SAFETY DATA SHEET
according to the Hazardous Products Regulations

Diazinon Formulation

SECTION 1. IDENTIFICATION

Product name : Diazinon 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
Acute toxicity (Oral) : Category 4
Skin irritation : Category 2
Serious eye damage : Category 1
Skin sensitization : Category 1
Germ cell mutagenicity : Category 1B
Carcinogenicity : Category 1B
Specific target organ toxicity - single exposure : Category 1 (Nervous system)
Specific target organ toxicity - single exposure : Category 3
Specific target organ toxicity - repeated exposure : Category 2 (Nervous system, nasal cavity)
Aspiration hazard : Category 1

GHS label elements
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 (Nervous system).
- H373 May cause damage to organs (Nervous system, nasal cavity) through prolonged or repeated exposure.

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 mist or vapors.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280 Wear protective gloves, protective clothing, eye protection and face protection.

Response:
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER.
- P302 + P352 IF ON SKIN: Wash with plenty of water.
- P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
- 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.
- P331 Do NOT induces vomiting.
- 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>Diazinon</td>
<td>Phosphorothioic acid, O,O-diethyl O-[6-methyl-2-(1-methylethyl)-4-pyrimidinyl] ester</td>
<td>333-41-5</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Solvent naphtha (petroleum), light aromatic</td>
<td>No data available</td>
<td>64742-95-6</td>
<td>20.2</td>
</tr>
<tr>
<td></td>
<td>Nonylphenol, ethoxylated</td>
<td>Poly(oxy-1,2-ethanediyl), .alpha.- (nonylphenyl)-.omega.-hydroxy-</td>
<td>9016-45-9</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate</td>
<td>3,4-Epoxycyclohexylmethyl-3,4-epoxycyclohexancarboxylate</td>
<td>2386-87-0</td>
<td>9.8</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 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 center immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.
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<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>2.2</td>
<td>09/30/2023</td>
<td>7699404-00008</td>
<td>07/12/2023</td>
<td>12/22/2020</td>
</tr>
</tbody>
</table>

**Most important symptoms and effects, both acute and delayed:**
- Harmful if swallowed.
- May be fatal if swallowed and enters airways.
- Causes skin irritation.
- May cause an allergic skin reaction.
- Causes serious eye damage.
- 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.

**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

**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 mist or 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.
- Keep in a cool, well-ventilated place.
- 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>Diazinon</td>
<td>333-41-5</td>
<td>TWA</td>
<td>0.01 mg/m³</td>
<td>CA AB OEL</td>
</tr>
</tbody>
</table>


# Safety Data Sheet

## Diazinon Formulation

### Control Parameters

<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., dripless 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

- Material: Chemical-resistant gloves

#### Eye protection

- Remarks: Consider double gloving.
- 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
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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

Appearance: liquid
Color: yellow
Odor: characteristic
Odor 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
Vapor pressure: No data available
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<td></td>
</tr>
</tbody>
</table>

- **Relative vapor density**: No data available
- **Relative density**: No data available
- **Density**: 1,030 - 1,090 g/cm³
- **Solubility(ies)**
  - **Water solubility**: No data available
- **Partition coefficient: n-octanol/water**: Not applicable
- **Autoignition temperature**: No data available
- **Decomposition temperature**: No data available
- **Viscosity**
  - **Viscosity, kinematic**: No data available
- **Explosive properties**: Not explosive
- **Oxidizing properties**: The substance or mixture is not classified as oxidizing.
- **Molecular weight**: 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**
Harmful if swallowed.

**Product:**
- **Acute oral toxicity**: Acute toxicity estimate: 1,139 mg/kg
  - Method: Calculation method
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Acute dermal toxicity: Acute toxicity estimate: > 2,000 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

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: vapor
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 401
Acute inhalation toxicity: LC50 (Rat): >= 5.19 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Assessment: The substance or mixture has no acute 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

Skin corrosion/irritation
Causes skin irritation.

Components:

Diazinon:
Species: Rabbit
Result: Mild skin irritation
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Revision Date: 09/30/2023  
SDS Number: 7699404-00008  
Date of last issue: 07/12/2023  
Date of first issue: 12/22/2020

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

Serious eye damage/eye irritation
Causes serious eye damage.

Components:

Solvent naphtha (petroleum), light aromatic:
Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405

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

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

Respiratory or skin sensitization

Skin sensitization
May cause an allergic skin reaction.

Respiratory sensitization
Not classified based on available information.

Components:

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

Solvent naphtha (petroleum), light aromatic:
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative

Nonylphenol, ethoxylated:
Test Type: Maximization 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

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
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<table>
<thead>
<tr>
<th>Test Type</th>
<th>Result</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>In vitro mammalian cell gene mutation test</td>
<td>positive</td>
<td></td>
</tr>
</tbody>
</table>

### Genotoxicity in vivo

- **Test Type:** Sister chromatid exchange analysis in spermato-gonia
- **Species:** Mouse
- **Application Route:** Intraperitoneal injection
- **Result:** positive

### Germ cell mutagenicity - Assessment

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

### Nonylphenol, 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

Solvent naphtha (petroleum), light aromatic:
Species: Mouse
Application Route: Skin contact
Exposure time: 2 Years
Result: positive

Carcinogenicity - Assessment: Sufficient evidence of carcinogenicity in animal experiments

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 fetal development: Test Type: Embryo-fetal 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 (vapor)
### Effects on fetal development

#### Diazinon:
- **Test Type:** Embryo-fetal development
- **Species:** Rat
- **Application Route:** Inhalation (vapor)
- **Result:** negative

#### 7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:
- **Test Type:** Embryo-fetal 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 (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.

#### Solvent naphtha (petroleum), light aromatic:
- **Assessment:** May cause drowsiness or dizziness.

### 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.

#### 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:**

**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

**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
SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

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

Solvent naphtha (petroleum), light aromatic:

Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 8.2 mg/l
  Exposure time: 96 h
  Test substance: Water Accommodated Fraction

Toxicity to daphnia and other aquatic invertebrates: EL50 (Daphnia magna (Water flea)): 4.5 mg/l
  Exposure time: 48 h
  Test substance: Water Accommodated Fraction
  Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants: EL50 (Pseudokirchneriella subcapitata (microalgae)): 3.1 mg/l
  Exposure time: 96 h
  Test substance: Water Accommodated Fraction
  Method: OECD Test Guideline 201

  NOELR (Pseudokirchneriella subcapitata (microalgae)): 0.5 mg/l
  Exposure time: 96 h
  Test substance: Water Accommodated Fraction
  Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOELR (Daphnia magna (Water flea)): 2.6 mg/l
  Exposure time: 21 d
  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

#### Toxicity to fish (Chronic toxicity)
- **NOEC** (Oryzias latipes (Japanese medaka)): > 0.1 - 1 mg/l
  - Exposure time: 100 d
  - Remarks: Based on data from similar materials

#### Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
- **NOEC** (Mysis bahia (opossum shrimp)): > 0.001 - 0.01 mg/l
  - Exposure time: 28 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

### 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

**Bioaccumulative potential**

**Components:**

**Diazinon:**
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

**Mobility in soil**
No data available

**Other adverse effects**
No data available

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**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.

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**SECTION 14. TRANSPORT INFORMATION**

**International Regulations**

**UNRTDG**
UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diazinon)

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)

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)

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)

Class : 9
Packing group : III
Labels : 9
ERG Code : 171
Marine pollutant : yes(Diazinon)

**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:

- **DSL**: not determined
- **AICS**: 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 AB OEL**: Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
- **CA BC OEL**: Canada. British Columbia OEL
- **CA QC OEL**: Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
- **ACGIH / TWA**: 8-hour, time-weighted average
- **CA AB OEL / TWA**: 8-hour Occupational exposure limit
- **CA BC OEL / TWA**: 8-hour time weighted average
- **CA QC OEL / TWA EV**: Time-weighted average exposure value

AliC - 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 Tempera-
**SAFETY DATA SHEET**

according to the Hazardous Products Regulations

## Diazinon Formulation

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

**Revision Date:** 09/30/2023  
**Date format:** mm/dd/yyyy

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.

CA / Z8