

Safety data sheet according to UK REACH

Printing date 27.03.2025

Revision: 27.03.2025

1 Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Organophosphorus Pesticides Standard (1X1 mL)
- **Part number:** SPM-825-1
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies LDA UK Ltd.
5500 Lakeside Cheadle Royal Business Park,
Cheadle, Cheshire, SK8 3GR
United Kingdom
Tel: +44 (0) 345 712 5292
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **1.4 Emergency telephone number:** CHEMTREC®: +44 20 3807 3798

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

- **Hazard pictograms**



GHS02 GHS07 GHS09

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· **Signal word** Danger· **Hazard-determining components of labelling:**

ethyl acetate

· **Hazard statements**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

P261 Avoid breathing vapours.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P240 Ground and bond container and receiving equipment.

P391 Collect spillage.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 141-78-6 EINECS: 205-500-4	ethyl acetate Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	99.556%
CAS: 55-38-9 EINECS: 200-231-9	fenthion (ISO) Acute Tox. 3, H331; Muta. 2, H341; STOT RE 1, H372; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Acute Tox. 4, H312	0.0222%
CAS: 62-73-7 EINECS: 200-547-7	dichlorvos (ISO) Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 2, H330; Aquatic Acute 1, H400; Skin Sens. 1, H317	0.0222%
CAS: 298-00-0 EINECS: 206-050-1	parathion -methyl (ISO) Flam. Liq. 3, H226; Acute Tox. 2, H300; Acute Tox. 3, H311; Acute Tox. 2, H330; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0222%
CAS: 298-02-2 EINECS: 206-052-2	phorate (ISO) Acute Tox. 2, H300; Acute Tox. 1, H310; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0222%
CAS: 300-76-5 EINECS: 206-098-3	naled (ISO) Aquatic Acute 1, H400; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2, H319	0.0222%

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CAS: 2921-88-2 EINECS: 220-864-4	chlorpyrifos (ISO) ☠ Acute Tox. 3, H301; Acute Tox. 2, H310; ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0222%
CAS: 7786-34-7 EINECS: 232-095-1	mevinphos (ISO) ☠ Acute Tox. 2, H300; Acute Tox. 1, H310; ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0222%

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

4 First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 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 section 13.
Ensure adequate ventilation.
- **6.4 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.

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7 Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

· **Information about storage in one common storage facility:** Not required.

· Further information about storage conditions:

Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

· **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· 8.1 Control parameters

· **Additional information about design of technical facilities:** No further data; see section 7.

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

141-78-6 ethyl acetate

WEL	Short-term value: 1468 mg/m ³ , 400 ppm
	Long-term value: 734 mg/m ³ , 200 ppm

298-02-2 phorate (ISO)

WEL	Short-term value: 0.2 mg/m ³
	Long-term value: 0.05 mg/m ³
	Sk

2921-88-2 chlorpyrifos (ISO)

WEL	Short-term value: 0.6 mg/m ³
	Long-term value: 0.2 mg/m ³
	Sk

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

· 8.2 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.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

· Respiratory protection:

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

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· Protection of hands:

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: > 4 hours

· Eye protection:



Tightly sealed goggles

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9 Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Fluid

Colour: Colourless

· Odour: Fruit-like

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point: -83.57 °C

Initial boiling point and boiling range: 77-78 °C

· Flash point: -4 °C

· Flammability (solid, gas): Highly flammable.

· Auto-ignition temperature: 460 °C

· Decomposition temperature: Not determined.

· Ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower: 2.1 Vol %

Upper: 11.5 Vol %

· Vapour pressure at 20 °C: 75 hPa

· Vapour pressure at 50 °C: 360 hPa

· Density at 20 °C: 0.9 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

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· Solubility in / Miscibility with water at 20 °C:	79 g/l
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.44 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.7 %
VOC (EC)	99.71 %
Solids content:	0.2 %
· 9.2 Other information	No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

141-78-6 ethyl acetate

Oral	LD50	5,620 mg/kg (rabbit)
Inhalative	LC50/4 h	1,600 mg/L (rat)

55-38-9 fenthion (ISO)

Oral	LD50	180 mg/kg (rat)
Dermal	LD50	330 mg/kg (rat)
Inhalative	LC50/4 h	800 mg/L (rat)

62-73-7 dichlorvos (ISO)

Oral	LD50	25 mg/kg (rat)
Dermal	LD50	107 mg/kg (rat)
		107 mg/kg (rabbit)
Inhalative	LC50/4 h	15 mg/L (rat)

298-00-0 parathion -methyl (ISO)

Oral	LD50	6.01 mg/kg (rat)
Dermal	LD50	67 mg/kg (rat)
		300 mg/kg (rabbit)

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298-02-2 phorate (ISO)		
Oral	LD50	1.6 mg/kg (rat)
Dermal	LD50	2.5 mg/kg (rat)
300-76-5 naled (ISO)		
Oral	LD50	92 mg/kg (rat)
Dermal	LD50	800 mg/kg (rat)
		1,100 mg/kg (rabbit)
2921-88-2 chlorpyrifos (ISO)		
Oral	LD50	60 mg/kg (mouse)
		135 mg/kg (rat)
Dermal	LD50	120 mg/kg (mouse)
		202 mg/kg (rat)
Inhalative	LC50/4 h	>200 mg/L (rat)
7786-34-7 mevinphos (ISO)		
Oral	LD50	3 mg/kg (rat)
Dermal	LD50	4 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for 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.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 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.

14 Transport information

- **14.1 UN-Number**
- **Not Regulated, De minimus Quantities**
- **ADR, IMDG, IATA** - UN1173
- **14.2 UN proper shipping name**
- **ADR** 1173 ETHYL ACETATE solution, ENVIRONMENTALLY HAZARDOUS
- **IMDG** ETHYL ACETATE solution, MARINE POLLUTANT
- **IATA** ETHYL ACETATE solution
- **14.3 Transport hazard class(es)**
- **ADR, IMDG**
- 

- **Class** 3 Flammable liquids.
- **Label** 3
- **IATA**
- 
- **Class** 3 Flammable liquids.
- **Label** 3
- **14.4 Packing group**
- **ADR, IMDG, IATA** II
- **14.5 Environmental hazards:** Product contains environmentally hazardous substances: azinphos-methyl (ISO), chlorpyrifos (ISO)
- **Marine pollutant:** Symbol (fish and tree)
- **Special marking (ADR):** Symbol (fish and tree)
- **14.6 Special precautions for user** Warning: Flammable liquids.
- **Hazard identification number (Kemler code):** 33
- **EMS Number:** F-E,S-D

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· Stowage Category	B
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1173 ETHYL ACETATE SOLUTION, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Poisons Act

· Regulated explosives precursors

None of the ingredients is listed.

· Regulated poisons

None of the ingredients is listed.

· Reportable explosives precursors

None of the ingredients is listed.

· Reportable poisons

62-73-7	dichlorvos (ISO)	Listed
86-50-0	azinphos-methyl (ISO)	Listed
298-02-2	phorate (ISO)	Listed
298-04-4	disulfoton	Listed
7786-34-7	mevinphos (ISO)	Listed

· Directive 2012/18/EU

- Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category

E1 Hazardous to the Aquatic Environment

P5c FLAMMABLE LIQUIDS

- Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t

- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Relevant phrases

H225 Highly flammable liquid and vapour.
 H226 Flammable liquid and vapour.
 H300 Fatal if swallowed.
 H301 Toxic if swallowed.
 H302 Harmful if swallowed.
 H310 Fatal in contact with skin.
 H311 Toxic in contact with skin.
 H312 Harmful in contact with skin.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H330 Fatal if inhaled.
 H331 Toxic if inhaled.
 H336 May cause drowsiness or dizziness.
 H341 Suspected of causing genetic defects.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.

· Abbreviations and acronyms:

ADR: Accord relatif au transport international 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
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 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
 ATE: Acute toxicity estimate values
 Flam. Liq. 2: Flammable liquids – Category 2
 Flam. Liq. 3: Flammable liquids – Category 3
 Acute Tox. 4: Acute toxicity – Category 4
 Acute Tox. 1: Acute toxicity – Category 1
 Acute Tox. 2: Acute toxicity – Category 2
 Acute Tox. 3: Acute toxicity – Category 3
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Skin Sens. 1: Skin sensitisation – Category 1
 Muta. 2: Germ cell mutagenicity – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· * Data compared to the previous version altered.