

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/22/2019

Version Number 1

Reviewed on 04/22/2019

1 Identification

- **Product identifier**
- **Trade name:** Insecticides Standard (1 x 1 mL)
- **Part number:** PPM-100-1
- **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.



GHS06 Skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.



GHS08 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.

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

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).

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· Hazard pictograms

· Signal word Danger
· Hazard-determining components of labeling:

hexanes
fensulfothion (ISO)
acetone
O-ethyl O-4-nitrophenyl phenylphosphonothioate
malathion (ISO)
phosalone

· Hazard statements

Highly flammable liquid and vapor.
Harmful if swallowed.
Toxic in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
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.
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.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
Rinse mouth.
Take off immediately all contaminated clothing and wash it before reuse.

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If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: 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 = 2

Fire = 4

Reactivity = 0

· HMIS-ratings (scale 0 - 4)


Health = 2

Fire = 4

Reactivity = 0

· 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:

73513-42-5	hexanes	75.572%
67-64-1	acetone	22.677%
121-75-5	malathion (ISO)	0.146%
56-38-2	parathion (ISO)	0.146%
2310-17-0	phosalone	0.146%

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.

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.

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- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a 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.
- **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**

· PAC-1:

67-64-1	acetone	200 ppm
786-19-6	carbophenothion (ISO)	0.62 mg/m ³
56-72-4	coumaphos (ISO)	0.27 mg/m ³
2104-64-5	O-ethyl O-4-nitrophenyl phenylphosphonothioate	0.45 mg/m ³
563-12-2	ethion (ISO)	1.2 mg/m ³
115-90-2	fensulfothion (ISO)	0.18 mg/m ³
55-38-9	fenthion (ISO)	0.15 mg/m ³
21609-90-5	leptophos (ISO)	2.7 mg/m ³
121-75-5	malathion (ISO)	15 mg/m ³
56-38-2	parathion (ISO)	0.15 mg/m ³
732-11-6	phosmet (ISO)	0.049 mg/m ³

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13071-79-9	S-tert-butylthiomethyl O,O-diethylphosphorodithioate	0.091 mg/m ³
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· PAC-2:

67-64-1	acetone	3200* ppm
786-19-6	carbophenothion (ISO)	6.8 mg/m ³
56-72-4	coumaphos (ISO)	3 mg/m ³
2104-64-5	O-ethyl O-4-nitrophenyl phenylphosphonothioate	5 mg/m ³
563-12-2	ethion (ISO)	13 mg/m ³
115-90-2	fensulfothion (ISO)	2 mg/m ³
55-38-9	fenthion (ISO)	5.9 mg/m ³
21609-90-5	leptophos (ISO)	30 mg/m ³
121-75-5	malathion (ISO)	120 mg/m ³
56-38-2	parathion (ISO)	1.5 mg/m ³
732-11-6	phosmet (ISO)	0.54 mg/m ³
13071-79-9	S-tert-butylthiomethyl O,O-diethylphosphorodithioate	1 mg/m ³

· PAC-3:

67-64-1	acetone	5700* ppm
786-19-6	carbophenothion (ISO)	24 mg/m ³
56-72-4	coumaphos (ISO)	13 mg/m ³
2104-64-5	O-ethyl O-4-nitrophenyl phenylphosphonothioate	50 mg/m ³
563-12-2	ethion (ISO)	38 mg/m ³
115-90-2	fensulfothion (ISO)	3.1 mg/m ³
55-38-9	fenthion (ISO)	35 mg/m ³
21609-90-5	leptophos (ISO)	53 mg/m ³
121-75-5	malathion (ISO)	390 mg/m ³
56-38-2	parathion (ISO)	2.0 mg/m ³
732-11-6	phosmet (ISO)	77 mg/m ³
13071-79-9	S-tert-butylthiomethyl O,O-diethylphosphorodithioate	2.2 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.

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.

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- **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:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

67-64-1 acetone

PEL	Long-term value: 2400 mg/m ³ , 1000 ppm
REL	Long-term value: 590 mg/m ³ , 250 ppm
TLV	Short-term value: 1187 mg/m ³ , 500 ppm
	Long-term value: 594 mg/m ³ , 250 ppm
BEI	

- **Ingredients with biological limit values:**

67-64-1 acetone

BEI	50 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Acetone (nonspecific)

- **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 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

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- **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.
Boiling point/Boiling range:	36 °C (96.8 °F)

· Flash point: -30 °C (-22 °F)

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 465 °C (869 °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:	2.6 Vol %
Upper:	13 Vol %

· Vapor pressure at 20 °C (68 °F): 245.3 hPa (184 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/water): Not determined.

· Viscosity:

Dynamic: Not determined.

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Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	23.3 %
VOC content:	0.58 %
	5.8 g/l / 0.05 lb/gal
· Solids content:	0.7 %
· 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:**

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	LD50	452 mg/kg (rat)
Dermal	LD50	905 mg/kg
Inhalative	LC50/4 h	31.2 mg/L

67-64-1 acetone

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

786-19-6 carbophenothion (ISO)

Oral	LD50	6.8 mg/kg (rat)
Dermal	LD50	27 mg/kg (rat)

56-72-4 coumaphos (ISO)

Oral	LD50	13 mg/kg (rat)
Dermal	LD50	860 mg/kg (rat)
		500 mg/kg (rabbit)

2104-64-5 O-ethyl O-4-nitrophenyl phenylphosphonothioate

Oral	LD50	7 mg/kg (rat)
Dermal	LD50	25 mg/kg (rat)
		30 mg/kg (rabbit)

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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)

115-90-2 fensulfothion (ISO)

Oral	LD50	3.5 mg/kg (rat)
Dermal	LD50	3 mg/kg (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)

21609-90-5 leptophos (ISO)

Oral	LD50	19 mg/kg (rat)
Dermal	LD50	800 mg/kg (rabbit)

121-75-5 malathion (ISO)

Oral	LD50	1,000 mg/kg (rat)
Dermal	LD50	8,790 mg/kg (rabbit)

56-38-2 parathion (ISO)

Oral	LD50	2 mg/kg (rat)
Dermal	LD50	6.8 mg/kg (rat)

2310-17-0 phosalone

Oral	LD50	85 mg/kg (rat)
Dermal	LD50	1,000 mg/kg (rabbit)

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)

13071-79-9 S-tert-butylthiomethyl O,O-diethylphosphorodithioate

Oral	LD50	4.5 mg/kg (rat)
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· Primary irritant effect:

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** 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
Harmful
Irritant

· Carcinogenic categories
· IARC (International Agency for Research on Cancer)

121-75-5 malathion (ISO)

2A

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56-38-2 parathion (ISO)

2B

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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

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

UN3021

· UN proper shipping name
· DOT

Pesticides, liquid, flammable, toxic (hexanes, S-tert-butylthiomethyl O,O-diethylphosphorodithioate)

· IMDG

PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S. (hexanes, S-tert-butylthiomethyl O,O-diethylphosphorodithioate), MARINE POLLUTANT

· IATA

PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S. (hexanes, S-tert-butylthiomethyl O,O-diethylphosphorodithioate)

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Transport hazard class(es)

DOT



Class 3 Flammable liquids
Label 3, 6.1

IMDG



Class 3 Flammable liquids
Label 3/6.1

IATA



Class 3 Flammable liquids
Label 3 (6.1)

Packing group

DOT, IMDG, IATA II

Environmental hazards: Product contains environmentally hazardous substances: O-ethyl O-4-nitrophenyl phenylphosphonothioate
Marine pollutant: Symbol (fish and tree)

Special precautions for user Warning: Flammable liquids
Danger code (Kemler): 336
EMS Number: F-E,S-D
Stowage Category B
Stowage Code SW2 Clear of living quarters.

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: 1 L
On cargo aircraft only: 60 L

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 3021 PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S. (HEXANES, S-TERT-BUTYLTHIOMETHYL O,O-

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DIETHYLPHOSPHORODITHIOATE), 3 (6.1), II,
ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

· Section 355 (extremely hazardous substances):

786-19-6	carbophenothion (ISO)
56-72-4	coumaphos (ISO)
2104-64-5	O-ethyl O-4-nitrophenyl phenylphosphonothioate
563-12-2	ethion (ISO)
115-90-2	fensulfothion (ISO)
21609-90-5	leptophos (ISO)
56-38-2	parathion (ISO)
732-11-6	phosmet (ISO)
13071-79-9	S-tert-butylthiomethyl O,O-diethylphosphorodithioate

· Section 313 (Specific toxic chemical listings):

55-38-9	fenthion (ISO)
121-75-5	malathion (ISO)
56-38-2	parathion (ISO)

· TSCA (Toxic Substances Control Act):

67-64-1	acetone	ACTIVE
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· Hazardous Air Pollutants

56-38-2	parathion (ISO)
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· Proposition 65

· Chemicals known to cause cancer:

121-75-5	malathion (ISO)
56-38-2	parathion (ISO)

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

67-64-1	acetone	I
56-38-2	parathion (ISO)	C

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· TLV (Threshold Limit Value established by ACGIH)		
67-64-1	acetone	A4
56-72-4	coumaphos (ISO)	A4
2104-64-5	O-ethyl O-4-nitrophenyl phenylphosphonothioate	A4
563-12-2	ethion (ISO)	A4
115-90-2	fensulfothion (ISO)	A4
55-38-9	fenthion (ISO)	A4
121-75-5	malathion (ISO)	A4
56-38-2	parathion (ISO)	A4
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
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 preparation / last revision** 04/22/2019 / -

· **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

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

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

Skin Sens. 1: Skin sensitisation – Category 1

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

Asp. Tox. 1: Aspiration hazard – Category 1