

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-844A-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**



flame

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



health hazard

Repr. 2 H361f Suspected of damaging fertility.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

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



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

(Contd. on page 2)

GB

Safety data sheet

according to UK REACH

Printing date 27.03.2025

Revision: 27.03.2025

Trade name: Organophosphorus Pesticides Standard (1X1 mL)

(Contd. of page 1)

· 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 GHS08 GHS09

· Signal word Danger

· Hazard-determining components of labelling:

n-hexane
acetone

· Hazard statements

H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H361f Suspected of damaging fertility.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
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.
P260 Do not breathe vapours.
P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:

Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.

· 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.

(Contd. on page 3)

Safety data sheet

according to UK REACH

Printing date 27.03.2025

Revision: 27.03.2025

Trade name: Organophosphorus Pesticides Standard (1X1 mL)

(Contd. of page 2)

· Dangerous components:		
CAS: 67-64-1 EINECS: 200-662-2	acetone ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	54.4011%
CAS: 110-54-3 EINECS: 203-777-6	n-hexane ⚠ Flam. Liq. 2, H225; ⚠ Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	45.3229%
CAS: 78-34-2 EINECS: 201-107-7	dioxathion (ISO) ⚠ Acute Tox. 2, H300; Acute Tox. 3, H311; Acute Tox. 2, H330; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0276%
CAS: 563-12-2 EINECS: 209-242-3	ethion (ISO) ⚠ Acute Tox. 3, H301; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H312	0.0276%
CAS: 732-11-6 EINECS: 211-987-4	phosmet (ISO) ⚠ Acute Tox. 3, H301; ⚠ Repr. 2, H361f; STOT SE 1, H370; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332	0.0276%
CAS: 2642-71-9 EINECS: 220-147-6	azinphos-ethyl (ISO) ⚠ Acute Tox. 2, H300; Acute Tox. 3, H311; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0276%
CAS: 13071-79-9 EINECS: 235-963-8	S-tert-butylthiomethyl O,O-diethylphosphorodithioate ⚠ Acute Tox. 2, H300; Acute Tox. 1, H310; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.0276%

· **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.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** 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:** 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

During heating or in case of fire poisonous gases are produced.

(Contd. on page 4)

Safety data sheet

according to UK REACH

Printing date 27.03.2025

Revision: 27.03.2025

Trade name: Organophosphorus Pesticides Standard (1X1 mL)

(Contd. of page 3)

- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
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.

7 Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **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:	
67-64-1 acetone	
WEL	Short-term value: 3620 mg/m ³ , 1500 ppm Long-term value: 1210 mg/m ³ , 500 ppm

(Contd. on page 5)

GB

Safety data sheet according to UK REACH

Printing date 27.03.2025

Revision: 27.03.2025

Trade name: Organophosphorus Pesticides Standard (1X1 mL)

(Contd. of page 4)

110-54-3 n-hexaneWEL Long-term value: 72 mg/m³, 20 ppm· **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.

Store protective clothing separately.

Do not inhale gases / fumes / aerosols.

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.

· **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

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:****Form:**

Fluid

Colour:

According to product specification

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition****Melting point/freezing point:**

Undetermined.

Initial boiling point and boiling range: 55 °C

(Contd. on page 6)

GB

Safety data sheet according to UK REACH

Printing date 27.03.2025

Revision: 27.03.2025

Trade name: Organophosphorus Pesticides Standard (1X1 mL)

(Contd. of page 5)

· Flash point:	-22 °C
· Flammability (solid, gas):	Highly flammable.
· Auto-ignition temperature:	240 °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:	1.2 Vol %
Upper:	13 Vol %
· Vapour pressure at 20 °C:	175 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.8 %
VOC (EC)	99.83 %
Solids content:	0.1 %
· 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.

(Contd. on page 7)

GB

Safety data sheet according to UK REACH

Printing date 27.03.2025

Revision: 27.03.2025

Trade name: Organophosphorus Pesticides Standard (1X1 mL)

(Contd. of page 6)

LD/LC50 values relevant for classification:		
67-64-1 acetone		
Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)
110-54-3 n-hexane		
Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	3,000 mg/kg (rabbit)
78-34-2 dioxathion (ISO)		
Oral	LD50	23 mg/kg (rat)
Dermal	LD50	63 mg/kg (rat)
Inhalative	LC50/4 h	1,398 mg/L (rat)
563-12-2 ethion (ISO)		
Oral	LD50	13 mg/kg (rat)
Dermal	LD50	62 mg/kg (rat)
Inhalative	LC50/4 h	864 mg/L (rat)
732-11-6 phosmet (ISO)		
Oral	LD50	92.5 mg/kg (rat)
Dermal	LD50	1,150 mg/kg (rat)
		>3,160 mg/kg (rabbit)
Inhalative	LC50/4 h	54 mg/L (rat)
2642-71-9 azinphos-ethyl (ISO)		
Dermal	LD50	250 mg/kg (rat)
Inhalative	LC50/4 h	390 mg/L (rat)
13071-79-9 S-tert-butylthiomethyl O,O-diethylphosphorodithioate		
Oral	LD50	4.5 mg/kg (rat)

· **Primary irritant effect:**

· **Skin corrosion/irritation**

Causes skin irritation.

· **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**

Suspected of damaging fertility.

· **STOT-single exposure**

May cause drowsiness or dizziness.

· **STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

· **Aspiration hazard**

May be fatal if swallowed and enters airways.

GB

(Contd. on page 8)

Safety data sheet

according to UK REACH

Printing date 27.03.2025

Revision: 27.03.2025

Trade name: Organophosphorus Pesticides Standard (1X1 mL)

(Contd. of page 7)

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 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even 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.
- **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** UN1993
- **14.2 UN proper shipping name**
- **ADR** 1993 FLAMMABLE LIQUID, N.O.S. (ACETONE, HEXANES), ENVIRONMENTALLY HAZARDOUS
- **IMDG** FLAMMABLE LIQUID, N.O.S. (ACETONE, HEXANES), MARINE POLLUTANT
- **IATA** FLAMMABLE LIQUID, N.O.S. (ACETONE, HEXANES)
- **14.3 Transport hazard class(es)**
- **ADR, IMDG**
- 

- **Class** 3 Flammable liquids.

(Contd. on page 9)

GB

Safety data sheet

according to UK REACH

Printing date 27.03.2025

Revision: 27.03.2025

Trade name: Organophosphorus Pesticides Standard (1X1 mL)

(Contd. of page 8)

· 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-ethyl (ISO), ethion (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, <u>S</u> -E
· 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 1993 FLAMMABLE LIQUID, N.O.S. (ACETONE, HEXANES), 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.

(Contd. on page 10)

GB

Safety data sheet

according to UK REACH

Printing date 27.03.2025

Revision: 27.03.2025

Trade name: Organophosphorus Pesticides Standard (1X1 mL)

(Contd. of page 9)

· Reportable explosives precursors

67-64-1	acetone	Listed
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· Reportable poisons

78-34-2	dioxathion (ISO)	Listed
470-90-6	chlorfenvinphos (ISO)	Listed
13171-21-6	phosphamidon	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.

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.

H300 Fatal if swallowed.

H301 Toxic if swallowed.

H304 May be fatal if swallowed and enters airways.

H310 Fatal in contact with skin.

H311 Toxic in contact with skin.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

H361f Suspected of damaging fertility.

H370 Causes damage to organs.

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.

H411 Toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Document Control / Regulatory

· **Contact:** pdl-acg-regulatory-cq@agilent.com

· 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

(Contd. on page 11)

Safety data sheet

according to UK REACH

Printing date 27.03.2025

Revision: 27.03.2025

Trade name: Organophosphorus Pesticides Standard (1X1 mL)

(Contd. of page 10)

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 1: Acute toxicity – Category 1

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

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

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· *** Data compared to the previous version altered.**

GB