



LUXEMBOURG

# SAFETY DATA SHEET

Revision date:21/04/2020

## 1. Identification of the substance or mixture and of the supplier

**Product:** Potassium phosphite 38.9% + Chlorothalonil 16.7%  
**Commercial product names:** Catamaran®  
**EPA registration number:** 42519-31  
**Recommended use:** Fungicide  
**Supplier:** Luxembourg-Pamol, Inc.  
 3647 Willowbend Boulevard, Suite 810  
 Houston, TX 77054, USA  
 Tel: 877-343-4239

**Manufacture:** Luxembourg Industries Ltd.  
 27 Hamered St., Tel Aviv, 6812509  
 ISRAEL

**Emergency phone number:** +972 3 796 4300  
For USA Only: 1-800-424-9300

Catamaran® is a registered trademark of Luxembourg

## 2. Hazards identification

**Classification of the product** (two classifications are presented: a. according to Global Harmonized System of Classification and Labelling of Chemicals (GHS, *fifth revised edition, 2013*) and b. according to OSHA HCS 2012, 29 C.F.R. § 1910.1200

### a. ACCORDING TO GHS

<b>Hazard classification:</b>	Carcinogenicity	Category 2
	Eye damage/irritation	Category 2B
	Skin Sensitization	Category 1
	Acute aquatic toxicity:	Category 1
	Chronic aquatic toxicity:	Category 1

**Label elements:** Pictogram:  Signal word: Warning

<b>Hazard statement(s):</b>	H351	Suspected of causing cancer.
	H317	May cause an allergic skin reaction.
	H320	Causes eye irritation.
	H410	Very toxic to aquatic life with long lasting effects.

### Precautionary statement(s):

Prevention:	P201	Obtain special instructions before use.
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Catamaran® SDS  
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**LUXEMBOURG-PAMOL, INC.**



	P202	Do not handle until all safety precautions have been read and understood.
	P261	Avoid breathing mist/spray.
	P264	Wash hands and exposed skin thoroughly after handling.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P280	Wear protective gloves and clothing, eye and face protection.
	P273	Avoid release to the environment.
Response:	P308+P313	If exposed or concerned: Get medical advice/attention.
	P302+P352	IF ON SKIN: Wash with plenty of soap and water.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337+P313	If eye irritation persists: Get medical advice/attention.
	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 in accordance with national/international regulations.

**b. ACCORDING TO OSHA HCS 2012, 29 C.F.R. § 1910.1200**

<b>Hazard(s) identification:</b>	Carcinogenicity	Category 2
	Eye damage/irritation	Category 2B
	Skin Sensitization	Category 1

**Hazard statement:** Suspected of causing cancer.  
Causes eye irritation.  
May cause an allergic skin reaction.

**Signal word:** Warning

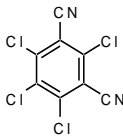
<b>Pictograms:</b>	Health hazard	
	Exclamation mark	

**Precautionary statements:**

**Prevention:** Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Wash hands and exposed skin thoroughly after handling.  
Avoid breathing mist/spray.  
Contaminated work clothing must not be allowed out of the workplace.

Response:	If exposed or concerned: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with plenty of water/soap. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage:	Store locked up.
Disposal:	Dispose of contents/container in accordance with local regulations.
<b>Hazards Not Otherwise Classified (HNOC):</b>	Not known.

### 3. Information on ingredients contributing to hazard

<b>Chemical name:</b>	Potassium salts of phosphorous (phosphonic) acid	Tetrachloroisophthalonitrile (IUPAC)
<b>Common name:</b>	Potassium phosphite	Chlorothalonil
<b>Chemical formula:</b>	$\text{KH}_2\text{PO}_3 + \text{K}_2\text{HPO}_3$	$\text{C}_8\text{Cl}_4\text{N}_2$
<b>Structural formula:</b>	$\begin{array}{c} \text{O} \\ \parallel \\ \text{OH}-\text{P}-\text{OK} \\   \\ \text{H} \end{array} + \begin{array}{c} \text{O} \\ \parallel \\ \text{KO}-\text{P}-\text{OK} \\   \\ \text{H} \end{array}$	
<b>CAS No.:</b>	13977-65-6 + 13492-26-7	1897-45-6
<b>Content:</b>	25%, 360-393 g/L (phosphorous acid equivalent)	16.7%, 238-262 g/L

### 4. First-aid measures

*Call a physician immediately in all cases of suspected poisoning.*

- Ingestion:** Call a poison control center or doctor immediately for treatment advice.  
Have person sip a glass of water if able to swallow.  
Do not induce vomiting unless told to do so by a poison control center or doctor.  
Do not give anything to an unconscious person.
- Inhalation:** Move person to fresh air.  
If person is not breathing, call an ambulance then give artificial respiration, preferably mouth-to-mouth if possible.  
Call a poison control center or doctor for further treatment advice.
- Eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes.  
Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.  
Call a poison control center or doctor for further treatment advice.
- Skin:** Take off contaminated clothing.  
Rinse skin immediately with plenty of water for 15-20 minutes.

Call a poison control center or doctor for further treatment advice.

### **Most important symptoms and effects, both acute and delayed.**

Chlorothalonil was reported to cause skin irritation and irritation of mucous membranes of the eye and respiratory tract. Dermal sensitization is reportedly rare and no cases of human systemic poisoning have been reported.

There is evidence in humans of contact dermatitis with repeated exposure of Chlorothalonil.

Occupational exposure to chlorothalonil was reported to induce asthma symptoms, which resolved cessation of exposure. No cases of systemic poisoning in humans have been reported in the published medical literature.

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

There is no specific antidote. Treat symptomatically.

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## **5. Fire-fighting measures**

<b>Suitable extinguishing media:</b>	Dry chemical, CO <sub>2</sub> , alcohol-resistant foam or water spray. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal; do not scatter the material.
<b>Specific hazards arising from the substance or mixture:</b>	During fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.
<b>Special protective equipment and precautions for firefighters:</b>	Clear fire area of all non-emergency personnel. Stay upwind of fire. Wear chemical protective clothing and self-contained breathing apparatus.

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## **6. Accidental release measures**

<b>Personal precautions, protective equipment:</b>	Use personal protective equipment. Avoid breathing mist/vapours. Ensure adequate ventilation.
<b>Environmental precautions:</b>	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Do not let product enter waterways or drains.
<b>Methods and materials for containment and cleaning up:</b>	Prevent further leakage or spillage if safe to do so. Contain product with an inert diking material. Vacuum up as much as possible. Place reclaimed product in a closed and properly labeled waste drum. Store drum in separate area until proper disposal. Wash thoroughly after handling.

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## 7. Handling and storage

<b>Precautions for safe handling:</b>	Wear suitable protective clothing. Avoid contact with skin and eyes. Do not breathe mist/vapours. Ensure adequate ventilation. Wash hands and exposed skin thoroughly after handling.
<b>Conditions for safe storage, including any incompatibilities:</b>	Store locked up. Store in a cool place. Keep container tightly closed in a dry and well ventilated place.

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## 8. Exposure controls / personal protection

<b>Occupational exposure limits:</b>	Chlorothalonil: TLV (ACGIH): Not established TWA (8 hr): 0.1 mg/m
<b>Appropriate engineering controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations low. Ensure that eyewash stations and safety showers are in proximity to the work-station location.
<b>Personal protective equipment:</b>	Long-sleeved shirt and long pants, shoes plus socks, chemical resistant gloves, dust or mist respirator, and protective eyewear.

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## 9. Physical and chemical properties

<b>Appearance:</b>	Liquid
<b>Colour:</b>	Off-white to brownish
<b>Odour:</b>	Faint paint-like characteristic odour
<b>Odor threshold:</b>	Not available
<b>pH (25°C):</b>	6.0-7.0
<b>Melting point/Freezing point:</b>	Not available
<b>Boiling point:</b>	Not available
<b>Evaporation rate:</b>	Not available
<b>Flash point:</b>	>100°C
<b>Flammability (solid, gas):</b>	Not flammable
<b>Upper/lower flammability or explosive limits:</b>	Not available
<b>Vapour pressure (25°C):</b>	Not available
<b>Vapour density:</b>	Not available
<b>Relative density:</b>	Not available
<b>Bulk density (20°C):</b>	1.5-1.6 g/mL
<b>Solubility in water (25°C):</b>	Suspension

<b>Partition coefficient</b>	
<b>n-octanol/water (25°C):</b>	Chlorothalonil K <sub>ow</sub> logP = 2.92 Potassium phosphite Not applicable
<b>Ignition temperature:</b>	Not applicable
<b>Decomposition temperature:</b>	>100.6°C
<b>Viscosity (25°C):</b>	126.0 cSt (@20°C), 105.6 cSt (@40°C)

## 10. Stability and reactivity

<b>Reactivity:</b>	Not available.
<b>Chemical stability:</b>	Stable at ambient temperature and under recommended storage and handling conditions <sup>7</sup> .
<b>Possibility of hazardous reactions:</b>	Not available.
<b>Conditions to avoid:</b>	Not available.
<b>Incompatible materials:</b>	The product is incompatible with strong acids, strong bases and oxidizing materials like potassium permanganate.
<b>Hazardous decomposition products:</b>	Not available.

## 11. Toxicological information

### Acute toxicity

Oral LD <sub>50</sub> (rat):	>5000 mg/kg
Dermal LD <sub>50</sub> (rabbit):	>5000 mg/kg
Inhalation LC <sub>50</sub> (rat):	>5.09 mg/L

### Skin corrosion/irritation

Skin irritation (rabbit):	Slightly irritant
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### Serious eye damage/irritation

Eye irritation (rabbit):	Mildly irritating to eyes (Category 2B)
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### Respiratory or skin sensitization

Dermal sensitization (guinea pig):	A contact sensitizer (Category 1)
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**Germ cell mutagenicity:** Not available

**Carcinogenicity:** Chlorothalonil: There is sufficient evidence in experimental animals for the carcinogenicity of chlorothalonil.  
NTP: Not listed  
OSHA: Not listed  
IARC: Group 2B, possibly carcinogenic to humans.  
Potassium phosphite: No carcinogenic potential

**Reproductive toxicity:** Not available

**STOT\* single exposure:** Not available

**STOT repeated exposure:** Not available

**Aspiration hazard:** Not available

\*Specific Target Organ Toxicity

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## 12. Ecological information

### Ecotoxicity:

#### Birds:

Quail, *Coturnix coturnix japonica*, LD<sub>50</sub>: >2000 mg/kg

#### Fish:

*Poecilia reticulata* LC<sub>50</sub> (96 h): 0.307 mg/L

#### Bees:

*Apis mellifera mellifera* LD<sub>50</sub> (48 h, oral) >100 µg/bee

### Persistence and degradability:

Chlorothalonil: Not readily biodegradable  
Potassium phosphite: Not readily biodegradable

### Bioaccumulative potential:

Chlorothalonil: Low bioaccumulative potential  
Bioconcentration factor (BCF): < 100 l/Kg  
Potassium phosphite: No bioaccumulative potential

### Mobility in soil:

Chlorothalonil: Low mobility to immobile  
Potassium phosphite: Medium to low mobility in soil

### Other adverse effects:

Not available

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## 13. Disposal considerations

**According to FIFRA:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. Follow label instructions or contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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## 14. Transport information

**UN No.:** 3082  
**Proper shipping name:** Environmentally hazardous substance, liquid, n.o.s (Chlorothalonil)  
**Transport hazard class:** 9  
**Packaging group:** III  
**Marine pollutant:** Yes

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## 15. Regulatory information

This data sheet complies with the requirements of the Global Harmonized System of Classification and Labelling of chemicals (GHS, *fifth revised edition, 2013*) and the Occupational Safety and Health Standards HCS 2012, 29 C.F.R. § 1910.1200 (OSHA).

**According to FIFRA:** This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation.

**TSCA Inventory:** This product is exempt from TSCA inventory listing requirements as it is solely for FIFRA regulated use.

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## 16. Other information

*The information contained herein is applicable solely to the indicated product, and does not relate to any other use of this product as described. Its use is intended by persons having technical skill and at their own discretion and risk. The information has been developed from sources reliable. This information is furnished without warranty, expressed or implied, including the warranties of merchantability and fitness for a particular purpose is made with respect to the information contained herein.*

Revision date:	21/04/2020
Issue date:	09/07/2015 (EA, LS)
Version:	1
Replace version:	NA