

# SAFETY DATA SHEET



## Temephos Liquid Formulation

Version 4.0 Revision Date: 14.04.2025 SDS Number: 10814446-00006 Date of last issue: 27.11.2023  
Date of first issue: 21.07.2022

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### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Temephos Liquid Formulation  
Other means of identification : Coopers Assassin Sheep Dip (47568)

#### Manufacturer or supplier's details

Company name of supplier : MSD  
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@msd.com

#### Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product  
Restrictions on use : Not applicable

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### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Acute toxicity (Oral) : Category 5  
Acute toxicity (Inhalation) : Category 4  
Skin corrosion/irritation : Category 3  
Serious eye damage/eye irritation : Category 1  
Skin sensitization : Category 1  
Germ cell mutagenicity : Category 2  
Specific target organ toxicity : Category 3  
- single exposure  
Specific target organ toxicity : Category 1 (Nervous system)  
- repeated exposure  
Specific target organ toxicity : Category 2 (nasal cavity)  
- repeated exposure  
Aspiration hazard : Category 1

#### GHS label elements

Hazard pictograms :

Signal Word : Danger

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Hazard Statements	: H303 May be harmful if swallowed. H304 May be fatal if swallowed and enters airways. H316 Causes mild skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H341 Suspected of causing genetic defects. H372 Causes damage to organs (Nervous system) through prolonged or repeated exposure. H373 May cause damage to organs (nasal cavity) through prolonged or repeated exposure.
Precautionary Statements	: <b>Prevention:</b> 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/ face protection. <b>Response:</b> P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. P302 + P352 IF ON SKIN: Wash with plenty of water. P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician 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 or doctor/ physician. P312 Call a POISON CENTER or doctor/ physician if you feel unwell. 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. <b>Storage:</b> P405 Store locked up. <b>Disposal:</b> P501 Dispose of contents/ container to an approved waste disposal plant.

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### Other hazards

Repeated exposure may cause skin dryness or cracking.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
Hydrocarbons, C10, aromatics, <1% naphthalene	64742-94-5	>= 30 -< 50
Temephos	3383-96-8	>= 30 -< 50
Calcium dodecylbenzenesulphonate	26264-06-2	>= 5 -< 10
7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	2386-87-0	>= 1 -< 5
2,6-Di-tert-butyl-p-cresol	128-37-0	>= 1 -< 5

## 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.  
If not breathing, give artificial respiration.  
If breathing is difficult, give oxygen.  
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.  
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.
- Most important symptoms and effects, both acute and delayed : Prolonged or repeated contact may dry skin and cause irritation.  
May be harmful if swallowed.  
May be fatal if swallowed and enters airways.  
Causes mild skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
Harmful if inhaled.  
May cause drowsiness or dizziness.  
Suspected of causing genetic defects.  
Causes damage to organs through prolonged or repeated exposure.
- Protection of first-aiders : First Aid responders should pay attention to self-protection,

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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 (CO <sub>2</sub> ) 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 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

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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.

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**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.<br>Do not breathe mist or vapors.<br>Do not swallow.<br>Do not get in eyes.<br>Wash skin thoroughly after handling.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Keep container tightly closed.<br>Do not eat, drink or smoke when using this product.<br>Take care to prevent spills, waste and minimize release to the environment.  |
| Hygiene measures            | : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.<br>When using do not eat, drink or smoke.<br>Contaminated work clothing should not be allowed out of the workplace.<br>Wash contaminated clothing before re-use.<br>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. |
| Conditions for safe storage | : Keep in properly labeled containers.<br>Store locked up.<br>Keep tightly closed.<br>Keep in a cool, well-ventilated place.<br>Store in accordance with the particular national regulations.  |
| Materials to avoid          | : Do not store with the following product types:<br>Strong oxidizing agents<br>Self-reactive substances and mixtures<br>Organic peroxides<br>Explosives<br>Gases   |

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**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Ingredients with workplace control parameters**

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Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Hydrocarbons, C10, aromatics, <1% naphthalene	64742-94-5	VLE-PPT (Mist)	5 mg/m <sup>3</sup>	NOM-010-STPS-2014
		TWA (Inhalable particulate matter)	5 mg/m <sup>3</sup>	ACGIH
Temephos	3383-96-8	VLE-PPT (Inhalable fraction and vapour)	1 mg/m <sup>3</sup>	NOM-010-STPS-2014
		TWA (Inhalable particulate matter)	1 mg/m <sup>3</sup>	ACGIH
2,6-Di-tert-butyl-p-cresol	128-37-0	VLE-PPT (Inhalable fraction and vapour)	2 mg/m <sup>3</sup>	NOM-010-STPS-2014
		TWA (Inhalable fraction and vapor)	2 mg/m <sup>3</sup>	ACGIH

## 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        |  |
| Material               | : Chemical-resistant gloves  |
| Remarks                | : Consider double gloving.   |
| Eye protection         | : Wear safety glasses with side shields or goggles.<br>If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.<br>Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols. |

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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.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	clear, Straw-colored
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
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available

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Viscosity : No data available  
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 characteristics  
Particle size : Not applicable

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## 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.

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## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

Inhalation  
Skin contact  
Ingestion  
Eye contact

### Acute toxicity

May be harmful if swallowed.  
Harmful if inhaled.

### Product:

Acute oral toxicity : Acute toxicity estimate: 3,020 mg/kg  
Method: Calculation method  
Acute inhalation toxicity : Acute toxicity estimate: 4.69 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method  
Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg  
Method: Calculation method

### Components:

#### Hydrocarbons, C10, aromatics, <1% naphthalene:

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

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Method: OECD Test Guideline 420  
Remarks: Based on data from similar materials

- Acute inhalation toxicity : LC50 (Rat): > 4.778 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Remarks: Based on data from similar materials
- Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Based on data from similar materials

**Temephos:**

- Acute oral toxicity : LD50 (Mouse, female): 2,062 mg/kg
- Acute inhalation toxicity : LC50 (Rat): > 4.79 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist
- Acute dermal toxicity : LD50 (Rat, male): 2,000 mg/kg

**Calcium dodecylbenzenesulphonate:**

- Acute oral toxicity : LD50 (Rat): > 500 - 2,000 mg/kg  
Method: OECD Test Guideline 401  
Remarks: Based on data from similar materials
- Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: Based on data from similar materials

**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

**2,6-Di-tert-butyl-p-cresol:**

- Acute oral toxicity : LD50 (Rat): > 6,000 mg/kg  
Method: OECD Test Guideline 401

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||| 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 mild skin irritation.

**Components:****Hydrocarbons, C10, aromatics, <1% naphthalene:**

||| Assessment : Repeated exposure may cause skin dryness or cracking.

**Temephos:**

||| Species : Rabbit  
||| Result : No skin irritation

**Calcium dodecylbenzenesulphonate:**

||| Species : Rabbit  
||| Method : OECD Test Guideline 404  
||| Result : 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

**2,6-Di-tert-butyl-p-cresol:**

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

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Components:****Hydrocarbons, C10, aromatics, <1% naphthalene:**

||| Species : Rabbit  
||| Result : No eye irritation  
||| Remarks : Based on data from similar materials

**Temephos:**

||| Species : Rabbit  
||| Result : No eye irritation

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### Calcium dodecylbenzenesulphonate:

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

### 2,6-Di-tert-butyl-p-cresol:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OECD Test Guideline 405
Remarks	:	Based on data from similar materials

### Respiratory or skin sensitization

#### Skin sensitization

May cause an allergic skin reaction.

#### Respiratory sensitization

Not classified based on available information.

#### Components:

##### Hydrocarbons, C10, aromatics, <1% naphthalene:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	negative
Remarks	:	Based on data from similar materials

##### Temephos:

Test Type	:	Buehler Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
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

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

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

### 2,6-Di-tert-butyl-p-cresol:

Test Type	:	Human repeat insult patch test (HRIPT)
Routes of exposure	:	Skin contact
Species	:	Humans
Result	:	negative

### Germ cell mutagenicity

Suspected of causing genetic defects.

### Components:

#### Hydrocarbons, C10, aromatics, <1% naphthalene:

Genotoxicity in vitro	:	Test Type: In vitro sister chromatid exchange assay in mammalian cells Result: negative Remarks: Based on data from similar materials
Genotoxicity in vivo	:	Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Species: Rat Application Route: inhalation (vapor) Result: negative Remarks: Based on data from similar materials

#### Temephos:

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
		Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro) Result: negative

#### 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

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	<p>Remarks: Based on data from similar materials</p>
	<p>Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Remarks: Based on data from similar materials</p>
Genotoxicity in vivo	<p>: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Ingestion Result: negative Remarks: Based on data from similar materials</p>
<b>7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:</b>	
Genotoxicity in vitro	<p>: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: positive</p>
	<p>Test Type: In vitro mammalian cell gene mutation test Result: positive</p>
	<p>Test Type: In vitro sister chromatid exchange assay in mammalian cells Result: positive</p>
	<p>Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro) Result: positive</p>
Genotoxicity in vivo	<p>: 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</p>
	<p>Test Type: Micronucleus test Species: Mouse Application Route: Intraperitoneal injection Result: negative</p>
	<p>Test Type: Transgenic rodent somatic cell gene mutation assay Species: Mouse Application Route: Ingestion Method: OECD Test Guideline 488 Result: positive</p>
Germ cell mutagenicity - Assessment	<p>: Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.</p>

**2,6-Di-tert-butyl-p-cresol:**

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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: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Species: Rat Application Route: Ingestion Result: negative

### Carcinogenicity

Not classified based on available information.

### Components:

#### **Temephos:**

Species	: Rat
Application Route	: Ingestion
Exposure time	: 24 Months
Result	: negative

#### **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

#### **2,6-Di-tert-butyl-p-cresol:**

Species	: Rat
Application Route	: Ingestion
Exposure time	: 22 Months
Result	: negative

### Reproductive toxicity

Not classified based on available information.

### Components:

#### **Hydrocarbons, C10, aromatics, <1% naphthalene:**

Effects on fertility	: Test Type: Three-generation reproduction toxicity study Species: Rat Application Route: inhalation (vapor) Result: negative Remarks: Based on data from similar materials
Effects on fetal development	: Test Type: Embryo-fetal development Species: Rat Application Route: Ingestion

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Result: negative  
Remarks: Based on data from similar materials

### Temephos:

- |                              |   |
|------------------------------|---|
| Effects on fertility         | : Test Type: One-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative   |
| Effects on fetal development | : Test Type: Three-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative |

### Calcium dodecylbenzenesulphonate:

- |                              |  |
|------------------------------|--|
| Effects on fertility         | : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 422<br>Result: negative<br>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<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 422<br>Result: negative<br>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<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 414<br>Result: negative |
|------------------------------|--|

### 2,6-Di-tert-butyl-p-cresol:

- |                              |   |
|------------------------------|---|
| Effects on fertility         | : Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative |
| Effects on fetal development | : Test Type: Embryo-fetal development<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative                   |

### STOT-single exposure

May cause drowsiness or dizziness.

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10814446-00006Date of last issue: 27.11.2023  
Date of first issue: 21.07.2022**Components:****Hydrocarbons, C10, aromatics, <1% naphthalene:**

Assessment	:	May cause drowsiness or dizziness.
Remarks	:	Based on data from similar materials

**STOT-repeated exposure**

Causes damage to organs (Nervous system) through prolonged or repeated exposure.  
May cause damage to organs (nasal cavity) through prolonged or repeated exposure.

**Components:****Temephos:**

Routes of exposure	:	Ingestion
Target Organs	:	Nervous system
Assessment	:	Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.

**Calcium dodecylbenzenesulphonate:**

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

**2,6-Di-tert-butyl-p-cresol:**

Assessment	:	No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.
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**Repeated dose toxicity****Components:****Hydrocarbons, C10, aromatics, <1% naphthalene:**

Species	:	Rat
NOAEL	:	300 mg/kg
Application Route	:	Ingestion
Exposure time	:	13 Weeks
Remarks	:	Based on data from similar materials

**Temephos:**

Species	:	Dog
NOAEL	:	0.45 mg/kg
LOAEL	:	12.5 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days

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**Calcium dodecylbenzenesulphonate:**

Species	:	Rat
NOAEL	:	> 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

**2,6-Di-tert-butyl-p-cresol:**

Species	:	Rat
NOAEL	:	25 mg/kg
Application Route	:	Ingestion
Exposure time	:	22 Months

**Aspiration toxicity**

May be fatal if swallowed and enters airways.

**Components:****Hydrocarbons, C10, aromatics, <1% naphthalene:**

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.

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****Hydrocarbons, C10, aromatics, <1% naphthalene:**

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other	:	EL50 (Daphnia magna (Water flea)): 3 - 10 mg/l

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aquatic invertebrates	Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	: EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 3 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials

### Temephos:

Toxicity to fish	: LC50 : 0.04 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0.000007 mg/l Exposure time: 48 h

### 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

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

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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
<b>2,6-Di-tert-butyl-p-cresol:</b>	
Toxicity to fish	: LC50 (Danio rerio (zebra fish)): > 0.57 mg/l Exposure time: 96 h Method: Directive 67/548/EEC, Annex V, C.1.
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0.48 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.24 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
	NOEC (Pseudokirchneriella subcapitata (green algae)): 0.24 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	: NOEC (Oryzias latipes (Japanese medaka)): 0.053 mg/l Exposure time: 30 d Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): 0.316 mg/l Exposure time: 21 d
Toxicity to microorganisms	: EC50: > 10,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

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**Persistence and degradability****Components:****Hydrocarbons, C10, aromatics, <1% naphthalene:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 49.56 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F

**Calcium dodecylbenzenesulphonate:**

Biodegradability : Result: 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

**2,6-Di-tert-butyl-p-cresol:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 4.5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301C

**Bioaccumulative potential****Components:****Temephos:**

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): 2,300

Partition coefficient: n-octanol/water : log Pow: 4.91  
Method: OECD Test Guideline 107

**Calcium dodecylbenzenesulphonate:**

Bioaccumulation : Bioconcentration factor (BCF): < 500  
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 4.77  
Remarks: Calculation

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

Partition coefficient: n-octanol/water : log Pow: 1.34  
Method: OECD Test Guideline 107

**2,6-Di-tert-butyl-p-cresol:**

Bioaccumulation : Species: Cyprinus carpio (Carp)

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||| Bioconcentration factor (BCF): 330 - 1,800  
||| Partition coefficient: n-octanol/water : log Pow: 5.1

### **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.  
Class : 9  
Packing group : III  
Labels : 9  
Environmentally hazardous : no

#### **IATA-DGR**

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

#### **IMDG-Code**

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Temephos, 2,6-Di-tert-butyl-p-cresol)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

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

Not applicable for product as supplied.

### Domestic regulation

#### NOM-002-SCT

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	:	9
Packing group	:	III
Labels	:	9

### 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

### Safety, health and environmental regulations/legislation specific for the substance or mixture

NOM-165-SEMARNAT-2013, Norm establishing a list of substances subject to report for the Registry of Emissions and Pollutant Transfer

Components	CAS-No.	MPU (kg/year)	Transfer/Release (kg/year)
Temephos	3383-96-8	2500 kg/year	100 kg/year

MPU: Applicable reporting threshold when the substance, pure or in mixture in a composition of more than 1% by weight, is used for industrial activities at facilities that are subject to report or are produced by them

Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills.

### The ingredients of this product are reported in the following inventories:

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

## SECTION 16. OTHER INFORMATION

Revision Date : 14.04.2025  
Date format : dd.mm.yyyy

### Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NOM-010-STPS-2014	:	Mexico. Norm NOM-010-STPS-2014 on Chemicals Polluting the Work Environment - Identification, Assessment and Control - Appendix 1 Occupational Exposure Limits

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ACGIH / TWA : 8-hour, time-weighted average  
NOM-010-STPS-2014 / VLE- : Time weighted average limit value  
PPT

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 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

Sources of key data used to : Internal technical data, data from raw material SDSs, OECD compile the Material Safety eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>  
Data Sheet

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

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