

Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

1 Identification

· Product identifier

· Trade name: Organochlorine Pesticides Standard (1X1 mL)

· Part number: PPM-808F-1

· Application of the substance / the mixture Reagents and Standards for Analytical Chemical Laboratory Use

· Details of the supplier of the safety data sheet

• Manufacturer/Supplier: Agilent Technologies, Inc. 5301 Stevens Creek Blvd.

Santa Clara, CA 95051 USA

· Information department:

Telephone: 800-227-9770

e-mail: pdl-msds author@agilent.com

· Emergency telephone number: CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

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



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 2 H351 Suspected of causing cancer.

Repr. 1A H360 May damage fertility or the unborn child.

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.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS07

CHCO

· Signal word Danger

(Contd. on page 2)



Printing date 03/30/2019 Reviewed on 03/30/2019 Version Number 2

Trade name: Organochlorine Pesticides Standard (1X1 mL)

(Contd. of page 1)

· Hazard-determining components of labeling:

toluene

1,2-dibromo-3-chloropropane

n-hexane

hexachlorobenzene

· Hazard statements

Highly flammable liquid and vapor.

Causes skin irritation.

May cause genetic defects.

Suspected of causing cancer.

May damage fertility or the unborn child.

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure.

May be fatal if swallowed and enters airways.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

If swallowed: Immediately call a poison center/doctor.

Specific treatment (see on this label).

Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

In case of fire: Use for extinction: CO2, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 1Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *1Fire = 3



Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

Trade name: Organochlorine Pesticides Standard (1X1 mL)

(Contd. of page 2)

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

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:		
108-88-3	toluene	56.368%
110-54-3	n-hexane	42.845%
96-12-8 1,2-dibromo-3-chloropropane 0.131°		0.131%
118-74-1	hexachlorobenzene	0.131%

4 First-aid measures

- · 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.
- · After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture

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

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

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

(Contd. on page 4)



Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

Trade name: Organochlorine Pesticides Standard (1X1 mL)

(Contd. of page 3)

- Environmental precautions: 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.

· Protective Action Criteria for Chemicals

Trottettiv	e rection effect to for elicinicals	
· PAC-1:		
108-88-3	toluene	67 ppm
110-54-3	n-hexane	260 ppm
96-12-8	1,2-dibromo-3-chloropropane	0.003 ppm
118-74-1	hexachlorobenzene	0.006 mg/m
77-47-4	hexachlorocyclopentadiene	0.03 ppm
465-73-6	isodrin	0.64 mg/m ³
510-15-6	chlorobenzilate (ISO)	8.4 mg/m ³
· PAC-2:		-
108-88-3	toluene	560 ppm
110-54-3	n-hexane	2900* ppi
96-12-8	1,2-dibromo-3-chloropropane	2.2 ppm
118-74-1	hexachlorobenzene	14 mg/m³
77-47-4	hexachlorocyclopentadiene	0.55 ppm
465-73-6	isodrin	7 mg/m ³
510-15-6	chlorobenzilate (ISO)	92 mg/m³
· PAC-3:		'
108-88-3	toluene	3700* ppm
110-54-3	n-hexane	8600** ppi
96-12-8	1,2-dibromo-3-chloropropane	4.3 ppm
118-74-1	hexachlorobenzene	91 mg/m³
77-47-4	hexachlorocyclopentadiene	1 ppm
465-73-6	isodrin	42 mg/m ³
510-15-6	chlorobenzilate (ISO)	550 mg/m ³

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

(Contd. on page 5)



Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

Trade name: Organochlorine Pesticides Standard (1X1 mL)

(Contd. of page 4)

Keep respiratory protective device available.

- · 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 receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

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

8 Exposure controls/personal protection

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

	ponents with limit values that require monitoring at the workplace: 8-3 toluene
PEL	Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift
REL	Short-term value: 560 mg/m³, 150 ppm Long-term value: 375 mg/m³, 100 ppm
TLV	Long-term value: 75 mg/m³, 20 ppm BEI
110-5	4-3 n-hexane
PEL	Long-term value: 1800 mg/m³, 500 ppm
REL	Long-term value: 180 mg/m³, 50 ppm
TLV	Long-term value: 176 mg/m³, 50 ppm Skin; BEI
96-12	-8 1,2-dibromo-3-chloropropane
PEL	Long-term value: 0.001 ppm see 29 CFR 1910.1044
REL	See Pocket Guide App. A
118-7	4-1 hexachlorobenzene
TLV	Long-term value: 0.002 mg/m³ Skin
	(Contd. on pa

_____I



Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

Trade name: Organochlorine Pesticides Standard (1X1 mL)

(Contd. of page 5)

· Ingredients with biological limit values:

108-88-3 toluene

BEI 0.02 mg/L

Medium: blood

Time: prior to last shift of workweek

Parameter: Toluene

0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene

0.3 mg/g creatinine Medium: urine Time: end of shift

Parameter: o-Cresol with hydrolysis (background)

110-54-3 n-hexane

BEI 0.4 mg/L

Medium: urine

Time: end of shift at end of workweek

Parameter: 2.5-Hexanedione without hydrolysis

· Additional information: The lists that were valid during the creation 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 skin.

Avoid contact with the eyes and skin.

· Breathing equipment:

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 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil 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

(Contd. on page 7)



Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

Trade name: Organochlorine Pesticides Standard (1X1 mL)

· Eye protection:

(Contd. of page 6)



Tightly sealed goggles

Information on basic physical and c General Information	hemical properties
Appearance:	
Form:	Fluid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	69 °C (156.2 °F)
Flash point:	-22 °C (-7.6 °F)
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	240 °C (464 °F)
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.4 Vol %
Vapor pressure at 20 °C (68 °F):	110 hPa (82.5 mm Hg)
Density:	Not determined.
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/wate	er): Not determined.

(Contd. on page 8)



Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

Trade name: Organochlorine Pesticides Standard (1X1 mL)

(Contd. of page 7)

 • Solvent content:
 99.3 %

 Organic solvents:
 99.34 %

 VOC content:
 99.34 g/l / 8.29 lb/gal

 Solids content:
 0.3 %

 • Other information
 No further relevant information available.

10 Stability and reactivity

- · 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 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

	Active toxicity.		
· LD/LC50	· LD/LC50 values that are relevant for classification:		
ATE (Acu	ATE (Acute Toxicity Estimate)		
Oral	LD50	3,563 mg/kg (rat)	
Dermal	LD50	4,929 mg/kg	
Inhalative	LC50/4 h	42.8 mg/L	
108-88-3 t	oluene		
Oral	LD50	5,580 mg/kg (rat)	
Dermal	LD50	12,124 mg/kg (rabbit)	
Inhalative	LC50/4 h	5,320 mg/L (mouse)	
		28.1 mg/L (rat)	
110-54-3 ı	1-hexane		
Oral	LD50	5,000 mg/kg (rat)	
Dermal	LD50	3,000 mg/kg (rabbit)	
96-12-8 1,	96-12-8 1,2-dibromo-3-chloropropane		
Oral	LD50	170 mg/kg (rat)	
Dermal	LD50	1,420 mg/kg (rat)	
		1,400 mg/kg (rabbit)	
118-74-1 l	nexachloro	benzene	
Oral	LD50	10,000 mg/kg (rat)	
Inhalative	LC50/4 h	3,600 mg/L (rat)	
		(Contd on page 9)	

(Contd. on page 9)



Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

Trade name: Organochlorine Pesticides Standard (1X1 mL)

		(Contd. of page 8)
77-47-4 h	exachloroc	cyclopentadiene
Oral	LD50	315 mg/kg (rat)
Dermal	LD50	430 mg/kg (rabbit)
Inhalative	LC50/4 h	2 mg/L (rat)
465-73-6 i	sodrin	
Oral	LD50	7 mg/kg (rat)
Dermal	LD50	23 mg/kg (rat)
2303-16-4 di-allate (ISO)		
Oral	LD50	395 mg/kg (rat)
510-15-6	chlorobenz	rilate (ISO)
Oral	LD50	700 mg/kg (rat)
Dermal	LD50	>1,000 mg/kg (rabbit)

- · Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

The product can cause inheritable damage.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)		
108-88-3	toluene	3
96-12-8	1,2-dibromo-3-chloropropane	2B
118-74-1	hexachlorobenzene	2B
2303-16-4	di-allate (ISO)	3
510-15-6	chlorobenzilate (ISO)	3
· NTP (National Toxicology Program)		
96-12-8 1	,2-dibromo-3-chloropropane	R
118-74-1 l	exachlorobenzene	R
· OSHA-Ca (Occupational Safety & Health Administration)		
96-12-8 1,2-dibromo-3-chloropropane		

12 Ecological information

- ·Toxicity
- Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (Self-assessment): extremely hazardous for water

(Contd. on page 10)



Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

Trade name: Organochlorine Pesticides Standard (1X1 mL)

(Contd. of page 9)

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.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities	-	
· UN-Number · DOT, IMDG, IATA	UN1993	
· UN proper shipping name · DOT · IMDG	Flammable liquids, n.o.s. (Hexanes, Toluene) FLAMMABLE LIQUID, N.O.S. (HEXANES, TOLUENE), MARINE POLLUTANT	
· IATA	FLAMMABLE LIQUID, N.O.S. (HEXANES, TOLUENE)	

- · Transport hazard class(es)
- · DOT, IATA



·Class	3 Flammable liquids
· Label	3

· IMDG



· Class · Label	3 Flammable liquids 3
· Packing group · DOT, IMDG, IATA	II
· Environmental hazards:	Product contains environmentally hazardous substances: di-allate (ISO), isodrin

(Contd. on page 11)



Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

Trade name: Organochlorine Pesticides Standard (1X1 mL)

	(Contd. of page 1
Marine pollutant:	Symbol (fish and tree)
Marme ponutant.	Symbol (fish and tree)
Special precautions for user	Warning: Flammable liquids
Danger code (Kemler):	33
EMS Number:	F-E, <u>S-E</u>
· Stowage Category	В
Transport in bulk according to Annex	II of
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L
-	On cargo aircraft only: 60 L
· IMDG	
Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2
1 1 ()	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. (HEXANES,
J	TOLUENE), 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

118-74-1 hexachlorobenzene

· Safety, health and environmental regulations/legislation specific for the substance or mixture

· Sara	· Sara		
· Section 355 (extremely hazardous substances):			
77-47-4	hexachlorocyclopentadiene		
465-73-6	isodrin		
· Section 3	· Section 313 (Specific toxic chemical listings):		
All ingred	lients are listed.		
· TSCA (T	oxic Substances Control Act):		
108-88-3	toluene		
110-54-3	n-hexane		
96-12-8	1,2-dibromo-3-chloropropane		
118-74-1	hexachlorobenzene		
77-47-4	hexachlorocyclopentadiene		
465-73-6	isodrin		
510-15-6	chlorobenzilate (ISO)		
· TSCA ne	w (21st Century Act): (Substances not listed)		
96-12-8	1,2-dibromo-3-chloropropane		
· Propositi	Proposition 65		
· Chemical	ls known to cause cancer:		
96-12-8 1,2-dibromo-3-chloropropane			

(Contd. on page 12)



Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

Trade name: Organochlorine Pesticides Standard (1X1 mL)

	(Contd. of page 11)		
510-15-6	chlorobenzilate (ISO)		
· Chemica	ls known to cause reproductive toxicity for females:		
None of	the ingredients is listed.		
· Chemica	lls known to cause reproductive toxicity for males:		
110-54-3	n-hexane		
96-12-8	1,2-dibromo-3-chloropropane		
· Chemica	· Chemicals known to cause developmental toxicity:		
108-88-3	toluene		
118-74-1	hexachlorobenzene		
Carcinogenic categories			

Carcinogenic categories

· EPA (Environmental Protection Agency)			
108-88-3	toluene	II	
110-54-3	n-hexane	II	
118-74-1	hexachlorobenzene	B2	
77-47-4	hexachlorocyclopentadiene	E, NL	
· TLV (Threshold Limit Value established by ACGIH)			

TLV (Threshold Limit Value established by ACGIH)108-88-3 tolueneA4118-74-1 hexachlorobenzeneA377-47-4 hexachlorocyclopentadieneA4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

96-12-8 1,2-dibromo-3-chloropropane

- · National regulations:
- · Additional classification according to Decree on Hazardous Materials:

Carcinogenic hazardous material group III (dangerous).

· 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.

- · Department issuing SDS: Document Control / Regulatory
- · Contact: regulatory@ultrasci.com
- · Date of preparation / last revision 03/30/2019 / 1
- · 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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

(Contd. on page 13)



Printing date 03/30/2019 Version Number 2 Reviewed on 03/30/2019

Trade name: Organochlorine Pesticides Standard (1X1 mL)

(Contd. of page 12)

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2 Skin Irrit. 2: Skin corrosion/irritation – Category 2 Muta. 1B: Germ cell mutagenicity – Category 1B

Carc. 2: Carcinogenicity – Category 2

Repr. 1A: Reproductive toxicity – Category 1A

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

US

^{* *} Data compared to the previous version altered.