

**Temephos Liquid Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.0	14.04.2025	10814443-00008	Date of first issue: 21.07.2022

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**Section 1: Identification**

**Product identifier** : Temephos Liquid Formulation

**Other means of identification** : Coopers Assassin Sheep Dip (47568)

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

Recommended use : Veterinary product  
Restrictions on use : Not applicable

**Manufacturer or supplier's details**

Company : MSD  
Address : 50 Tuas West Drive  
Singapore - Singapore 638408  
Telephone : +1-908-740-4000  
Emergency telephone number : 65 6697 2111 (24/7/365)  
E-mail address : EHSDATASTEWARD@msd.com

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**Section 2: Hazard identification****Classification of the substance or mixture**

Acute toxicity (Inhalation) : Category 4  
Serious eye damage/eye irritation : Category 1  
Skin sensitisation : Category 1  
Germ cell mutagenicity : Category 2  
Specific target organ toxicity - single exposure : Category 3  
Specific target organ toxicity - repeated exposure : Category 1 (Nervous system)  
Aspiration hazard : Category 1  
Short-term (acute) aquatic hazard : Category 1  
Long-term (chronic) aquatic : Category 1

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hazard

## GHS Label elements, including precautionary statements

Hazard pictograms



Signal word

: Danger

Hazard statements

: H304 May be fatal if swallowed and enters airways.  
 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.  
 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/ hearing 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 + P313 IF exposed or concerned: Get medical advice/ attention.  
 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.

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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

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
Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether	37251-69-7	>= 2.5 -< 10
Calcium dodecylbenzenesulphonate	26264-06-2	>= 3 -< 10
7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	2386-87-0	>= 1 -< 10
2,6-Di-tert-butyl-p-cresol	128-37-0	>= 1 -< 2.5

## Section 4: First-aid measures

### Description of necessary 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.

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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**

Risks : Prolonged or repeated contact may dry skin and cause irritation.  
May be fatal if swallowed and enters airways.  
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, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

**Indication of any immediate medical attention and special treatment needed**

Treatment : Treat symptomatically and supportively.

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**Section 5: Fire-fighting measures****Extinguishing media**

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : None known.

**Special hazards arising from the substance or mixture**

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Sulphur oxides  
Oxides of phosphorus  
Metal oxides  
Sulphur compounds

**Special protective actions for fire-fighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

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

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so.  
Evacuate area.

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**Section 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

**Environmental precautions**

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**

Methods for 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.

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**Section 7: Handling and storage****Precautions for safe handling**

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.

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Hygiene measures : Take care to prevent spills, waste and minimize release to the environment.  
 : 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.

### Conditions for safe storage, including any incompatibilities

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

## Section 8: Exposure controls/personal protection

### Control parameters

### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrocarbons, C10, aromatics, <1% naphthalene	64742-94-5	PEL (long term) (Mist)	5 mg/m <sup>3</sup>	SG OEL
		PEL (short term) (Mist)	10 mg/m <sup>3</sup>	SG OEL
		TWA (Inhalable particulate matter)	5 mg/m <sup>3</sup>	ACGIH
Temephos	3383-96-8	PEL (long term)	10 mg/m <sup>3</sup>	SG OEL
		TWA (Inhalable particulate matter)	1 mg/m <sup>3</sup>	ACGIH
2,6-Di-tert-butyl-p-cresol	128-37-0	PEL (long term)	10 mg/m <sup>3</sup>	SG OEL
		TWA (Inhalable fraction and vapor)	2 mg/m <sup>3</sup>	ACGIH

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**Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Temephos	3383-96-8	red blood cell acetylcholinesterase (rbc ACHE)	Blood		70 % of baseline	SG BTLV

**Appropriate engineering control 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.

**Individual protection measures, such as personal protective equipment (PPE)**

Eye/face 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 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.

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.

**Section 9: Physical and chemical properties**

Appearance : liquid

Colour : clear, Straw-coloured

Odour : characteristic

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Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	No data available
Solubility(ies) Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, kinematic	:	No data available
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.

**Section 11: Toxicological information**

Information on likely routes of exposure	:	Inhalation Skin contact Ingestion Eye contact
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**Acute toxicity**

Harmful if inhaled.

**Product:**

Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method
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Acute inhalation toxicity	:	Acute toxicity estimate: 4.69 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
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Acute dermal toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method
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**Components:****Hydrocarbons, C10, aromatics, <1% naphthalene:**

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 420 Remarks: Based on data from similar materials
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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
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Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity
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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

## Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:

Acute oral toxicity	: LD50 (Rat): > 4,000 mg/kg
Acute dermal toxicity	: LD50 (Rat): > 5,000 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
Acute dermal toxicity	: LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity

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II

**Skin corrosion/irritation**

Not classified based on available information.

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

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

**Temephos:**II Species : Rabbit  
II Result : No skin irritation**Calcium dodecylbenzenesulphonate:**II Species : Rabbit  
II Method : OECD Test Guideline 404  
II Result : Skin irritation  
II Remarks : Based on data from similar materials**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**II Species : Rabbit  
II Method : OECD Test Guideline 404  
II Result : No skin irritation**2,6-Di-tert-butyl-p-cresol:**II Species : Rabbit  
II Method : OECD Test Guideline 404  
II Result : No skin irritation  
II Remarks : Based on data from similar materials**Serious eye damage/eye irritation**

Causes serious eye damage.

**Components:****Hydrocarbons, C10, aromatics, <1% naphthalene:**II Species : Rabbit  
II Result : No eye irritation  
II Remarks : Based on data from similar materials**Temephos:**II Species : Rabbit  
II Result : No eye irritation**Calcium dodecylbenzenesulphonate:**II Species : Rabbit  
II Result : Irreversible effects on the eye

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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 sensitisation

#### Skin sensitisation

May cause an allergic skin reaction.

#### Respiratory sensitisation

Not classified based on available information.

### Components:

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

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

#### Temephos:

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

#### Calcium dodecylbenzenesulphonate:

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

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

Test Type	: Maximisation Test
Exposure routes	: Skin contact

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Species	: Guinea pig
Result	: positive
Assessment	: Probability or evidence of skin sensitisation in humans

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

Test Type	: Human repeat insult patch test (HRIPT)
Exposure routes	: 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 (vapour) 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
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#### 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
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	Result: negative Remarks: Based on data from similar materials
	Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Remarks: Based on data from similar materials
Genotoxicity in vivo	: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Ingestion Result: negative Remarks: Based on data from similar materials

**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.

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

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 (vapour)

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	Result: negative
	Remarks: Based on data from similar materials
Effects on foetal development	: Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Result: negative Remarks: Based on data from similar materials

### Temephos:

Effects on fertility	: Test Type: One-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
Effects on foetal development	: Test Type: Three-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative

### Calcium dodecylbenzenesulphonate:

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

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

Effects on foetal development	: Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative
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### 2,6-Di-tert-butyl-p-cresol:

Effects on fertility	: Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
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Effects on foetal development	:	Test Type: Embryo-foetal development
		Species: Rat
		Application Route: Ingestion
		Result: negative

**STOT - single exposure**

May cause drowsiness or dizziness.

**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.

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

Exposure routes	:	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:**

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.

**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

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||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

**Calcium dodecylbenzenesulphonate:**

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

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

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

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

**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

### Toxicity

#### 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 aquatic invertebrates	: EL50 (Daphnia magna (Water flea)): 3 - 10 mg/l 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
M-Factor (Acute aquatic toxicity)	: 100,000
M-Factor (Chronic aquatic toxicity)	: 100,000

##### **Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:**

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 (Daphnia magna (Water flea)): > 0.1 - 1 mg/l Exposure time: 48 h Method: ISO 6341 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	: ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 1 mg/l Exposure time: 72 h

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	Method: OECD Test Guideline 201
	Remarks: Based on data from similar materials
	NOEC (Raphidocelis subcapitata (freshwater green alga)): > 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 (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 (Mysidopsis bahia (opossum shrimp)): > 0.001 - 0.01 mg/l
	Exposure time: 28 d
	Remarks: Based on data from similar materials
M-Factor (Chronic aquatic toxicity)	: 10
Toxicity to microorganisms	: EC10 (activated sludge): > 1 mg/l
	Exposure time: 3 h
	Method: OECD Test Guideline 209
	Remarks: Based on data from similar materials

**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	: NOEC (Daphnia magna (Water flea)): > 1 mg/l

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aquatic invertebrates (Chronic toxicity)	Exposure time: 21 d Remarks: Based on data from similar materials
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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
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**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 24 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
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Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 40 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
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Toxicity to algae/aquatic plants	: ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 110 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
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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
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**2,6-Di-tert-butyl-p-cresol:**

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.
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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
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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

M-Factor (Acute aquatic tox-	: 1
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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
M-Factor (Chronic aquatic toxicity)	: 1
Toxicity to microorganisms	: EC50: > 10,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

**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
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**Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:**

Biodegradability	: Result: Not readily biodegradable. Remarks: Based on data from similar materials
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**Calcium dodecylbenzenesulphonate:**

Biodegradability	: Result: Readily biodegradable. Remarks: Based on data from similar materials
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**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

Biodegradability	: Result: Not readily biodegradable. Biodegradation: 71 % Exposure time: 28 d Method: OECD Test Guideline 301B
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**2,6-Di-tert-butyl-p-cresol:**

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

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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

**Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:**

Partition coefficient: n-octanol/water : log Pow: < 4  
Remarks: Calculation

**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)  
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

**Section 13: Disposal considerations****Disposal methods**

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

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

**Section 14: Transport information****International Regulations****UNRTDG**

UN number : UN 3082

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UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Transport hazard class(es) : 9  
Packing group : III  
Labels : 9  
Environmental hazards : no

**IATA-DGR**

UN/ID No. : UN 3082  
UN proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
Transport hazard class(es) : 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)  
Transport hazard class(es) : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

**Transport in bulk according to IMO instruments**

Not applicable for product as supplied.

**Special precautions for user**

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

**Section 15: Regulatory information****Safety, health and environmental regulations specific for the product in question**

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subject to the requirements in the Act/Regulations.

Environmental Protection and Management Act and : Not applicable

Environmental Protection and Management (Hazardous Substances) Regulations

Fire Safety (Petroleum and Flammable Materials) Regulations : Not applicable

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

AICS : not determined

DSL : not determined



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IECSC : not determined

**Section 16: Other information**

Revision Date : 14.04.2025

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

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

Date format : dd.mm.yyyy

**Full text of other abbreviations**ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
SG BTLV : Singapore. Biological Threshold Limit Values  
SG OEL : Singapore. Workplace Safety and Health (General Provisions) Regulations - First Schedule Permissible Exposure Limits of Toxic Substances.ACGIH / TWA : 8-hour, time-weighted average  
SG OEL / PEL (long term) : Permissible Exposure Level (PEL) Long Term  
SG OEL / PEL (short term) : Permissible Exposure Level (PEL) Short Term

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

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tion, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

SG / EN