algae)): 0.39 mg/l Exposure time: 10 d
M-Factor (Acute aquatic toxicity)	: 1
Toxicity to fish (Chronic toxicity)	: NOEC (Oncorhynchus mykiss (rainbow trout)): 0.1 mg/l Exposure time: 99 d
Toxicity to microorganisms	: NOEC (Pseudomonas putida): \geq 10 mg/l Exposure time: 30 min Remarks: No toxicity at the limit of solubility

Diazinon:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 0.09 mg/l Exposure time: 96 h
Toxicity to daphnia and other	: EC50 (Ceriodaphnia dubia (water flea)): 0.000164 mg/l

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

aquatic invertebrates	Exposure time: 48 h
M-Factor (Acute aquatic toxicity)	: 1,000
Toxicity to fish (Chronic toxicity)	: NOEC (Pimephales promelas (fathead minnow)): 0.092 mg/l Exposure time: 34 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): 0.00017 mg/l Exposure time: 21 d
M-Factor (Chronic aquatic toxicity)	: 100

Calcium dodecylbenzenesulphonate:

Toxicity to fish	: LC50 (Leuciscus idus (Golden orfe)): > 1 - 10 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (green algae)): > 10 - 100 mg/l Exposure time: 72 h Remarks: Based on data from similar materials
	: NOEC (Pseudokirchneriella subcapitata (green algae)): > 0.1 - 1 mg/l Exposure time: 72 h Remarks: Based on data from similar materials
Toxicity to fish (Chronic toxicity)	: NOEC (Pimephales promelas (fathead minnow)): > 0.1 - 1 mg/l Exposure time: 28 d Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): > 1 mg/l Exposure time: 21 d Remarks: Based on data from similar materials
Toxicity to microorganisms	: EC50 (activated sludge): > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

Alcohols, C12-15, ethoxylated:

Toxicity to fish	: LC50 (Danio rerio (zebra fish)): > 1 - 10 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other	: EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

aquatic invertebrates		Exposure time: 48 h	Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 10 mg/l	Exposure time: 72 h
		Remarks: Based on data from similar materials	
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC10 (Daphnia magna (Water flea)): > 0.1 - 1 mg/l	Exposure time: 21 d
		Remarks: Based on data from similar materials	

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

4-[(1,5-Dihydro-3-methyl-5-oxo-1-phenyl-4H-pyrazol-4-ylidene)methyl]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 22.7 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)): > 0.407 mg/l	Exposure time: 48 h	Method: OECD Test Guideline 202	Remarks: No toxicity at the limit of solubility
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l	Exposure time: 72 h	Method: OECD Test Guideline 201	

Diazinon (9%) Liquid Formulation

Version 2.0 Revision Date: 27.11.2023 SDS Number: 10842825-00005 Date of last issue: 30.09.2023
Date of first issue: 26.08.2022

Remarks: No toxicity at the limit of solubility

EL10 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility

Toxicity to microorganisms : EC50: > 1,000 mg/l
Exposure time: 30 min
Method: OECD Test Guideline 209

Persistence and degradability**Components:****Dibutyl phthalate:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 81 %
Exposure time: 28 d
Method: CO2 Evolution Test

Calcium dodecylbenzenesulphonate:

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

Alcohols, C12-15, ethoxylated:

Biodegradability : Result: rapidly degradable
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

4-[(1,5-Dihydro-3-methyl-5-oxo-1-phenyl-4H-pyrazol-4-ylidene)methyl]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Bioaccumulative potential**Components:****Dibutyl phthalate:**

Partition coefficient: n- : log Pow: 4.46

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

|| octanol/water

Diazinon:|| Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 46.9|| Partition coefficient: n-
octanol/water : log Pow: 3.69**Calcium dodecylbenzenesulphonate:**|| Bioaccumulation : Bioconcentration factor (BCF): < 500
Remarks: Based on data from similar materials|| Partition coefficient: n-
octanol/water : log Pow: 4.77
Remarks: Calculation**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**4-[(1,5-Dihydro-3-methyl-5-oxo-1-phenyl-4H-pyrazol-4-ylidene)methyl]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one:**|| Partition coefficient: n-
octanol/water : log Pow: 5.02**Mobility in soil**

No data available

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 handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

14. TRANSPORT INFORMATION**International Regulations****UNRTDG**UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Diazinon, Dibutyl phthalate)
Class : 9
Packing group : III

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

Labels : 9
 Environmentally hazardous : yes

IATA-DGR

UN/ID No. : UN 3082
 Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
 (Diazinon, Dibutyl phthalate)
 Class : 9
 Packing group : III
 Labels : Miscellaneous
 Packing instruction (cargo aircraft) : 964
 Packing instruction (passenger aircraft) : 964
 Environmentally hazardous : yes

IMDG-Code

UN number : UN 3082
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
 N.O.S.
 (Diazinon, Dibutyl phthalate)
 Class : 9
 Packing group : III
 Labels : 9
 EmS Code : F-A, S-F
 Marine pollutant : yes

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

Not applicable for product as supplied.

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****Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.**

Environmental Protection and Management Act and Environmental Protection and Management (Hazardous Substances) Regulations	:	Phosphorus compounds used as pesticides (insecticides, acaricides, etc.)
Fire Safety (Petroleum and Flammable Materials) Regulations	:	Not applicable

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

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

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

16. OTHER INFORMATION

Revision Date : 27.11.2023

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/>

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

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
SG BTLV	:	Singapore. Biological Threshold Limit Values
SG OEL	:	Singapore. Workplace Safety and Health (General Provisions) Regulations - First Schedule Permissible Exposure Limits of Toxic Substances.

ACGIH / TWA	:	8-hour, time-weighted average
SG OEL / PEL (long term)	:	Permissible Exposure Level (PEL) Long Term

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumu-

Diazinon (9%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
2.0	27.11.2023	10842825-00005	Date of first issue: 26.08.2022

lative 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.

SG / EN