SAFETY DATA SHEET  
according to the Hazardous Products Regulations

Diazinon (9%) Liquid Formulation

SECTION 1. IDENTIFICATION

Product name : Diazinon (9%) Liquid Formulation  
Other means of identification : No data available

Manufacturer or supplier's details
Company name of supplier : Merck & Co., Inc  
Address : 126 E. Lincoln Avenue  
Rahway, New Jersey U.S.A. 07065  
Telephone : 908-740-4000  
Emergency telephone : 1-908-423-6000  
E-mail address : EHSDATASTEWARD@merck.com

Recommended use of the chemical and restrictions on use
Recommended use : Veterinary product  
Restrictions on use : Not applicable

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Serious eye damage : Category 1  
Skin sensitization : Category 1  
Germ cell mutagenicity : Category 2  
Carcinogenicity : Category 1B  
Reproductive toxicity : Category 1B  
Specific target organ toxicity - single exposure : Category 1 (Nervous system)  
Specific target organ toxicity - repeated exposure : Category 2 (Nervous system, nasal cavity)

GHS label elements
Hazard pictograms : ![Pictograms]

Signal Word : Danger

Hazard Statements : 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.
Diazinon (9%) Liquid Formulation

Precautionary Statements:

**Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe vapors.
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.
P280 Wear protective gloves, protective clothing, eye protection and face protection.

**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.
P308 + P311 IF exposed or concerned: Call a doctor.
P333 + P313 IF skin irritation or rash occurs: Get medical attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

**Storage:**
P405 Store locked up.

**Disposal:**
P501 Dispose of contents and container to an approved waste disposal plant.

Other hazards:
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

<table>
<thead>
<tr>
<th>Components</th>
<th>Chemical name</th>
<th>Common Name/Synonym</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dibutyl phthalate</td>
<td>1,2-Benzenedicarboxylic acid, 1,2-dibutyl ester</td>
<td>84-74-2</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>Diazinon</td>
<td>Phosphorothioic acid, O,O-diethyl O-[6-methyl-2-(1-</td>
<td>333-41-5</td>
<td>9</td>
</tr>
</tbody>
</table>
SECTION 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.
Causes damage to organs.
May cause damage to organs through prolonged or repeated
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.

SECTION 5. FIRE-FIGHTING 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 (NOx)
Sulfur oxides
Oxides of phosphorus
Metal oxides
Sulfur 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 fire-fighters: In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

SECTION 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 diking or other appropriate containment to keep material from spreading. If diked 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.

### SECTION 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 vapors. 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 labeled 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. Self-reactive substances and mixtures. Organic peroxides. Explosives. Gases.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibutyl phthalate</td>
<td>84-74-2</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>CA AB OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Vapour and inhalable aerosols)</td>
<td>0.01 mg/m³</td>
<td>CA AB OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td>Diazinon</td>
<td>333-41-5</td>
<td>TWA</td>
<td>0.01 mg/m³</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>CA QC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Vapour and inhalable aerosols)</td>
<td>0.01 mg/m³</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>CA QC OEL</td>
</tr>
</tbody>
</table>
## Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diazinon</td>
<td>333-41-5</td>
<td>Acetylcholinesterase activity</td>
<td>In red blood cells</td>
<td>End of shift</td>
<td>70% of an individual's baseline</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Butyrylcholinesterase activity</td>
<td>In serum or plasma</td>
<td>End of shift</td>
<td>60% of an individual's baseline</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

## 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 vapor type

### Hand protection
- Chemical-resistant gloves

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>viscous</td>
</tr>
<tr>
<td>Color</td>
<td>clear, yellow, orange</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (liquids)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility (water solubility)</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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 : No data available
Particle size : Not applicable

SECTION 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.

SECTION 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
  Acute dermal 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
### Diazinon (9%) Liquid Formulation

**Version** 2.2  
**Revision Date:** 09/30/2023  
**SDS Number:** 10842834-00004  
**Date of last issue:** 04/04/2023  
**Date of first issue:** 08/26/2022

<table>
<thead>
<tr>
<th>Substance Description</th>
<th>Acute Inhalation Toxicity</th>
<th>Acute Dermal Toxicity</th>
</tr>
</thead>
</table>
| Calcium dodecylbenzenesulphonate | LC50 (Rat): > 5.437 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist | LD50 (Rabbit): > 2,020 mg/kg |
| Acids, C12-15, ethoxylated | LD50 (Rat): > 500 - 2,000 mg/kg  
Method: OECD Test Guideline 401  
Remarks: Based on data from similar materials | LD50 (Rabbit): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: Based on data from similar materials |
| 7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate | 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 toxicity | LD50 (Rat): > 2,500 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 | LC50 (Rat): 7.39 mg/l  
Exposure time: 8 h  
Test atmosphere: dust/mist | LD50 (Rat): > 2,500 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity |
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Skin corrosion/irritation
Not classified based on available information.

Components:

Dibutyl phthalate:
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

**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 sensitization**

**Skin sensitization**
May cause an allergic skin reaction.

**Respiratory sensitization**
Not classified based on available information.

**Components:**

**Dibutyl phthalate:**
Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

**Diazinon:**
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative

**Calcium dodecylbenzenesulphonate:**
Test Type: Maximization Test
Routes of exposure: 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
Routes of exposure: 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: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: positive
Assessment: Probability or evidence of skin sensitization in humans

4-[(1,5-Dihydro-3-methyl-5-oxo-1-phenyl-4H-pyrazol-4-ylidene)methyl]-2,4-dihydro-5methyl-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
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)
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
Application Route: Ingestion
Result: positive
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Effects on fetal 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 fetal development : Test Type: Embryo-fetal 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 fetal 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 fetal development : Test Type: Embryo-fetal 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:
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
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Effects on fetal 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**
Causes damage to organs (Nervous system).

**Components:**

**Diazinon:**
Routes of exposure: 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**
May cause damage to organs (Nervous system, nasal cavity) through prolonged or repeated exposure.

**Components:**

**Diazinon:**
Routes of exposure: 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:**
Routes of exposure: 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:**

**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
- **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

SECTION 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
Toxicity to fish (Chronic toxicity): NOEC (Oncorhynchus mykiss (rainbow trout)): 0.1 mg/l
Exposure time: 99 d
Toxicity to daphnia and other aquatic invertebrates: NOEC (Daphnia magna (Water flea)): >= 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 aquatic invertebrates: EC50 (Ceriodaphnia dubia (water flea)): 0.000164 mg/l
Exposure time: 48 h
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
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 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 - 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
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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  
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-octanol/water: log Pow: 4.46

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
Diazinon (9%) Liquid Formulation

octanol/water Remarks: Calculation

7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:
Partition coefficient: n-octanol/water: \( \text{log Pow: 1.34} \)
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: \( \text{log Pow: 5.02} \)

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: Do not dispose of waste into sewer.
Dispose of in accordance with local regulations.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

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

Domestic regulation

TDG
UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Diazinon, Dibutyl phthalate)
Class : 9
Packing group : III
Labels : 9
ERG Code : 171
Marine pollutant : yes (Diazinon, Dibutyl phthalate)

Special precautions for user
The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

The ingredients of this product are reported in the following inventories:
AICS : not determined
DSL : not determined
IECSC : not determined

SECTION 16. OTHER INFORMATION

Full text of other abbreviations
ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
CA BC OEL : Canada. British Columbia OEL
CA QC OEL : Québec. Regulation respecting occupational health and safe-
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according to the Hazardous Products Regulations

**Diazinon (9%) Liquid Formulation**

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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

### Sources of key data used to compile the Material Safety Data Sheet


### Revision Date

| Date format | 09/30/2023 | mm/dd/yyyy |

AICL - 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
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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.

CA / Z8