

Diazinon Formulation

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|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

1. PRODUCT AND COMPANY IDENTIFICATION

Chemical product name : Diazinon Formulation

Supplier's company name, address and phone number

Company name of supplier : MSD

Address : 1-13-12, Kudan-kita, Chiyoda-ku, Tokyo, Japan

Telephone : 03-6272-1099

E-mail address : EHSDATASTEWARD@msd.com

Emergency telephone number : 1-908-423-6000

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use : Not applicable

2. HAZARDS IDENTIFICATION

GHS classification of chemical product

Acute toxicity (Oral) : Category 4

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 1

Skin sensitisation : 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)

Aspiration hazard : Category 1

Short-term (acute) aquatic : Category 1

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

hazard

Long-term (chronic) aquatic hazard : Category 1

GHS label elementsHazard 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) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.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 vapours.
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.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
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 POISON CENTER/ 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/ doctor.
P308 + P311 IF exposed or concerned: Call a POISON

SAFETY DATA SHEET



Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

CENTER/ doctor.
P331 Do NOT induce vomiting.
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.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

| Chemical name | CAS-No. | Concentration (% w/w) | ENCS No. |
|---|------------|-----------------------|----------|
| Diazinon | 333-41-5 | 50 | 5-923 |
| Solvent naphtha (petroleum), light aromatic | 64742-95-6 | 20.2 | 9-1700 |
| Nonylphenol, ethoxylated | 9016-45-9 | 20 | 7-172 |
| 7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate | 2386-87-0 | $\geq 2.5 - < 10$ | 3-2452 |

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. |

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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| If swallowed | : Get medical attention immediately. If swallowed, DO NOT induce vomiting. If vomiting occurs have person lean forward. Call a physician or poison control centre immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. |
| Most important symptoms and effects, both acute and 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. |

5. FIREFIGHTING MEASURES

| | |
|---|---|
| Suitable extinguishing media | : Water spray Alcohol-resistant foam Carbon dioxide (CO ₂) 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 |
| 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

SAFETY DATA SHEET



Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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| 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 certain local or national requirements. |

7. HANDLING AND STORAGE

Handling

- | | |
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| 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. |
| Avoidance of contact | : Oxidizing agents |
| 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 |

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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.

Storage

Conditions for safe storage : Keep in properly labelled containers.
Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.

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

Packaging material : Unsuitable material: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Threshold limit value and permissible exposure limits for each component in the work environment**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Concentration standard / Permissible concentration | Basis |
|---|---|------------------------------------|---|-------------------------|
| Diazinon | 333-41-5 | OEL-M | 0.1 mg/m3 | JP OEL JSHO |
| | Further information: Skin absorption, Group 2B: possibly carcinogenic to humans | | | |
| | | 8h-OEL-M | 0.01 mg/m3 | JP ISHL OEL 577-2(2) |
| | | TWA (Inhalable fraction and vapor) | 0.01 mg/m3 | ACGIH |
| Solvent naphtha (petroleum), light aromatic | 64742-95-6 | TWA | 200 mg/m3 (total hydrocarbon vapor) | ACGIH |

Biological occupational exposure limits

| Components | CAS-No. | Target substance | Biological specimen | Sampling time | Permissible concentration | Basis |
|------------|----------|--------------------------------|---------------------|---------------|----------------------------------|--------------|
| Diazinon | 333-41-5 | Acetylcholinesterase activity | In red blood cells | End of shift | 70 % of an individual's baseline | ACGIH BEI |
| | | Butyrylcholinesterase activity | In serum or plasma | End of shift | 60 % of an individual's baseline | ACGIH BEI |

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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.
Impermeable protective gloves

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Colour : yellow

Odour : characteristic

Odour Threshold : No data available

Melting point/freezing point : No data available

Boiling point, initial boiling point and boiling range : No data available

SAFETY DATA SHEET



Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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| Flammability (solid, gas) | : Not applicable |
| Flammability (liquids) | : No data available |
| Lower explosion limit and upper explosion limit / flammability limit | |
| Upper explosion limit / Upper per flammability limit | : No data available |
| Lower explosion limit / Lower flammability limit | : No data available |
| Flash point | : No data available |
| Decomposition temperature | : No data available |
| pH | : No data available |
| Evaporation rate | : No data available |
| Auto-ignition temperature | : No data available |
| Viscosity | |
| Viscosity, kinematic | : No data available |
| Solubility(ies) | |
| Water solubility | : No data available |
| Partition coefficient: n-octanol/water | : Not applicable |
| Vapour pressure | : No data available |
| Density and / or relative density | |
| Relative density | : No data available |
| Density | : 1,030 - 1,090 g/cm ³ |
| Relative vapour density | : No data available |
| Explosive properties | : Not explosive |
| Oxidizing properties | : The substance or mixture is not classified as oxidizing. |
| Molecular weight | : No data available |
| Particle characteristics | |
| Particle size | : Not applicable |

10. STABILITY AND REACTIVITY

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

| | | |
|------------------------------------|---|--|
| 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

Harmful if swallowed.

Product:

Acute oral toxicity : Acute toxicity estimate: 1,192 mg/kg
Method: Calculation method

Components:**Diazinon:**

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|---------------------------|---|--|
| 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: vapour |
| Acute dermal toxicity | : | LD50 (Rabbit): > 2,000 mg/kg |

Nonylphenol, ethoxylated:

| | | |
|---------------------|---|-------------------------------|
| Acute oral toxicity | : | LD50 (Rat): 500 - 2,000 mg/kg |
|---------------------|---|-------------------------------|

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

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| Acute oral toxicity | : | LD50 (Rat, male): > 2,959 - 5,000 mg/kg Method: OECD Test Guideline 401 |
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Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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| 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 |

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 |
|---------|----------|

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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| 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 sensitisation**Skin sensitisation**

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:**Diazinon:**

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

Solvent naphtha (petroleum), light aromatic:

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

Nonylphenol, ethoxylated:

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

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

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

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| Assessment | : Probability or evidence of skin sensitisation in humans |
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Germ cell mutagenicity

May cause genetic defects.

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

Components:**Diazinon:**

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| 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:

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|-------------------------------------|---|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Test Type: In vitro mammalian cell gene mutation test Result: positive |
| Genotoxicity in vivo | : Test Type: Sister chromatid exchange analysis in spermatogonia Species: Mouse Application Route: Intraperitoneal injection Result: positive |
| Germ cell mutagenicity - Assessment | : Positive result(s) from in vivo heritable germ cell mutagenicity tests in mammals |

Nonylphenol, ethoxylated:

| | |
|-----------------------|---|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Remarks: Based on data from similar materials |
|-----------------------|---|

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 |
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Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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| Genotoxicity in vivo | 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 |
| | : 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 |
| Germ cell mutagenicity - Assessment | Test Type: Transgenic rodent somatic cell gene mutation assay Species: Mouse Application Route: Ingestion Method: OECD Test Guideline 488 Result: positive |
| | : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests. |

Carcinogenicity

May cause cancer.

Components:**Diazinon:**

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

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

Solvent naphtha (petroleum), light aromatic:

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

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| Carcinogenicity - Assessment | : Sufficient evidence of carcinogenicity in animal experiments |
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Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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:**

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

Solvent naphtha (petroleum), light aromatic:

| | |
|-------------------------------|---|
| Effects on fertility | : Test Type: Reproduction/Developmental toxicity screening test Species: Rat Application Route: inhalation (vapour) Result: negative |
| Effects on foetal development | : Test Type: Embryo-foetal development Species: Rat Application Route: inhalation (vapour) Result: negative |

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

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|-------------------------------|---|
| Effects on foetal development | : Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative |
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STOT - single exposure

May cause drowsiness or dizziness.
Causes damage to organs (Nervous system).

Components:**Diazinon:**

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|-----------------|------------------|
| Exposure routes | : Ingestion |
| Target Organs | : Nervous system |

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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) through prolonged or repeated exposure.

Components:**Diazinon:**

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

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

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

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

Species : Rat
NOAEL : 0.3 mg/kg
LOAEL : 15 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Species : Rat
NOAEL : 0.1 mg/l
LOAEL : 0.75 mg/l
Application Route : inhalation (dust/mist/fume)
Exposure time : 28 Days

Solvent naphtha (petroleum), light aromatic:

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

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

Species : Rat

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

| | |
|-------------------|---------------------------|
| 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 |
|------------|----------------------------------|

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 |
| 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 |

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 |
|------------------|---|

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

| | | |
|--|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (<i>Daphnia magna</i> (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 (<i>Pseudokirchneriella subcapitata</i> (microalgae)): 3.1 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 |
| | | NOELR (<i>Pseudokirchneriella subcapitata</i> (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 (<i>Daphnia magna</i> (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 (<i>Pimephales promelas</i> (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 (<i>Ceriodaphnia dubia</i> (water flea)): > 0.1 - 1 mg/l Exposure time: 48 h Remarks: Based on data from similar materials |
| Toxicity to algae/aquatic plants | : | ErC50 (<i>Selenastrum capricornutum</i> (green algae)): > 1 - 10 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials |
| | | EC10 (<i>Selenastrum capricornutum</i> (green algae)): > 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials |
| M-Factor (Acute aquatic toxicity) | : | 1 |
| Toxicity to fish (Chronic toxicity) | : | NOEC (<i>Oryzias latipes</i> (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 (<i>Mysidopsis bahia</i> (opossum shrimp)): > 0.001 - 0.01 mg/l Exposure time: 28 d Remarks: Based on data from similar materials |

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: |
| 7.0 | 2025/04/14 | 7699410-00011 | 2024/09/28 |
| | | | Date of first issue: 2020/12/22 |

M-Factor (Chronic aquatic toxicity) : 10

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

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 24 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 40 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 110 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Raphidocelis subcapitata (freshwater green alga)): 30 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC10 (activated sludge): 409 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

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

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

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:**

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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

Hazardous to the ozone layer

Not applicable

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.
Do not dispose of waste into sewer.

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)

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

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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.

National Regulations

Refer to section 15 for specific national regulation.

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.

ERG Code : 171

15. REGULATORY INFORMATION**Related Regulations****Fire Service Law**

Not applicable to dangerous materials / designated flammables.

Chemical Substance Control Law**Class II Specified Chemical Substance**

| Chemical name | Number |
|--|--------|
| alpha-(Nonylphenyl)-omega-hydroxypoly(oxyethylene) | 86 |
| NPE | 24 |

Priority Assessment Chemical Substance

| Chemical name | Number |
|--|--------|
| alpha-(Nonylphenyl)-omega-hydroxypoly(oxyethylene) | 86 |
| NPE | 24 |

Industrial Safety and Health Law**Harmful Substances Prohibited from Manufacture**

Not applicable

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

Harmful Substances Required Permission for Manufacture

Not applicable

Substances Prevented From Impairment of Health

Not applicable

Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity

Not applicable

Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity

Not applicable

Substances Subject to be Notified Names

Law Article 57-2 (Ministerial Order Article 34-2 Appended Table 2)

| Chemical name | Concentration (%) | Remarks |
|---|-------------------|----------------------|
| O,O-Diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate | >=50 - <60 | - |
| Petroleum naphtha | 20.2 | - |
| Nonylphenol, ethoxylated | >=20 - <30 | From April 1st, 2026 |

Substances Subject to be Indicated Names

Law Article 57 (Ministerial Order Article 30 Appended Table 2)

| Chemical name | Remarks |
|---|----------------------|
| O,O-Diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate | - |
| Petroleum naphtha | - |
| Nonylphenol, ethoxylated | From April 1st, 2026 |

Skin and Eye Damage Substances (ISHL MO Art. 594-2)

| Chemical name |
|--|
| O,O-Diethyl-O-(2-isopropyl-6-methyl-4-pyrimidinyl) thiophosphate |

Carcinogenic Substances (Article 577-2 of the Occupational Health and Safety Regulations)

Not applicable

Ordinance on Prevention of Hazards Due to Specified Chemical Substances

Not applicable

Ordinance on Prevention of Lead Poisoning

Not applicable

Ordinance on Prevention of Tetraalkyl Lead Poisoning

Not applicable

Ordinance on Prevention of Organic Solvent Poisoning

Organic Solvents Class 3

Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)

Not applicable

Poisonous and Deleterious Substances Control Law

Deleterious substance

SAFETY DATA SHEET



Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

| Chemical name | Cabinet Order Number |
|---|----------------------|
| Preparations containing 2-Isopropyl-4-methylpyrimidy-6-diethylthiophosphate | 10 |

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Class I Designated Chemical Substances

| Chemical name | Administration number | Concentration (%) |
|---|-----------------------|-------------------|
| O,O-Diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate | 248 | 50 |
| Poly(oxyethylene) alkylphenyl ether (limited to those the alkyl group is C=9) | 410 | 20 |

High Pressure Gas Safety Act

Not applicable

Explosive Control Law

Not applicable

Vessel Safety Law

Miscellaneous dangerous substances and articles (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1)

Aviation Law

Miscellaneous dangerous substances and articles (Article 194 of The Enforcement Rules of Aviation Law and its Attached Table 1)

Marine Pollution and Sea Disaster Prevention etc Law

Bulk transportation : Not classified as noxious liquid substance

Pack transportation : Classified as marine pollutant

Narcotics and Psychotropics Control Act

Narcotic or Psychotropic Raw Material (Export / Import Permission)

Not applicable

Specific Narcotic or Psychotropic Raw Material (Export / Import permission)

Not applicable

Waste Disposal and Public Cleansing Law

Industrial waste

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

DSL : not determined

AICS : not determined

IECSC : not determined

16. OTHER INFORMATION

In this SDS, if the concentration of substances subject to notification under the Industrial Safety and Health Law is indicated as a range, it includes cases where it is a trade secret.

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

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 : yyyy/mm/dd

Full text of other abbreviations

| | |
|---------------------------------|--|
| ACGIH | : USA. ACGIH Threshold Limit Values (TLV) |
| ACGIH BEI | : ACGIH - Biological Exposure Indices (BEI) |
| JP ISHL OEL 577-2(2) | : Concentration standard (Value set by the Minister of Health, Labour and Welfare stipulated under the Ministerial Ordinance Article 577-2(2)) |
| JP OEL JSOH | : Japan. The Japan Society for Occupational Health. Recommendation of Occupational Exposure Limits |
| ACGIH / TWA | : 8-hour, time-weighted average |
| JP ISHL OEL 577-2(2) / 8h-OEL-M | : 8-hour Occupational Exposure Limit-Mean |
| JP OEL JSOH / OEL-M | : Occupational Exposure Limit-Mean |

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Sub-

Diazinon Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 2024/09/28 |
| 7.0 | 2025/04/14 | 7699410-00011 | Date of first issue: 2020/12/22 |

stances 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.

JP / EN