

1 Identifikasi Senyawa (Tunggal atau Campuran)

- **Product identifier**
- **Trade name:** Phosphatidyl-L-Serine in Chloroform
- **Article number:** 100969
- **Relevant identified uses of the substance or mixture and uses advised against**
 No further relevant information available.
- **Application of the substance / the mixture** Research use only.
- **Details of the supplier of the safety data sheet**
- **Further information obtainable from:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2 Identifikasi Bahaya

- **Classification of the substance or mixture**



skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



health hazard

Carc. 2 H351 Suspected of causing cancer.
 Repr. 2 H361 Suspected of damaging fertility or the unborn child.
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



Acute Tox. 4 H302 Harmful if swallowed.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2A H319 Causes serious eye irritation.
 STOT SE 3 H336 May cause drowsiness or dizziness.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS06



GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
 Chloroform
- **Hazard statements**
 Harmful if swallowed.

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- Toxic if inhaled.*
Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
 - If medical advice is needed, have product container or label at hand.*
 - Keep out of reach of children.*
 - Read label before use.*
 - Do not breathe dust/fume/gas/mist/vapours/spray.*
 - Wear protective gloves/protective clothing/eye protection/face protection.*
 - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*
 - Continue rinsing.*
 - Store locked up.*
 - Dispose of contents/container in accordance with local/regional/national/international regulations.*
 - **Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

3 Komposisi /Informasi tentang Bahan Penyusun Senyawa Tunggal

- **Chemical characterisation: Mixtures**
- **Description:** Mixture: consisting of the following components.

- **Dangerous components:**

67-66-3	Chloroform	90-100%
	 Acute Tox. 3, H331; Carc. 2, H351; Repr. 2, H361; STOT RE 2, H373; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H336; Aquatic Chronic 3, H412	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 Tindakan Pertolongan Pertama pada Kecelakaan

- **Description of first aid measures**
- **General information:**
 - Immediately remove any clothing soiled by the product.*
 - Remove breathing equipment only after contaminated clothing have been completely removed.*
 - In case of irregular breathing or respiratory arrest provide artificial respiration.*
- **After inhalation:**
 - Supply fresh air or oxygen; call for doctor.*
 - In case of unconsciousness place patient stably in side position for transportation.*
- **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*
- **After eye contact:**
 - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.*
- **After swallowing:** *Call for a doctor immediately.*
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Tindakan pemadaman kebakaran

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Tindakan Penanggulangan jika terjadi Tumpahan dan Kebocoran

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Penanganan dan Penyimpanan

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** -20°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

8 Kontrol Paparan/ Perlindungan Diri

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

67-66-3 Chloroform

NAB	Long-term value: 49 mg/m ³ , 10 ppm
A3	

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· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Sifat fisika dan kimia

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Solution

Colour: Colourless

· **Odour:** Indeterminate

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Undetermined.

· **Flash point:** Not applicable.

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· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	982 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure at 20 °C:	211 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	- Not determined.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
Solids content:	1.4 %
· Other information	No further relevant information available.

10 Stabilitas dan Reaktifitas

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Informasi Toksikologi

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values relevant for classification:		
ATE (Acute Toxicity Estimates)		
Oral	LD50	956 mg/kg (rat)
Dermal	LD50	78.9 mg/kg (rat)
Inhalative	LC50/4 h	3.16 mg/L

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67-66-3 Chloroform

Oral	LD50	908 mg/kg (rat)
Dermal	LD50	75 mg/kg (rat) 20,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3 mg/L (ATE)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
 Toxic
 Harmful
 Irritant
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 Carc. 2, Repr. 2

12 Informasi Ekologi

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
*Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 Danger to drinking water if even extremely small quantities leak into the ground.
 Harmful to aquatic organisms*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Pembuangan Limbah

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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14 Informasi Transpor/Pengangkutan

<ul style="list-style-type: none"> · UN-Number · ADR, IMDG, IATA 	<p style="text-align: right;">UN1888</p>
<ul style="list-style-type: none"> · UN proper shipping name · ADR · IMDG · IATA 	<p style="text-align: right;">1888 CHLOROFORM CHLOROFORM, MARINE POLLUTANT CHLOROFORM</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · ADR, IMDG 	<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: right;">6.1 Toxic substances. 6.1</p>
<ul style="list-style-type: none"> · Class · Label 	<p style="text-align: right;">6.1 Toxic substances. 6.1</p>
<ul style="list-style-type: none"> · IATA 	<div style="display: flex; justify-content: center; align-items: center;">  </div> <p style="text-align: right;">6.1 Toxic substances. 6.1</p>
<ul style="list-style-type: none"> · Class · Label 	<p style="text-align: right;">6.1 Toxic substances. 6.1</p>
<ul style="list-style-type: none"> · Packing group · ADR, IMDG, IATA 	<p style="text-align: right;">III</p>
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: · Special marking (ADR): 	<p style="text-align: right;">Symbol (fish and tree) Symbol (fish and tree)</p>
<ul style="list-style-type: none"> · Special precautions for user · EMS Number: · Segregation groups · Stowage Category · Stowage Code 	<p style="text-align: right;">Warning: Toxic substances. F-A,S-A Liquid halogenated hydrocarbons A SW2 Clear of living quarters.</p>
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of Marpol and the IBC Code 	<p style="text-align: right;">Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: 	<p style="text-align: right;">Not applicable.</p>
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Excepted quantities (EQ) 	<p style="text-align: right;">5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p style="text-align: right;">UN 1888 CHLOROFORM, 6.1, III</p>

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15 Informasi yang Berkaitan dengan Regulasi

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS06 GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
Chloroform
- **Hazard statements**
Harmful if swallowed.
Toxic if inhaled.
Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** *None of the ingredients is listed.*
- **Seveso category** *H2 ACUTE TOXIC*
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** *50 t*
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** *200 t*
- **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Informasi Lain

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** *Quality Control Dept.*
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association

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*EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 4: Acute toxicity – Category 4**Acute Tox. 3: Acute toxicity – Category 3**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**Carc. 2: Carcinogenicity – Category 2**Repr. 2: Reproductive toxicity – Category 2**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

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