

Safety Data Sheet

according to HPR, Schedule 1

Printing date 04/29/2019

Version Number 1

Reviewed on 04/23/2019

1 Identification

- **Product identifier**
- **Trade name:** Pesticides Calibration Standard (1 x 1 mL)
- **Part number:** US-310-1
- **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 identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids - Category 2 H225 Highly flammable liquid and vapour.



GHS06 Skull and crossbones

Acute Toxicity (Oral) - Category 3 H301 Toxic if swallowed.

Acute Toxicity (Dermal) - Category 3 H311 Toxic in contact with skin.



GHS08 Health hazard

Carcinogenicity - Category 2 H351 Suspected of causing cancer.

Reproductive Toxicity - Category 2 H361 Suspected of damaging fertility or the unborn child.



GHS07

Skin Irritation - Category 2 H315 Causes skin irritation.

Skin Sensitizer - Category 1 H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS06



GHS07



GHS08

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· **Signal word** Danger

· **Hazard-determining components of labeling:**

tert-butyl methyl ether
disulfoton-sulfone
methyl paraoxon
oxydisulfoton
dichlorvos (ISO)
ethoprophos (ISO)

· **Hazard statements**

Highly flammable liquid and vapour.
Toxic if swallowed or in contact with skin.
Causes skin irritation.
May cause an allergic skin reaction.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof [electrical/ventilating/lighting] equipment.
Use non-sparking tools.
Take actions to prevent static discharges.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center/doctor.
Rinse mouth.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF exposed or concerned: Get medical advice/attention.
Call a poison center/doctor if you feel unwell.
Take off contaminated clothing and wash it before reuse.
Specific measures (see on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO₂, powder or water spray.
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 = 2
Fire = 3
Reactivity = 0

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HEALTH	2	Health = 2
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

3 Composition/Information on ingredients

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

1634-04-4	tert-butyl methyl ether	94.866% w/w
101-21-3	chlorpropham	0.135% w/w
62-73-7	dichlorvos (ISO)	0.135% w/w
13194-48-4	ethoprophos (ISO)	0.135% w/w
60168-88-9	fenarimol (ISO)	0.135% w/w
23950-58-5	propyzamide (ISO)	0.135% w/w

4 First aid measures

· Description of first aid measures**· General information:**

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air and to be sure call for a 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. Then consult a doctor.**· After swallowing:** Do not induce vomiting; immediately call for medical help.**· 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 Firefighting 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** No further relevant information available.**· Advice for firefighters****· Protective equipment:** No special measures required.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **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.

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.
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**

Components with limit values that require monitoring at the workplace:
1634-04-4 tert-butyl methyl ether

EL Long-term value: 50 ppm
R

EV Long-term value: 40 ppm

62-73-7 dichlorvos (ISO)

EL Long-term value: 0.1 mg/m³
vapour and inhalable aerosol; Skin; IARC 2B; S(D)

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EV	Long-term value: 0.1 mg/m ³ inhalable, aerosol and vapour; Skin
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· **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

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· **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.

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Boiling point/Boiling range:	55.2 °C
· Flash point:	-33 °C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	374 °C
· 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:	1.6 Vol %
Upper:	8.4 Vol %
· Vapor pressure at 20 °C:	279 hPa
· 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/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	95.7 %
Solids content:	2.8 %
· 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.

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11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	98.5 mg/kg
Dermal	LD50	>496 mg/kg
Inhalative	LC50/4 h	355 mg/L

1634-04-4 tert-butyl methyl ether

Oral	LD50	4,000 mg/kg (rat)
Dermal	LD50	1,000 mg/kg (rabbit)
Inhalative	LC50/4 h	23,576 mg/L (rat)

834-12-8 ametryn (ISO)

Oral	LD50	1,626 mg/kg (rat)
Dermal	LD50	8,160 mg/kg (rabbit)
Inhalative	LC50/4 h	>2.22 mg/L (rat)

2497-07-6 oxydisulfoton

Dermal	LD50	92 mg/kg (rat)
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101-21-3 chlorpropham

Oral	LD50	1,200 mg/kg (rat)
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1134-23-2 cycloate

Oral	LD50	1,678 mg/kg (rat)
Dermal	LD50	3,000 mg/kg (rabbit)

333-41-5 diazinon (ISO)

Oral	LD50	696 mg/kg (rat)
Dermal	LD50	900 mg/kg (rat)
		>2,020 mg/kg (rabbit)
Inhalative	LC50/4 h	>5,400 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)

298-04-4 disulfoton

Oral	LD50	2 mg/kg (rat)
Dermal	LD50	20 mg/kg (rat)

13194-48-4 ethoprophos (ISO)

Oral	LD50	34 mg/kg (rat)
Dermal	LD50	26 mg/kg (rat)
		2.4 mg/kg (rabbit)

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Inhalative	LC50/4 h	125 mg/L (rat)
60168-88-9 fenarimol (ISO)		
Oral	LD50	2,500 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
51235-04-2 3-cyclohexyl-6-dimethylamino-1-methyl-1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione		
Oral	LD50	1,690 mg/kg (rat)
Dermal	LD50	>5,278 mg/kg (rabbit)
7786-34-7 mevinphos (ISO)		
Oral	LD50	3 mg/kg (rat)
Dermal	LD50	4 mg/kg (rat)
23950-58-5 propyzamide (ISO)		
Oral	LD50	3,350 mg/kg (rat)
34014-18-1 tebuthiuron (ISO)		
Oral	LD50	644 mg/kg (rat)
22224-92-6 fenamiphos (ISO)		
Oral	LD50	10 mg/kg (rat)
Dermal	LD50	80 mg/kg (rat)
Inhalative	LC50/4 h	91 mg/L (rat)

· **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.

· **Additional toxicological information:**

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

Toxic
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

1634-04-4	tert-butyl methyl ether	3
101-21-3	chlorpropham	3
333-41-5	diazinon (ISO)	2A
62-73-7	dichlorvos (ISO)	2B
22248-79-9	tetrachlorvinphos	2B

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

23950-58-5 propyzamide (ISO)

LC50 (96h) - for fish 72 mg/L/96h (Oncorhynchus mykiss (rainbow trout))

· **Persistence and degradability** No further relevant information available.

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- **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
 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/TDG, ADR, IMDG, IATA | UN2398 |
| · UN proper shipping name | |
| · DOT/TDG | Methyl tert-butyl ether solution |
| · ADR | 2398 METHYL tert-BUTYL ETHER solution,
ENVIRONMENTALLY HAZARDOUS |
| · IMDG, IATA | METHYL tert-BUTYL ETHER solution |
| · Transport hazard class(es) | |
| · DOT/TDG (Transport dangerous goods): | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · ADR | |
|   | |
| · Class | 3 Flammable liquids |

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· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT/TDG, ADR, IMDG, IATA	II
· Environmental hazards:	Product contains environmentally hazardous substances: oxydisulfoton
· Special marking (ADR):	Symbol (fish and tree)
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E,S-D
· Stowage Category	E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT/TDG	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· 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 2398 METHYL TERT-BUTYL ETHER SOLUTION, 3, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

· Section 355 (extremely hazardous substances):

2497-07-6	oxydisulfoton
62-73-7	dichlorvos (ISO)
298-04-4	disulfoton

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13194-48-4	ethoprophos (ISO)
7786-34-7	mevinphos (ISO)
22224-92-6	fenamiphos (ISO)

Section 313 (Specific toxic chemical listings):

1634-04-4	tert-butyl methyl ether
834-12-8	ametryn (ISO)
314-40-9	bromacil
5234-68-4	carboxin
1134-23-2	cycloate
333-41-5	diazinon (ISO)
62-73-7	dichlorvos (ISO)
957-51-7	diphenamid (ISO)
759-94-4	EPTC (ISO)
13194-48-4	ethoprophos (ISO)
60168-88-9	fenarimol (ISO)
51235-04-2	3-cyclohexyl-6-dimethylamino-1-methyl-1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione
150-50-5	merphos
7786-34-7	mevinphos (ISO)
27314-13-2	norflurazon
1114-71-2	pebulate (ISO)
7287-19-6	prometryn
23950-58-5	propyzamide (ISO)
34014-18-1	tebuthiuron (ISO)
5902-51-2	terbacil

TSCA (Toxic Substances Control Act):

1634-04-4	tert-butyl methyl ether	ACTIVE
333-41-5	diazinon (ISO)	ACTIVE
62-73-7	dichlorvos (ISO)	ACTIVE
759-94-4	EPTC (ISO)	ACTIVE
60168-88-9	fenarimol (ISO)	ACTIVE
59756-60-4	fluridone	ACTIVE
51235-04-2	3-cyclohexyl-6-dimethylamino-1-methyl-1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione	ACTIVE
150-50-5	merphos	ACTIVE
1610-18-0	prometon	ACTIVE

Canadian substance listings:
Canadian Domestic Substances List (DSL)

1634-04-4	tert-butyl methyl ether
314-40-9	bromacil
333-41-5	diazinon (ISO)
62-73-7	dichlorvos (ISO)
113-48-4	MGK-264 (mixed, total)

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· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 1%)

None of the ingredients is listed.

· 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.

· Date of the latest revision of the safety data sheet 04/29/2019 / -**· Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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