

Product name: LC TOF/QTOF/QQQ Pesticide Test Mix
Part no.: 5190-0469

This product is composed of the following:

Kit Components, Reagents

Box/Module Part number	Box/Module Name	Kit Component Part Number	Kit Component Name	Qty Units	CLP
-	-	5190-0469-1	Mixture 1 Basic Compounds	3	Yes
-	-	5190-0469-2	Mixture 2 Acidic Compounds	3	Yes

Article SDSs, if maintained, are available on www.agilent.com. We recommend using the article product code when searching. SDSs are only available for a limited set of countries.

Transport Information for the Kit:

Dangerous Goods classification for: 5190-0469

ADR/RID	IMDG	IATA
UN1648, ACETONITRILE solution, 3, II	UN1648, ACETONITRILE solution, 3, II	UN1648, Acetonitrile solution, 3, II


 *De minimis quantities*

Table of contents

Kit Component Name	Page
Mixture 1 Basic Compounds.....	2
Mixture 2 Acidic Compounds.....	21

SDSs for each individual Kit component follow this cover sheet.

SAFETY DATA SHEET

Mixture 1 Basic Compounds

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

1.1 Product identifier

Product name : Mixture 1 Basic Compounds
Part no. : 5190-0469-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 1 ml ampoule
Uses advised against : None known.

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH
 Hewlett-Packard-Str. 8
 76337 Waldbronn
 Germany
 0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +353 1 901 4670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

H225	FLAMMABLE LIQUIDS	Category 2
H302	ACUTE TOXICITY (oral)	Category 4
H312	ACUTE TOXICITY (dermal)	Category 4
H332	ACUTE TOXICITY (inhalation)	Category 4
H319	SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2
H400	SHORT-TERM (ACUTE) AQUATIC HAZARD	Category 1
H411	LONG-TERM (CHRONIC) AQUATIC HAZARD	Category 2

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapour.
 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
 H319 - Causes serious eye irritation.
 H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Mixture 1 Basic Compounds

SECTION 2: Hazards identification

- Prevention** : P280 - Wear protective gloves and protective clothing. Wear eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.
P261 - Avoid breathing vapour.
- Response** : P391 - Collect spillage.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazardous ingredients** : acetonitrile
- Supplemental label elements** : Not applicable.
- Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.
- Special packaging requirements**
- Tactile warning of danger** : Not applicable.

2.3 Other hazards

- Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
- Other hazards which do not result in classification** : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
acetonitrile	EC: 200-835-2 CAS: 75-05-8 Index: 608-001-00-3	≥90	Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Eye Irrit. 2, H319	ATE [Oral] = 500 mg/kg ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
aminocarb (ISO)	EC: 217-990-7 CAS: 2032-59-9 Index: 006-018-00-5	≤0.1	Acute Tox. 3, H301 Acute Tox. 3, H311 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 100 mg/kg ATE [Dermal] = 275 mg/kg M [Acute] = 100 M [Chronic] = 100	[1]
atrazine (ISO)	EC: 217-617-8 CAS: 1912-24-9 Index: 613-068-00-7	≤0.1	Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 100 M [Chronic] = 100	[1] [2]
carbofuran (ISO)	EC: 216-353-0	≤0.1	Acute Tox. 2, H300	ATE [Oral] = 8 mg/	[1] [2]

Mixture 1 Basic Compounds

SECTION 3: Composition/information on ingredients

diazinon (ISO)	CAS: 1563-66-2 Index: 006-026-00-9		Acute Tox. 2, H330 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	kg ATE [Inhalation (dusts and mists)] = 0.05 mg/l M [Acute] = 100 M [Chronic] = 10	
imazalil (ISO)	EC: 206-373-8 CAS: 333-41-5 Index: 015-040-00-4	≤0.1	Acute Tox. 3, H301 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 66 mg/kg M [Acute] = 1000 M [Chronic] = 100	[1] [2]
malathion (ISO)	EC: 252-615-0 CAS: 35554-44-0 Index: 613-042-00-5	≤0.1	Acute Tox. 3, H301 Acute Tox. 4, H332 Eye Dam. 1, H318 Carc. 2, H351 Aquatic Chronic 1, H410	ATE [Oral] = 227 mg/kg ATE [Inhalation (dusts and mists)] = 1.5 mg/l M [Chronic] = 10	[1]
metazachlor (ISO)	EC: 204-497-7 CAS: 121-75-5 Index: 015-041-00-X	≤0.1	Acute Tox. 4, H302 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 500 mg/kg M [Acute] = 1000 M [Chronic] = 1000	[1] [2]
metosulam (ISO)	EC: 266-583-0 CAS: 67129-08-2 Index: 616-205-00-9	≤0.1	Skin Sens. 1B, H317 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 100 M [Chronic] = 100	[1]
metosulam (ISO)	CAS: 139528-85-1 Index: 616-214-00-8	≤0.1	Carc. 2, H351 STOT RE 2, H373 (eyes, kidneys) Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1000 M [Chronic] = 100	[1]
molinate (ISO)	EC: 218-661-0 CAS: 2212-67-1 Index: 613-051-00-4	≤0.1	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Sens. 1, H317 Carc. 2, H351 Repr. 2, H361f STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 369 mg/kg ATE [Inhalation (dusts and mists)] = 1.5 mg/l M [Acute] = 100 M [Chronic] = 100	[1]
pyraclostrobin (ISO)	CAS: 175013-18-0 Index: 613-272-00-6	≤0.1	Acute Tox. 4, H302 Acute Tox. 3, H331 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H335 STOT RE 2, H373 (gastrointestinal tract, liver, nasal cavity) Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 450 mg/kg ATE [Inhalation (dusts and mists)] = 0.58 mg/l M [Acute] = 100 M [Chronic] = 100	[1]

Mixture 1 Basic Compounds**SECTION 3: Composition/information on ingredients**

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures**4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayedOver-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

Mixture 1 Basic Compounds**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is very toxic to aquatic life. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
cyanides

5.3 Advice for firefighters

Special precautions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Mixture 1 Basic Compounds

SECTION 6: Accidental release measures

6.4 Reference to other sections : See Section 1 for emergency contact information.
 See Section 8 for information on appropriate personal protective equipment.
 See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Avoid release to the environment. Avoid contact with eyes, skin and clothing. Do not ingest. Empty containers retain product residue and can be hazardous. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage : Store between the following temperatures: 18 to 25°C (64.4 to 77°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonnes	50000 tonnes
E1	100 tonnes	200 tonnes

7.3 Specific end use(s)

Recommendations : Industrial applications, Professional applications.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Mixture 1 Basic Compounds

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
acetonitrile	NAOSH (Ireland, 4/2024) Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 40 ppm. OELV 8 hours: 70 mg/m ³ . OELV 15 minutes: 4 mg/m ³ . OELV 15 minutes: 1.8 ppm. EU OEL (Europe, 1/2022) Absorbed through skin. TWA 8 hours: 40 ppm. TWA 8 hours: 70 mg/m ³ .
atrazine (ISO)	NAOSH (Ireland, 4/2024) Sensitiser. Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 2 mg/m ³ .
carbofuran (ISO)	NAOSH (Ireland, 4/2024) Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 0.1 mg/m ³ .
diazinon (ISO)	NAOSH (Ireland, 4/2024) Absorbed through skin. Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 0.01 mg/m ³ . Form: The Inhalable Fraction and Vapour note is used when a material exerts sufficient vapour pressure such that it may be present in both particle and vapour phases..
malathion (ISO)	NAOSH (Ireland, 4/2024) Absorbed through skin , Sensitiser. Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 1 mg/m ³ . Form: The Inhalable Fraction and Vapour note is used when a material exerts sufficient vapour pressure such that it may be present in both particle and vapour phases..

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures

: Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name

Result

acetonitrile	DNEL - General population - Long term - Oral	0.4 mg/kg bw/day
	DNEL - General population - Short term - Oral	0.6 mg/kg bw/day
	DNEL - General population - Long term - Dermal	1.2 mg/kg bw/day
	DNEL - General population - Long term - Inhalation	2.4 mg/m ³

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Mixture 1 Basic Compounds**SECTION 8: Exposure controls/personal protection**

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties**Appearance**

- Physical state** : Liquid.
- Colour** : Colourless.
- Odour** : Aromatic.
- Odour threshold** : Not available.
- Melting point/freezing point** : -48°C
- Boiling point or initial boiling point and boiling range** : 81 to 82°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Lower: 4.4%
Upper: 16%
- Flash point** : Closed cup: 5.56°C
- Auto-ignition temperature** : 523.89°C

Mixture 1 Basic Compounds

SECTION 9: Physical and chemical properties

Decomposition temperature : Not available.
pH : Not available.
Viscosity : Dynamic (room temperature): Not available.
 Kinematic (room temperature): Not available.
 Kinematic (40°C): Not available.

Solubility	Media	Result
	water	Soluble

Partition coefficient: n-octanol/water : Not applicable.

Vapour pressure : 13.3 kPa (100 mm Hg)

Relative density : 0.786

Density : 0.786 g/cm³

Relative vapour density : 1.4 [Air = 1]

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties : Not available.

Oxidising properties : Not available.

9.2.2 Other safety characteristics

Miscible with water : Yes.

Evaporation rate : Not available.

Physical/chemical properties comments : Not available.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.

10.5 Incompatible materials : Reactive or incompatible with the following materials:
 oxidising materials
 Reactive or incompatible with the following materials: acids.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Mixture 1 Basic Compounds

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
acetonitrile	Rat - Oral - LD50	2460 mg/kg
	Rat - Inhalation - LC50 Vapour	17100 ppm [4 hours]
aminocarb (ISO)	Rat - Oral - LD50	30 mg/kg
	Rat - Dermal - LD50	275 mg/kg
atrazine (ISO)	Rabbit - Dermal - LD50	7500 mg/kg
	Rat - Oral - LD50	672 mg/kg
	Rat - Dermal - LD50	3 g/kg
	Rat - Inhalation - LC50 Dusts and mists	5200 mg/m ³ [4 hours]
carbofuran (ISO)	Rat - Oral - LD50	8 mg/kg
diazinon (ISO)	Rat - Oral - LD50	66 mg/kg
imazalil (ISO)	Rat - Oral - LD50	227 mg/kg
	Rat - Dermal - LD50	4200 mg/kg
	Rabbit - Dermal - LD50	4200 mg/kg
	Rat - Inhalation - LC50 Dusts and mists	16 g/m ³ [4 hours]
malathion (ISO)	Rabbit - Dermal - LD50	4100 mg/kg
	Rat - Oral - LD50	290 mg/kg
	Rat - Inhalation - LC50 Dusts and mists	43790 µg/m ³ [4 hours]
metazachlor (ISO)	Rat - Oral - LD50	1 g/kg
	Rat - Dermal - LD50	>6810 mg/kg
molinate (ISO)	Rat - Oral - LD50	369 mg/kg
	Rabbit - Dermal - LD50	3536 mg/kg
	Rat - Inhalation - LC50 Dusts and mists	2100 mg/m ³ [1 hours]

Conclusion/Summary : Not available.

[Product]

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Mixture 1 Basic Compounds	500.9	1102.0	N/A	11.0	N/A
acetonitrile	500	1100	N/A	11	N/A
aminocarb (ISO)	100	275	N/A	N/A	N/A
atrazine (ISO)	N/A	3000	N/A	N/A	5.2
carbofuran (ISO)	8	N/A	N/A	N/A	0.05
diazinon (ISO)	66	N/A	N/A	N/A	N/A
imazalil (ISO)	227	4200	N/A	N/A	1.5
malathion (ISO)	500	4100	N/A	N/A	N/A
molinate (ISO)	369	3536	N/A	N/A	1.5
pyraclostrobin (ISO)	450	N/A	N/A	N/A	0.58

Skin corrosion/irritation

Product/ingredient name	Result	
atrazine (ISO)	Rabbit - Skin - Mild irritant	Amount/concentration applied: 38 mg
carbofuran (ISO)	Rabbit - Skin - Mild irritant	Amount/concentration applied: 500 mg

Conclusion/Summary : Not available.

[Product]

Ingredient name	Conclusion/Summary
diazinon (ISO)	Causes mild skin irritation.

Serious eye damage/eye irritation

Product/ingredient name	Result
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Mixture 1 Basic Compounds

SECTION 11: Toxicological information

acetonitrile	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours Amount/concentration applied: 100 uL
atrazine (ISO)	Rabbit - Eyes - Severe irritant	Amount/concentration applied: 6320 ug
imazalil (ISO)	Rabbit - Eyes - Moderate irritant	Amount/concentration applied: 49 mg

Conclusion/Summary : Not available.

[Product]

Ingredient name

diazinon (ISO)

Conclusion/Summary

May cause eye irritation.

Respiratory corrosion/irritation

Conclusion/Summary : May cause respiratory irritation.

[Product]

Ingredient name

acetonitrile

Conclusion/Summary

May cause respiratory irritation.

Respiratory or skin sensitization

Skin

Conclusion/Summary : Not available.

[Product]

Ingredient name

diazinon (ISO)

Conclusion/Summary

May cause skin sensitisation.

Respiratory

Conclusion/Summary : Not available.

[Product]

Germ cell mutagenicity

Conclusion/Summary : Not available.

[Product]

Carcinogenicity

Conclusion/Summary : Not available.

[Product]

Ingredient name

diazinon (ISO)

Conclusion/Summary

May cause cancer.

Reproductive toxicity

Conclusion/Summary : Not available.

[Product]

Specific target organ toxicity (single exposure)

Product/ingredient name

pyraclostrobin (ISO)

Result

STOT SE 3, H335 (Respiratory tract irritation)

Specific target organ toxicity (repeated exposure)

Product/ingredient name

Result

Mixture 1 Basic Compounds

SECTION 11: Toxicological information

atrazine (ISO)	STOT RE 2, H373
metosulam (ISO)	STOT RE 2, H373 (eyes, kidneys)
molinate (ISO)	STOT RE 2, H373
pyraclostrobin (ISO)	STOT RE 2, H373 (gastrointestinal tract, liver, nasal cavity)

Aspiration hazard

Not available.

Information on likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Harmful in contact with skin.
- Ingestion** : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

- Conclusion/Summary [Product]** : Not available.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

Other information : Adverse symptoms may include the following: May cause headache, weakness, dizziness, shortness of breath, cyanosis, rapid heart beat, unconsciousness and possible death.

Mixture 1 Basic Compounds

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	
acetonitrile	Acute - LC50 - Fresh water	3600 mg/l [48 hours]
	Acute - IC50 - Fresh water	3685 mg/l [96 hours]
	Chronic - NOEC - Fresh water	160 mg/l [21 days]
	Chronic - NOEC - Fresh water	1000 mg/l [96 hours]
	Acute - LC50 - Fresh water	1000 mg/l [96 hours]
aminocarb (ISO)	Chronic - NOEC - Fresh water	38.9 µg/l [31 days]
	Acute - LC50 - Fresh water	80 µg/l [96 hours]
	Acute - EC50 - Fresh water	5 ppb [48 hours]
atrazine (ISO)	Acute - EC50 - Fresh water	240 µg/l [48 hours]
	Chronic - NOEC - Fresh water	0.26 ppb [16 weeks]
	Acute - LC50 - Fresh water	1.25 ppm [96 hours]
	Chronic - NOEC - Fresh water	25 µg/l [21 days]
	Acute - EC50 - Fresh water	0.004 mg/l [96 hours]
carbofuran (ISO)	Chronic - NOEC - Fresh water	0.0005 mg/l [96 hours]
	Acute - LC50 - Fresh water	1.592 µg/l [48 hours]
	Chronic - NOEC - Fresh water	0.2 mg/l [96 hours]
	Chronic - NOEC - Fresh water	9.8 ppb [21 days]
	Acute - LC50 - Marine water	33 ppb [96 hours]
diazinon (ISO)	Chronic - NOEC	2.6 ppb [32 days]
	Acute - IC50 - Fresh water	1980 µg/l [96 hours]
	Acute - LC50 - Fresh water	0.000072 mg/l [96 hours]
imazalil (ISO)	Acute - LC50 - Fresh water	0.21 µg/l [48 hours]
	Chronic - NOEC - Fresh water	0.15 µg/l [21 days]
	Acute - EC50 - Fresh water	10.82 mg/l [96 hours]
	Chronic - NOEC - Fresh water	0.018 ppb [30 days]
	Chronic - NOEC - Fresh water	0.17 mg/l [96 hours]
malathion (ISO)	Acute - LC50 - Fresh water	1.48 ppm [96 hours]
	Acute - EC50 - Fresh water	3.54 ppm [48 hours]
	Acute - EC50 - Fresh water	0.73 ppm [72 hours]
metazachlor (ISO)	Acute - LC50 - Fresh water	0.5 µg/l [48 hours]
	Chronic - NOEC	11.676 ng/l [96 hours]
	Chronic - NOEC - Fresh water	21 ppb [97 days]
	Chronic - NOEC - Fresh water	0.06 ppb [21 days]
	Chronic - NOEC - Fresh water	34 mg/l [72 hours]
molinate (ISO)	Chronic - NOEC	0.01 mg/l [72 hours]
	Acute - EC50	245 µg/l [96 hours]
pyraclostrobin (ISO)	Acute - LC50 - Fresh water	355 µg/l [96 hours]
	Acute - LC50 - Fresh water	390 µg/l [48 hours]
	Chronic - NOEC - Fresh water	90 µg/l [28 days]
	Chronic - NOEC - Fresh water	220 µg/l [96 hours]
	Chronic - NOEC - Fresh water	0.38 ppm [21 days]
pyraclostrobin (ISO)	Acute - EC50 - Fresh water	0.22 ppm [4 days]
	Chronic - NOEC - Fresh water	4 ppb [21 days]
	Acute - LC50 - Fresh water	6.2 ppb [96 hours]
	Chronic - NOEC	2.35 ppb [98 days]
	Acute - EC50 - Fresh water	3.9 µg/l [48 hours]
pyraclostrobin (ISO)	Chronic - NOEC - Fresh water	0.015 mg/l [96 hours]
	Acute - EC50 - Fresh water	152 ppb [96 hours]

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Product/ingredient name	Result
acetonitrile	- 70% [21 days] - Readily -
atrazine (ISO)	- 9.86% [28 days] - Not readily -

Conclusion/Summary [Product] : Not available.

Mixture 1 Basic Compounds

SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
acetonitrile	-	-	Readily
atrazine (ISO)	-	-	Not readily
diazinon (ISO)	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
acetonitrile	-0.34	3	Low
aminocarb (ISO)	1.9	-	Low
atrazine (ISO)	2.59	7.94	Low
carbofuran (ISO)	2.32	-	Low
diazinon (ISO)	3.81	70.79	Low
imazalil (ISO)	3.82	170	Low
malathion (ISO)	2.36	33.11	Low
metazachlor (ISO)	2.13	-	Low
metosulam (ISO)	3.08	-	Low
molinate (ISO)	3.21	25.7	Low
pyraclostrobin (ISO)	3.99	230	Low

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logKoc	Koc
acetonitrile	0.42	2.62657
aminocarb (ISO)	2	100.133
atrazine (ISO)	2.2	173.852
carbofuran (ISO)	1.8	56.3325
diazinon (ISO)	2.7	561.251
imazalil (ISO)	3.7	5334.19
malathion (ISO)	2.4	229.268
metazachlor (ISO)	2.2	151.02
metosulam (ISO)	2.2	160.688
molinate (ISO)	1.9	83.465
pyraclostrobin (ISO)	3.2	1622.29

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
acetonitrile	No	N/A	Yes	No	N/A	N/A	Yes
aminocarb (ISO)	No	No	No	No	No	No	No
atrazine (ISO)	No	No	No	No	No	No	No
carbofuran (ISO)	N/A	N/A	Yes	Yes	N/A	N/A	Yes
diazinon (ISO)	No	No	Yes	Yes	No	No	No
imazalil (ISO)	No	No	No	No	No	No	No
malathion (ISO)	No	No	No	No	No	No	No
metazachlor (ISO)	No	No	No	No	No	No	No
metosulam (ISO)	No	No	No	No	No	No	No
molinate (ISO)	No	No	No	No	No	No	No
pyraclostrobin (ISO)	No	No	No	No	No	No	No

Mobility : Not available.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Mixture 1 Basic Compounds

SECTION 12: Ecological information

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
acetonitrile	No	N/A	No	No	No	N/A	No
aminocarb (ISO)	No	N/A	N/A	No	N/A	N/A	N/A
atrazine (ISO)	No	N/A	No	Yes	No	N/A	No
carbofuran (ISO)	N/A	N/A	N/A	Yes	N/A	N/A	N/A
diazinon (ISO)	No	No	No	Yes	No	No	No
imazalil (ISO)	No	N/A	No	No	No	N/A	No
malathion (ISO)	No	N/A	No	Yes	No	N/A	No
metazachlor (ISO)	No	N/A	N/A	No	N/A	N/A	N/A
metosulam (ISO)	N/A	N/A	N/A	Yes	N/A	N/A	N/A
molinate (ISO)	No	N/A	No	Yes	No	N/A	No
pyraclostrobin (ISO)	No	N/A	No	Yes	No	N/A	No

Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
acetonitrile	No	N/A	No	No	No	N/A	No
aminocarb (ISO)	No	No	No	No	No	No	No
atrazine (ISO)	No	No	No	No	No	No	No
carbofuran (ISO)	N/A	N/A	N/A	Yes	N/A	N/A	N/A
diazinon (ISO)	No	No	No	Yes	No	No	No
imazalil (ISO)	No	No	No	No	No	No	No
malathion (ISO)	No	No	No	No	No	No	No
metazachlor (ISO)	No	No	No	No	No	No	No
metosulam (ISO)	No	No	No	No	No	No	No
molinate (ISO)	No	No	No	No	No	No	No
pyraclostrobin (ISO)	No	No	No	No	No	No	No

Conclusion/Summary : The product does not meet the criteria to be considered as a PBT or vPvB.
Regulation (EC) No. 1272/2008 [CLP]

12.6 Endocrine disrupting properties

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging






Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Mixture 1 Basic Compounds

SECTION 13: Disposal considerations

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	UN1648	UN1648	UN1648
14.2 UN proper shipping name	ACETONITRILE solution	ACETONITRILE solution	Acetonitrile solution
14.3 Transport hazard class(es)	3  	3  	3 
14.4 Packing group	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

Remarks: De minimis quantities

ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Hazard identification number 33

Limited quantity 1 L

Tunnel code (D/E)

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Emergency schedules F-E, S-D

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.

Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Substances of very high concern

None of the components are listed.

Mixture 1 Basic Compounds

SECTION 15: Regulatory information

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product / Ingredient name	Identifiers	Designation [Usage]
Mixture 1 Basic Compounds	-	3

Labelling : Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Listed

Industrial emissions (integrated pollution prevention and control) - Water : Listed

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c E1

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : Not determined.
- Canada** : Not determined.
- China** : Not determined.
- Eurasian Economic Union** : **Russian Federation inventory:** All components are listed or exempted.
- Japan** : **Japan inventory (CSCL):** Not determined.
Japan inventory (ISHL): Not determined.
- New Zealand** : Not determined.
- Philippines** : Not determined.

Mixture 1 Basic Compounds

SECTION 15: Regulatory information

- Republic of Korea : Not determined.
- Taiwan : Not determined.
- Thailand : Not determined.
- Turkey : Not determined.
- United States : Not determined.
- Viet Nam : All components are listed or exempted.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

- Abbreviations and acronyms** :
- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
 - ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 - ATE = Acute Toxicity Estimate
 - B = Bioaccumulative
 - BCF = Bioconcentration Factor
 - CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 - DMEL = Derived Minimal Effect Level
 - DNEL = Derived No Effect Level
 - EUH statement = CLP-specific Hazard statement
 - IATA = International Air Transport Association
 - IMDG = International Maritime Dangerous Goods
 - IMO = International Maritime Organization
 - M = Mobile
 - N/A = Not available
 - P = Persistent
 - PBT = Persistent, Bioaccumulative and Toxic
 - PMT = Persistent, Mobile and Toxic
 - PNEC = Predicted No Effect Concentration
 - RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 - RRN = REACH Registration Number
 - SGG = Segregation Group
 - T = Toxic
 - vB = Very Bioaccumulative
 - vM = Very Mobile
 - vP = Very Persistent
 - vPvB = Very Persistent and Very Bioaccumulative
 - vPvM = Very Persistent and Very Mobile

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 2, H225	On basis of test data
Acute Tox. 4, H302	Calculation method
Acute Tox. 4, H312	Calculation method
Acute Tox. 4, H332	Calculation method
Eye Irrit. 2, H319	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

Mixture 1 Basic Compounds

SECTION 16: Other information

H225	Highly flammable liquid and vapour.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
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.

Full text of classifications [CLP/GHS]

Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Carc. 2	CARCINOGENICITY - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

Date of issue/ Date of revision : 23/12/2025

Date of previous issue : No previous validation

Version : 1

Notice to reader

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SAFETY DATA SHEET

Mixture 2 Acidic Compounds

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

1.1 Product identifier

Product name : Mixture 2 Acidic Compounds
Part no. : 5190-0469-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 1 ml ampoule
Uses advised against : None known.

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH
 Hewlett-Packard-Str. 8
 76337 Waldbronn
 Germany
 0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +353 1 901 4670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

H225	FLAMMABLE LIQUIDS	Category 2
H302	ACUTE TOXICITY (oral)	Category 4
H312	ACUTE TOXICITY (dermal)	Category 4
H332	ACUTE TOXICITY (inhalation)	Category 4
H319	SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2
H410	LONG-TERM (CHRONIC) AQUATIC HAZARD	Category 1

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapour.
 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
 H319 - Causes serious eye irritation.
 H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Mixture 2 Acidic Compounds

SECTION 2: Hazards identification

- Prevention** : P280 - Wear protective gloves and protective clothing. Wear eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.
P261 - Avoid breathing vapour.
- Response** : P391 - Collect spillage.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazardous ingredients** : acetonitrile
- Supplemental label elements** : Not applicable.
- Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.
- Special packaging requirements**
- Tactile warning of danger** : Not applicable.

2.3 Other hazards

- Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
- Other hazards which do not result in classification** : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
acetonitrile	EC: 200-835-2 CAS: 75-05-8 Index: 608-001-00-3	≥90	Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Eye Irrit. 2, H319	ATE [Oral] = 500 mg/kg ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
2,4,5-T (ISO)	EC: 202-273-3 CAS: 93-76-5 Index: 607-041-00-9	≤0.1	Acute Tox. 3, H301 Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 300 mg/kg ATE [Dermal] = 1535 mg/kg M [Acute] = 10 M [Chronic] = 1	[1] [2]
dinoseb (ISO)	EC: 201-861-7 CAS: 88-85-7 Index: 609-025-00-7	≤0.1	Acute Tox. 2, H300 Acute Tox. 3, H311 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317	ATE [Oral] = 25 mg/kg ATE [Dermal] = 300 mg/kg M [Acute] = 10	[1] [3]

Mixture 2 Acidic Compounds

SECTION 3: Composition/information on ingredients

fenoprop (ISO)	EC: 202-271-2 CAS: 93-72-1 Index: 607-047-00-1	≤0.1	Repr. 1B, H360Df Aquatic Acute 1, H400 Aquatic Chronic 1, H410 EUH044 Acute Tox. 4, H302 Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Chronic] = 10 ATE [Oral] = 650 mg/kg M [Acute] = 10 M [Chronic] = 1	[1]
hexaflumuron (ISO)	EC: 401-400-1 CAS: 86479-06-3 Index: 616-221-00-6	≤0.1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	M [Acute] = 1000 M [Chronic] = 10000	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
 - [2] Substance with a workplace exposure limit
 - [3] Substance with carcinogenic, mutagenic or reproductive toxicity properties
- Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Mixture 2 Acidic Compounds**SECTION 4: First aid measures**

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed**Over-exposure signs/symptoms**

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
cyanides

5.3 Advice for firefighters

Special precautions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Avoid release to the environment. Avoid contact with eyes, skin and clothing. Do not ingest. Empty containers retain product residue and can be hazardous. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store between the following temperatures: 18 to 25°C (64.4 to 77°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds**Danger criteria**

Mixture 2 Acidic Compounds

SECTION 7: Handling and storage

Category	Notification and MAPP threshold	Safety report threshold
P5c E1	5000 tonnes 100 tonnes	50000 tonnes 200 tonnes

7.3 Specific end use(s)

Recommendations : Industrial applications, Professional applications.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
acetonitrile	NAOSH (Ireland, 4/2024) Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 40 ppm. OELV 8 hours: 70 mg/m ³ . OELV 15 minutes: 4 mg/m ³ . OELV 15 minutes: 1.8 ppm. EU OEL (Europe, 1/2022) Absorbed through skin. TWA 8 hours: 40 ppm. TWA 8 hours: 70 mg/m ³ .
2,4,5-T (ISO)	NAOSH (Ireland, 4/2024) Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 10 mg/m ³ .

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Result
acetonitrile	DNEL - General population - Long term - Oral 0.4 mg/kg bw/day
	DNEL - General population - Short term - Oral 0.6 mg/kg bw/day
	DNEL - General population - Long term - Dermal 1.2 mg/kg bw/day
	DNEL - General population - Long term - Inhalation 2.4 mg/m ³
dinoseb (ISO)	DNEL - General population - Long term - Dermal 0.003 mg/kg bw/day
	DNEL - General population - Long term - Oral 0.006 mg/kg bw/day
	DNEL - Workers - Long term - Dermal 0.006 mg/kg bw/day
	DNEL - General population - Long term - Inhalation 0.01 mg/m ³
	DNEL - General population - Short term - Dermal 0.02 mg/kg bw/day
	DNEL - General population - Short term - Oral 0.03 mg/kg bw/day
	DNEL - Workers - Short term - Dermal 0.03 mg/kg bw/day
	DNEL - Workers - Long term - Inhalation 0.04 mg/m ³
	DNEL - General population - Short term - Inhalation 0.052 mg/m ³
	DNEL - Workers - Short term - Inhalation 0.21 mg/m ³

PNECs

Mixture 2 Acidic Compounds**SECTION 8: Exposure controls/personal protection**

Not available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties**Appearance**

Physical state : Liquid.
Colour : Colourless.
Odour : Aromatic.
Odour threshold : Not available.
Melting point/freezing point : -48°C

Mixture 2 Acidic Compounds

SECTION 9: Physical and chemical properties

- Boiling point or initial boiling point and boiling range** : 81 to 82°C
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Lower: 4.4%
Upper: 16%
- Flash point** : Closed cup: 5.56°C
- Auto-ignition temperature** : 523.89°C
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): Not available.

Solubility	Media	Result
	water	Soluble

- Partition coefficient: n-octanol/water** : Not applicable.
- Vapour pressure** : 13.3 kPa (100 mm Hg)
- Relative density** : 0.786
- Density** : 0.786 g/cm³
- Relative vapour density** : 1.4 [Air = 1]

Particle characteristics

- Median particle size** : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

- Explosive properties** : Not available.
- Oxidising properties** : Not available.

9.2.2 Other safety characteristics

- Miscible with water** : Yes.
- Evaporation rate** : Not available.
- Physical/chemical properties comments** : Not available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:
oxidising materials
Reactive or incompatible with the following materials: acids.

Mixture 2 Acidic Compounds

SECTION 10: Stability and reactivity

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
acetonitrile	Rat - Oral - LD50	2460 mg/kg
	Rat - Inhalation - LC50 Vapour	17100 ppm [4 hours]
2,4,5-T (ISO)	Rat - Oral - LD50	300 mg/kg
	Rat - Dermal - LD50	1535 mg/kg
dinoseb (ISO)	Rat - Oral - LD50	25 mg/kg
fenoprop (ISO)	Rat - Oral - LD50	650 mg/kg
hexaflumuron (ISO)	Rat - Oral - LD50	>5 g/kg
	Rat - Dermal - LD50	>5 g/kg

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Mixture 2 Acidic Compounds	500.4	1100.8	N/A	11.0	N/A
acetonitrile	500	1100	N/A	11	N/A
2,4,5-T (ISO)	300	1535	N/A	N/A	N/A
dinoseb (ISO)	25	300	N/A	N/A	N/A
fenoprop (ISO)	650	N/A	N/A	N/A	N/A

Skin corrosion/irritation

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result	
acetonitrile	Rabbit - Eyes - Moderate irritant	Duration of treatment/exposure: 24 hours Amount/concentration applied: 100 uL
dinoseb (ISO)	Rabbit - Eyes - Severe irritant	Duration of treatment/exposure: 24 hours Amount/concentration applied: 50 ug
	Rabbit - Eyes - Severe irritant	Amount/concentration applied: 0.1 MI

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : May cause respiratory irritation.

Ingredient name	Conclusion/Summary
acetonitrile	May cause respiratory irritation.

Mixture 2 Acidic Compounds

SECTION 11: Toxicological information

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
2,4,5-T (ISO)	STOT SE 3, H335 (Respiratory tract irritation)

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled.

Skin contact : Harmful in contact with skin.

Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Mixture 2 Acidic Compounds

SECTION 11: Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

Other information : Adverse symptoms may include the following: May cause headache, weakness, dizziness, shortness of breath, cyanosis, rapid heart beat, unconsciousness and possible death.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	
acetonitrile	Acute - LC50 - Fresh water	3600 mg/l [48 hours]
	Acute - IC50 - Fresh water	3685 mg/l [96 hours]
	Chronic - NOEC - Fresh water	160 mg/l [21 days]
	Chronic - NOEC - Fresh water	1000 mg/l [96 hours]
2,4,5-T (ISO)	Acute - LC50 - Fresh water	1000 mg/l [96 hours]
	Acute - LC50 - Fresh water	150 µg/l [96 hours]
	Acute - LC50 - Fresh water	>200 mg/l [48 hours]
	Chronic - NOEC - Fresh water	20 mg/l [72 hours]
dinoseb (ISO)	Acute - IC50 - Fresh water	85.74 mg/l [96 hours]
	Acute - LC50 - Fresh water	240 µg/l [48 hours]
	Acute - LC50 - Fresh water	28 µg/l [96 hours]
	Chronic - NOEC - Fresh water	4.32 µg/l [64 days]
fenoprop (ISO)	Acute - LC50 - Fresh water	350 µg/l [96 hours]
	Acute - LC50 - Fresh water	>140 mg/l [48 hours]
	Chronic - NOEC - Fresh water	0.111 ppb [48 hours]
hexaflumuron (ISO)	Acute - EC50 - Fresh water	0.001 ppb [21 days]
	Chronic - NOEC - Fresh water	0.001 ppb [21 days]
	Chronic - NOEC	0.5 mg/l [72 hours]

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Product/ingredient name	Result
acetonitrile	- 70% [21 days] - Readily -

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
acetonitrile	-	-	Readily

12.3 Bioaccumulative potential

Mixture 2 Acidic Compounds

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
acetonitrile	-0.34	3	Low
2,4,5-T (ISO)	3.31	-	Low
dinoseb (ISO)	1.26	61.66	Low
fenoprop (ISO)	3.8	-	Low
hexaflumuron (ISO)	5.68	-	High

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logK _{oc}	K _{oc}
acetonitrile	0.42	2.62657
2,4,5-T (ISO)	2	97.6121
dinoseb (ISO)	2.7	503.534
fenoprop (ISO)	1.8	56.4311
hexaflumuron (ISO)	2.9	708.103

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
acetonitrile	No	N/A	Yes	No	N/A	N/A	Yes
2,4,5-T (ISO)	No	N/A	Yes	No	N/A	N/A	Yes
dinoseb (ISO)	N/A	N/A	Yes	Yes	No	N/A	No
fenoprop (ISO)	No	N/A	Yes	No	N/A	N/A	Yes
hexaflumuron (ISO)	No	No	No	No	No	No	No

Mobility : Not available.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
acetonitrile	No	N/A	No	No	No	N/A	No
2,4,5-T (ISO)	No	N/A	N/A	No	N/A	N/A	N/A
dinoseb (ISO)	No	N/A	No	Yes	No	N/A	No
fenoprop (ISO)	No	N/A	N/A	No	N/A	N/A	N/A
hexaflumuron (ISO)	N/A	N/A	N/A	Yes	N/A	N/A	N/A

Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
acetonitrile	No	N/A	No	No	No	N/A	No
2,4,5-T (ISO)	No	N/A	N/A	No	N/A	N/A	N/A
dinoseb (ISO)	No	N/A	No	Yes	No	N/A	No
fenoprop (ISO)	No	N/A	N/A	No	N/A	N/A	N/A
hexaflumuron (ISO)	No	No	No	No	No	No	No

Conclusion/Summary : The product does not meet the criteria to be considered as a PBT or vPvB.

Regulation (EC) No. 1272/2008 [CLP]

12.6 Endocrine disrupting properties

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

Mixture 2 Acidic Compounds

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.




Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	UN1648	UN1648	UN1648
14.2 UN proper shipping name	ACETONITRILE solution	ACETONITRILE solution	Acetonitrile solution
14.3 Transport hazard class(es)	3 	3 	3 
14.4 Packing group	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

Remarks: De minimis quantities

ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Hazard identification number 33
Limited quantity 1 L
Tunnel code (D/E)

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-E, S-D

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Mixture 2 Acidic Compounds

SECTION 14: Transport information

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
dinoseb (ISO)	Toxic to reproduction	Candidate	ED/169/2012	12/19/2012

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

None of the components are listed / The components are not impacted by a restriction

Labelling : Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Listed

Industrial emissions (integrated pollution prevention and control) - Water : Listed

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c E1

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Mixture 2 Acidic Compounds

SECTION 15: Regulatory information

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

- Australia** : Not determined.
- Canada** : Not determined.
- China** : Not determined.
- Eurasian Economic Union** : **Russian Federation inventory:** All components are listed or exempted.
- Japan** : **Japan inventory (CSCL):** Not determined.
Japan inventory (ISHL): Not determined.
- New Zealand** : Not determined.
- Philippines** : Not determined.
- Republic of Korea** : Not determined.
- Taiwan** : All components are listed or exempted.
- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : Not determined.
- Viet Nam** : All components are listed or exempted.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

 Indicates information that has changed from previously issued version.

- Abbreviations and acronyms** :
- ATE = Acute Toxicity Estimate
 - CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 - DNEL = Derived No Effect Level
 - EUH statement = CLP-specific Hazard statement
 - PNEC = Predicted No Effect Concentration
 - RRN = REACH Registration Number

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Eye Irrit. 2, H319 Aquatic Chronic 1, H410	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method

[Full text of abbreviated H statements](#)

H225	Highly flammable liquid and vapour.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H360Df	May damage the unborn child. Suspected of damaging fertility.

Mixture 2 Acidic Compounds

SECTION 16: Other information

H400 H410 EUH044	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Risk of explosion if heated under confinement.
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Full text of classifications [CLP/GHS]

Acute Tox. 2 Acute Tox. 3 Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 1 Eye Dam. 1 Eye Irrit. 2 Flam. Liq. 2 Repr. 1B Skin Irrit. 2 Skin Sens. 1 STOT SE 3	ACUTE TOXICITY - Category 2 ACUTE TOXICITY - Category 3 ACUTE TOXICITY - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 REPRODUCTIVE TOXICITY - Category 1B SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITISATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
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