

SAFETY DATA SHEET



LC TOF/QTOF/QQQ Pesticide Test Mix, Part Number 5190-0469

Section 1. Identification

1.1 Product identifier

Product name : LC TOF/QTOF/QQQ Pesticide Test Mix, Part Number 5190-0469
Part no. (chemical kit) : 5190-0469
Part no. : Mixture 1 Basic Compounds 5190-0469-1
 Mixture 2 Acidic Compounds 5190-0469-2
Validation date : 9/29/2021

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

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 Mixture 1 Basic Compounds 3 x 1 ml ampoule
 Mixture 2 Acidic Compounds 3 x 1 ml ampoule

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : Mixture 1 Basic Compounds This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 Mixture 2 Acidic Compounds This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Mixture 1 Basic Compounds

H225 FLAMMABLE LIQUIDS - Category 2
 H302 ACUTE TOXICITY (oral) - Category 4
 H312 ACUTE TOXICITY (dermal) - Category 4
 H332 ACUTE TOXICITY (inhalation) - Category 4
 H319 EYE IRRITATION - Category 2A
 H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
 H400 AQUATIC HAZARD (ACUTE) - Category 1
 H410 AQUATIC HAZARD (LONG-TERM) - Category 1

Mixture 2 Acidic Compounds

H225 FLAMMABLE LIQUIDS - Category 2
 H302 ACUTE TOXICITY (oral) - Category 4
 H312 ACUTE TOXICITY (dermal) - Category 4
 H332 ACUTE TOXICITY (inhalation) - Category 4
 H319 EYE IRRITATION - Category 2A
 H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
 H410 AQUATIC HAZARD (LONG-TERM) - Category 1

2.2 GHS label elements

Section 2. Hazards identification

Hazard pictograms : Mixture 1 Basic Compounds



Mixture 2 Acidic Compounds



Signal word : Mixture 1 Basic Compounds
Mixture 2 Acidic Compounds

Danger

Danger

Hazard statements : Mixture 1 Basic Compounds

H225 - Highly flammable liquid and vapor.

H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.

H319 - Causes serious eye irritation.

H373 - May cause damage to organs through prolonged or repeated exposure. (blood system, central nervous system (CNS), kidneys, liver)

H410 - Very toxic to aquatic life with long lasting effects.

Mixture 2 Acidic Compounds

H225 - Highly flammable liquid and vapor.

H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.

H319 - Causes serious eye irritation.

H373 - May cause damage to organs through prolonged or repeated exposure. (blood system, central nervous system (CNS), kidneys, liver)

H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Mixture 1 Basic Compounds

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.

P241 - Use explosion-proof electrical, ventilating or lighting equipment.

P242 - Use non-sparking tools.

P243 - Take action to prevent static discharges.

P233 - Keep container tightly closed.

P273 - Avoid release to the environment.

P260 - Do not breathe vapor.

P270 - Do not eat, drink or smoke when using this product.

P264 - Wash thoroughly after handling.

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.

P241 - Use explosion-proof electrical, ventilating or lighting equipment.

P242 - Use non-sparking tools.

P243 - Take action to prevent static discharges.

P233 - Keep container tightly closed.

P273 - Avoid release to the environment.

P260 - Do not breathe vapor.

P270 - Do not eat, drink or smoke when using this

Mixture 2 Acidic Compounds

Section 2. Hazards identification

Response	: Mixture 1 Basic Compounds	product. P264 - Wash thoroughly after handling. P391 - Collect spillage. P314 - Get medical advice or attention if you feel unwell. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P302 + P312 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
	Mixture 2 Acidic Compounds	P391 - Collect spillage. P314 - Get medical advice or attention if you feel unwell. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P302 + P312 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage	: Mixture 1 Basic Compounds	P403 + P235 - Store in a well-ventilated place. Keep cool.
	Mixture 2 Acidic Compounds	P403 + P235 - Store in a well-ventilated place. Keep cool.
Disposal	: Mixture 1 Basic Compounds	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Mixture 2 Acidic Compounds	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	None known. None known.
<u>2.3 Other hazards</u>		
Hazards not otherwise classified	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	None known. None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Mixture Mixture
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Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
Mixture 1 Basic Compounds		
Acetonitrile	≥90	75-05-8
Aminocarb (ISO)	≤0.1	2032-59-9
Atrazine (ISO)	<0.1	1912-24-9
Carbofuran (ISO)	≤0.1	1563-66-2
Diazinon (ISO)	<0.1	333-41-5
Dimethoate (ISO)	<0.1	60-51-5
1-[2-(Allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole	<0.1	35554-44-0
Malathion (ISO)	<0.1	121-75-5
2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide	<0.1	67129-08-2
n-(2,6-Dichloro-3-methylphenyl)-5,7-dimethoxy-[1,2,4]triazolo(1,5-a)-pyrimidin-2-sulphonamid	<0.1	139528-85-1
Molinate (ISO)	<0.1	2212-67-1
Pyraclostrobin	≤0.1	175013-18-0
Mixture 2 Acidic Compounds		
Acetonitrile	≥90	75-05-8
bentazone (ISO)	≤0.024	25057-89-0
dinoseb (ISO)	≤0.024	88-85-7
1-(3,5-Dichloro-4-(1,1,2,2-tetrafluoroethoxy)phenyl)-3-(2,6-difluorobenzoyl)urea	≤0.024	86479-06-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	: Mixture 1 Basic Compounds	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.
	Mixture 2 Acidic Compounds	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	: Mixture 1 Basic Compounds	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 following exposure or if feeling unwell. 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

Section 4. First aid measures

medical surveillance for 48 hours.

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 following exposure or if feeling unwell. 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

Mixture 2 Acidic Compounds

: Mixture 1 Basic Compounds

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 following exposure or if feeling unwell. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Mixture 2 Acidic Compounds

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 following exposure or if feeling unwell. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Mixture 1 Basic Compounds

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

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

Section 4. First aid measures

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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Causes serious eye irritation. Causes serious eye irritation.
Inhalation	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Harmful if inhaled. Harmful if inhaled.
Skin contact	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Harmful in contact with skin. Harmful in contact with skin.
Ingestion	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Harmful if swallowed. Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Adverse symptoms may include the following: pain or irritation watering redness Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	No specific data. No specific data.
Skin contact	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	No specific data. No specific data.
Ingestion	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	No specific data. No specific data.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	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. 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	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	No specific treatment. No specific treatment.
Protection of first-aiders	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	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. 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.

Section 4. First aid measures

Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media : Mixture 1 Basic Compounds
Mixture 2 Acidic Compounds

Use dry chemical, CO₂, water spray (fog) or foam.
Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Mixture 1 Basic Compounds
Mixture 2 Acidic Compounds

Do not use water jet.
Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical : Mixture 1 Basic Compounds

Highly flammable liquid and vapor. 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 vapor/gas is heavier than air and will spread along the ground. Vapors 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.

Mixture 2 Acidic Compounds

Highly flammable liquid and vapor. 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 vapor/gas is heavier than air and will spread along the ground. Vapors 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 thermal decomposition products : Mixture 1 Basic Compounds

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide
nitrogen oxides
cyanides

Mixture 2 Acidic Compounds

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide
nitrogen oxides
cyanides

5.3 Advice for firefighters

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : Mixture 1 Basic Compounds

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.

Mixture 2 Acidic Compounds

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 : Mixture 1 Basic Compounds

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Mixture 2 Acidic Compounds

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Mixture 1 Basic Compounds

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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Mixture 2 Acidic Compounds

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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : Mixture 1 Basic Compounds

If specialized 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". If specialized 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".

Mixture 2 Acidic Compounds

Section 6. Accidental release measures

6.2 Environmental precautions

: Mixture 1 Basic Compounds

Avoid dispersal of spilled 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.

Mixture 2 Acidic Compounds

Avoid dispersal of spilled 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 materials for containment and cleaning up

Methods for cleaning up

: Mixture 1 Basic Compounds

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 2 Acidic Compounds

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.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures

: Mixture 1 Basic Compounds

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

Mixture 2 Acidic Compounds

Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless

Section 7. Handling and storage

adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Mixture 1 Basic Compounds

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.

Mixture 2 Acidic Compounds

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 : Mixture 1 Basic Compounds

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 oxidizing 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 unlabeled containers.

Mixture 2 Acidic Compounds

Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. 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 oxidizing 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Section 7. Handling and storage

Recommendations	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Not available. Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Mixture 1 Basic Compounds Acetonitrile	<p>ACGIH TLV (United States, 1/2021). Absorbed through skin. TWA: 20 ppm 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 40 ppm 8 hours. TWA: 70 mg/m³ 8 hours. STEL: 60 ppm 15 minutes. STEL: 105 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2020). TWA: 20 ppm 10 hours. TWA: 34 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 5/2018). TWA: 40 ppm 8 hours. TWA: 70 mg/m³ 8 hours.</p>
Aminocarb (ISO) Atrazine (ISO)	<p>None.</p> <p>ACGIH TLV (United States, 1/2021). TWA: 2 mg/m³ 8 hours. Form: Inhalable fraction</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2020). TWA: 5 mg/m³ 10 hours.</p>
Carbofuran (ISO)	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 0.1 mg/m³ 8 hours.</p> <p>ACGIH TLV (United States, 1/2021). TWA: 0.1 mg/m³ 8 hours. Form: Inhalable fraction and vapor</p> <p>NIOSH REL (United States, 10/2020). TWA: 0.1 mg/m³ 10 hours.</p>
Diazinon (ISO)	<p>OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 0.1 mg/m³ 8 hours.</p> <p>ACGIH TLV (United States, 1/2021). Absorbed through skin. TWA: 0.01 mg/m³ 8 hours. Form: Inhalable fraction and vapor</p> <p>NIOSH REL (United States, 10/2020). Absorbed through skin. TWA: 0.1 mg/m³ 10 hours.</p>
Dimethoate (ISO) 1-[2-(Allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole Malathion (ISO)	<p>None.</p> <p>None.</p> <p>ACGIH TLV (United States, 1/2021). Absorbed through skin. TWA: 1 mg/m³ 8 hours. Form: Inhalable fraction and vapor</p> <p>NIOSH REL (United States, 10/2020).</p>

Section 8. Exposure controls/personal protection

<p>2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide n-(2,6-Dichloro-3-methylphenyl)-5,7-dimethoxy-[1,2,4]triazolo(1,5-a)- pyrimidin-2-sulphonamid Molinate (ISO) Pyraclostrobin</p> <p>Mixture 2 Acidic Compounds Acetonitrile</p> <p>bentazone (ISO) dinoseb (ISO) 1-(3,5-Dichloro-4-(1,1,2,2-tetrafluoroethoxy)phenyl)-3-((2,6-difluorobenzoyl)urea</p>	<p>Absorbed through skin. TWA: 10 mg/m³ 10 hours. OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 10 mg/m³ 8 hours. Form: Total dust OSHA PEL (United States, 5/2018). Absorbed through skin. TWA: 15 mg/m³ 8 hours. Form: Total dust None. None. None. None.</p> <p>ACGIH TLV (United States, 1/2021). Absorbed through skin. TWA: 20 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 40 ppm 8 hours. TWA: 70 mg/m³ 8 hours. STEL: 60 ppm 15 minutes. STEL: 105 mg/m³ 15 minutes. NIOSH REL (United States, 10/2020). TWA: 20 ppm 10 hours. TWA: 34 mg/m³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 40 ppm 8 hours. TWA: 70 mg/m³ 8 hours. None. None. None.</p>
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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.

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.

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

Section 8. Exposure controls/personal 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.
- 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.

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

Physical state	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Liquid. Liquid.
Color	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Colorless. Colorless.
Odor	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Aromatic. Aromatic.
Odor threshold	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Not available. Not available.
pH	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Not available. Not available.
Melting point/freezing point	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	-48°C (-54.4°F) -48°C (-54.4°F)
Boiling point, initial boiling point, and boiling range	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	81 to 82°C (177.8 to 179.6°F) 81 to 82°C (177.8 to 179.6°F)
Flash point	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Closed cup: 5.56°C (42°F) Closed cup: 5.56°C (42°F)
Evaporation rate	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Not available. Not available.
Flammability	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Not applicable. Not applicable.
Lower and upper explosion limit/flammability limit	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	Lower: 4.4% Upper: 16% Lower: 4.4% Upper: 16%
Vapor pressure	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	13.3 kPa (100 mm Hg) 13.3 kPa (100 mm Hg)
Relative vapor density	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	1.4 [Air = 1] 1.4 [Air = 1]
Relative density	: Mixture 1 Basic Compounds Mixture 2 Acidic Compounds	0.786 0.786

Section 9. Physical and chemical properties and safety characteristics

Solubility	: Mixture 1 Basic Compounds	Easily soluble in the following materials: cold water and hot water.
	Mixture 2 Acidic Compounds	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Mixture 1 Basic Compounds	Not applicable.
	Mixture 2 Acidic Compounds	Not applicable.
Auto-ignition temperature	: Mixture 1 Basic Compounds	523.89°C (975°F)
	Mixture 2 Acidic Compounds	523.89°C (975°F)
Decomposition temperature	: Mixture 1 Basic Compounds	Not available.
	Mixture 2 Acidic Compounds	Not available.
Viscosity	: Mixture 1 Basic Compounds	Not available.
	Mixture 2 Acidic Compounds	Not available.
Particle characteristics		
Median particle size	: Mixture 1 Basic Compounds	Not applicable.
	Mixture 2 Acidic Compounds	Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity	: Mixture 1 Basic Compounds	No specific test data related to reactivity available for this product or its ingredients.
	Mixture 2 Acidic Compounds	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Mixture 1 Basic Compounds	The product is stable.
	Mixture 2 Acidic Compounds	The product is stable.
10.3 Possibility of hazardous reactions	: Mixture 1 Basic Compounds	Under normal conditions of storage and use, hazardous reactions will not occur.
	Mixture 2 Acidic Compounds	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Mixture 1 Basic Compounds	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
	Mixture 2 Acidic Compounds	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
10.5 Incompatible materials	: Mixture 1 Basic Compounds	Reactive or incompatible with the following materials: oxidizing materials
	Mixture 2 Acidic Compounds	Reactive or incompatible with the following materials: oxidizing materials
10.6 Hazardous decomposition products	: Mixture 1 Basic Compounds	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Mixture 2 Acidic Compounds	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	Species	Dose	Exposure
Mixture 1 Basic Compounds				
Acetonitrile	LC50 Inhalation Vapor	Rat	17100 ppm	4 hours
	LD50 Oral	Rat	2460 mg/kg	-
Aminocarb (ISO)	LD50 Dermal	Rat	275 mg/kg	-
	LD50 Oral	Rat	30 mg/kg	-
Atrazine (ISO)	LC50 Inhalation Dusts and mists	Rat	5200 mg/m ³	4 hours
	LD50 Dermal	Rabbit	7500 mg/kg	-
	LD50 Dermal	Rat	3 g/kg	-
	LD50 Oral	Rat	672 mg/kg	-
Carbofuran (ISO)	LD50 Dermal	Rabbit	885 mg/kg	-
	LD50 Dermal	Rat	120 mg/kg	-
	LD50 Oral	Rat	5 mg/kg	-
Diazinon (ISO)	LC50 Inhalation Vapor	Rat	3.5 g/m ³	4 hours
	LD50 Dermal	Rabbit	3.6 g/kg	-
	LD50 Dermal	Rat	180 mg/kg	-
	LD50 Oral	Rat	66 mg/kg	-
Dimethoate (ISO)	LD50 Dermal	Rabbit	1 g/kg	-
	LD50 Dermal	Rat	353 mg/kg	-
	LD50 Oral	Rat	60 mg/kg	-
1-[2-(Allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole	LC50 Inhalation Dusts and mists	Rat	16 g/m ³	4 hours
	LD50 Dermal	Rabbit	4200 mg/kg	-
	LD50 Dermal	Rat	4200 mg/kg	-
	LD50 Oral	Rat	227 mg/kg	-
Malathion (ISO)	LC50 Inhalation Dusts and mists	Rat	43790 µg/m ³	4 hours
	LD50 Dermal	Rabbit	4100 mg/kg	-
	LD50 Oral	Rat	290 mg/kg	-
2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide	LD50 Dermal	Rat	>6810 mg/kg	-
	LD50 Oral	Rat	1 g/kg	-
Molinate (ISO)	LC50 Inhalation Dusts and mists	Rat	2100 mg/m ³	1 hours
	LD50 Dermal	Rabbit	3536 mg/kg	-
	LD50 Oral	Rat	369 mg/kg	-
Mixture 2 Acidic Compounds				
Acetonitrile	LC50 Inhalation Vapor	Rat	17100 ppm	4 hours
	LD50 Oral	Rat	2460 mg/kg	-
bentazone (ISO)	LC50 Inhalation Dusts and mists	Rat	5100 mg/m ³	4 hours
	LD50 Dermal	Rat	2500 mg/kg	-
	LD50 Oral	Rat	1100 mg/kg	-
dinoseb (ISO)	LD50 Dermal	Rabbit	40 mg/kg	-
	LD50 Dermal	Rat	80 mg/kg	-
	LD50 Oral	Rat	25 mg/kg	-
1-(3,5-Dichloro-4-(1,1,2,2-tetrafluoroethoxy)phenyl)-3-(2,6-difluorobenzoyl)urea	LD50 Dermal	Rat	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Mixture 1 Basic Compounds					
Acetonitrile	Eyes - Moderate irritant	Rabbit	-	24 hours 100 uL	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
Atrazine (ISO)	Eyes - Severe irritant	Rabbit	-	6320 ug	-
	Skin - Mild irritant	Rabbit	-	38 mg	-
Carbofuran (ISO)	Skin - Mild irritant	Rabbit	-	500 mg	-
Diazinon (ISO)	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	500 mg	-
1-[2-(Allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole	Eyes - Moderate irritant	Rabbit	-	49 mg	-
Mixture 2 Acidic Compounds					
Acetonitrile	Eyes - Moderate irritant	Rabbit	-	24 hours 100 uL	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
dinoseb (ISO)	Eyes - Severe irritant	Rabbit	-	24 hours 50 ug	-
	Eyes - Severe irritant	Rabbit	-	0.1 MI	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Mixture 1 Basic Compounds			
Atrazine (ISO)	-	3	-
Diazinon (ISO)	-	2A	-
Malathion (ISO)	-	2A	-

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Mixture 1 Basic Compounds			
Aminocarb (ISO)	Category 2	-	nervous system
Carbofuran (ISO)	Category 1	-	nervous system
Pyraclostrobin	Category 2	-	nervous system
	Category 3	-	Respiratory tract irritation
Mixture 2 Acidic Compounds			
dinoseb (ISO)	Category 3	-	Respiratory tract irritation

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Mixture 1 Basic Compounds			
Acetonitrile	Category 2	-	blood system, central nervous system (CNS), kidneys, liver
Atrazine (ISO)	Category 2	oral	heart
Diazinon (ISO)	Category 2	-	nervous system
Dimethoate (ISO)	Category 2	-	nervous system
Malathion (ISO)	Category 2	-	nervous system
n-(2,6-Dichloro-3-methylphenyl)-5,7-dimethoxy-[1,2,4] triazolo(1,5-a)-pyrimidin-2-sulphonamid	Category 2	-	eyes, kidneys
Molinate (ISO)	Category 2	-	nervous system
Mixture 2 Acidic Compounds			
Acetonitrile	Category 2	-	blood system, central nervous system (CNS), kidneys, liver
dinoseb (ISO)	Category 2	-	blood system, kidneys, liver

Aspiration hazard

Not available.

Information on the likely routes of exposure : Mixture 1 Basic Compounds Routes of entry anticipated: Oral, Dermal, Inhalation.
Mixture 2 Acidic Compounds Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Mixture 1 Basic Compounds Causes serious eye irritation.
Mixture 2 Acidic Compounds Causes serious eye irritation.

Inhalation : Mixture 1 Basic Compounds Harmful if inhaled.
Mixture 2 Acidic Compounds Harmful if inhaled.

Skin contact : Mixture 1 Basic Compounds Harmful in contact with skin.
Mixture 2 Acidic Compounds Harmful in contact with skin.

Ingestion : Mixture 1 Basic Compounds Harmful if swallowed.
Mixture 2 Acidic Compounds Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Mixture 1 Basic Compounds Adverse symptoms may include the following:
pain or irritation
watering
redness
Mixture 2 Acidic Compounds Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Mixture 1 Basic Compounds No specific data.
Mixture 2 Acidic Compounds No specific data.

Skin contact : Mixture 1 Basic Compounds No specific data.
Mixture 2 Acidic Compounds No specific data.

Section 11. Toxicological information

Ingestion : Mixture 1 Basic Compounds No specific data.
Mixture 2 Acidic Compounds No specific data.

Delayed and immediate effects and also 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

General : Mixture 1 Basic Compounds May cause damage to organs through prolonged or repeated exposure.
Mixture 2 Acidic Compounds May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : Mixture 1 Basic Compounds No known significant effects or critical hazards.
Mixture 2 Acidic Compounds No known significant effects or critical hazards.

Mutagenicity : Mixture 1 Basic Compounds No known significant effects or critical hazards.
Mixture 2 Acidic Compounds No known significant effects or critical hazards.

Reproductive toxicity : Mixture 1 Basic Compounds No known significant effects or critical hazards.
Mixture 2 Acidic Compounds No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Mixture 1 Basic Compounds					
Mixture 1 Basic Compounds	500.9	1102	N/A	11	N/A
Acetonitrile	500	1100	N/A	11	N/A
Aminocarb (ISO)	30	275	N/A	N/A	N/A
Atrazine (ISO)	672	3000	N/A	N/A	5.2
Carbofuran (ISO)	5	120	N/A	N/A	0.05
Diazinon (ISO)	66	180	N/A	3.5	N/A
Dimethoate (ISO)	60	353	N/A	N/A	N/A
1-[2-(Allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole	227	4200	N/A	N/A	1.5
Malathion (ISO)	290	4100	N/A	N/A	0.04379
2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide	1000	N/A	N/A	N/A	N/A
Molinate (ISO)	369	3536	N/A	N/A	0.525
Pyraclostrobin	N/A	N/A	N/A	3	N/A
Mixture 2 Acidic Compounds					
Mixture 2 Acidic Compounds	500.4	1100.8	N/A	11	N/A
Acetonitrile	500	1100	N/A	11	N/A
bentazone (ISO)	1100	2500	N/A	N/A	5.1
dinoseb (ISO)	25	40	N/A	N/A	N/A

Section 11. Toxicological information

Other information	: Mixture 1 Basic Compounds	Adverse symptoms may include the following: May cause headache, weakness, dizziness, shortness of breath, cyanosis, rapid heart beat, unconsciousness and possible death.
	Mixture 2 Acidic Compounds	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	Species	Exposure
Mixture 1 Basic Compounds			
Acetonitrile	Acute IC50 3685000 µg/l Fresh water Acute LC50 3600000 µg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia magna	96 hours 48 hours
	Acute LC50 1000000 µg/l Fresh water Chronic NOEC 1000000 µg/l Fresh water	Fish - Pimephales promelas Aquatic plants - Lemna minor	96 hours 96 hours
Aminocarb (ISO)	Chronic NOEC 160000 µg/l Fresh water Acute EC50 5 ppb Fresh water Acute LC50 29 µg/l Fresh water	Daphnia - Daphnia magna Daphnia - Daphnia magna Crustaceans - Gammarus lacustris	21 days 48 hours 48 hours
	Acute LC50 80 µg/l Fresh water Chronic NOEC 38.9 µg/l Fresh water	Fish - Pimephales promelas Fish - Pimephales promelas - Embryo	96 hours 31 days
Atrazine (ISO)	Acute EC50 4.3 µg/l Fresh water Acute EC50 11 µg/l Fresh water Acute EC50 0.0405 mg/l Fresh water Acute EC50 240 µg/l Fresh water Acute IC50 13.4 µg/l Marine water Acute LC50 373.9 µg/l Marine water	Algae - Chlorella vulgaris Algae - Scenedesmus acutus Aquatic plants - Lemna minor Daphnia - Daphnia pulex Aquatic plants - Zostera muelleri Crustaceans - Acartia tonsa - Adult	96 hours 72 hours 96 hours 48 hours 72 hours 48 hours
	Acute LC50 1.25 ppm Fresh water Chronic IC10 1.17 µg/l Marine water Chronic NOEC 0.002 mg/l Fresh water	Fish - Barbodes carnaticus Aquatic plants - Zostera muelleri Algae - Scenedesmus acutus var. acutus - Exponential growth phase	96 hours 72 hours 3 days
	Chronic NOEC 25 µg/l Fresh water	Crustaceans - Eurytemora affinis - Nauplii	21 days
Carbofuran (ISO)	Chronic NOEC 3 mg/l Fresh water Chronic NOEC 0.26 ppb Fresh water Acute EC50 5.11 mg/l Marine water Acute EC50 6.7745 mg/l Fresh water	Daphnia - Daphnia magna Fish - Poecilia reticulata - Adult Algae - Chaetoceros gracilis Algae - Scenedesmus acutus var. acutus	21 days 16 weeks 72 hours 96 hours
	Acute EC50 0.018 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute IC50 236000 µg/l Fresh water Acute LC50 1.592 µg/l Fresh water	Aquatic plants - Lemna minor Crustaceans - Paratelphusa jacquemontii - Intermolt	96 hours 48 hours
	Acute LC50 33 ppb Marine water Chronic NOEC 0.2 mg/l Fresh water	Fish - Menidia menidia Algae - Scenedesmus acutus var. acutus	96 hours 96 hours
Diazinon (ISO)	Chronic NOEC 171000 µg/l Fresh water Chronic NOEC 9.8 ppb Fresh water Chronic NOEC 2.6 ppb Acute EC50 10.82 mg/l Fresh water Acute EC50 0.522 ppb Fresh water Acute LC50 0.21 µg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Cyprinodon variegatus Algae - Chlorella pyrenoidosa Daphnia - Daphnia magna Crustaceans - Ceriodaphnia dubia - Neonate	96 hours 21 days 32 days 96 hours 48 hours 48 hours

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Dimethoate (ISO)	Acute LC50 0.000072 mg/l Fresh water	Fish - Cyprinus carpio	96 hours
	Chronic NOEC 0.17 mg/l Fresh water	Algae - Chlorella vulgaris - Exponential growth phase	96 hours
	Chronic NOEC 6.43 µg/l Fresh water	Aquatic plants - Oryza sativa - Seed	4 days
	Chronic NOEC 0.15 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	21 days
	Chronic NOEC 0.018 ppb Fresh water	Fish - Cyprinus carpio	30 days
	Acute EC50 6.85 ppm Marine water	Algae - Phaeodactylum tricornutum	96 hours
	Acute EC50 5500 µg/l Fresh water	Algae - Chlamydomonas noctigama	3 days
1-[2-(Allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole	Acute EC50 560 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 102.7 µg/l Fresh water	Crustaceans - Macrobrachium rosenbergii - Post-larvae	48 hours
	Acute LC50 2.3 µg/l Fresh water	Fish - Mugilidae - Fry	96 hours
	Chronic NOEC 0.04 ppm Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.0735 mg/l Fresh water	Fish - Oncorhynchus mykiss - Adult	30 days
	Acute EC50 3.54 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Malathion (ISO)	Acute LC50 1.48 ppm Fresh water	Fish - Oncorhynchus mykiss
Acute EC50 0.5 µg/l Fresh water		Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
Acute LC50 0.9 µg/l Fresh water		Daphnia - Daphnia magna - Neonate	48 hours
Acute LC50 11.676 ng/L Fresh water		Fish - Heteropneustes fossilis	96 hours
Chronic NOEC 34 mg/l Fresh water		Algae - Euglena gracilis	72 hours
Chronic NOEC 0.5 mg/l Marine water		Crustaceans - Scylla serrata	3 weeks
Chronic NOEC 0.06 ppb Fresh water		Daphnia - Daphnia magna	21 days
Molinate (ISO)	Chronic NOEC 21 ppb	Fish - Oncorhynchus mykiss	97 days
	Acute EC50 630 µg/l Fresh water	Algae - Desmodesmus subspicatus	96 hours
	Acute EC50 4.36 mg/l Fresh water	Algae - Nannochloropsis oculata	72 hours
	Acute EC50 600 µg/l Fresh water	Daphnia - Daphnia magna - Instar	48 hours
	Acute LC50 390 µg/l Fresh water	Crustaceans - Gammarus fasciatus - Instar	48 hours
	Acute LC50 355 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 220 µg/l Fresh water	Algae - Scenedesmus acutus	96 hours
Pyraclostrobin	Chronic NOEC 0.38 ppm Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 90 µg/l Fresh water	Fish - Cyprinus carpio	28 days
	Acute EC50 0.19 mg/l Fresh water	Algae - Chlorella vulgaris - Exponential growth phase	96 hours
	Acute EC50 3.9 µg/l Fresh water	Daphnia - Daphnia magna - Embryo	48 hours
	Acute LC50 6.2 ppb Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.015 mg/l Fresh water	Algae - Chlorella vulgaris - Exponential growth phase	96 hours
	Chronic NOEC 4 ppb Fresh water	Daphnia - Daphnia magna	21 days
Chronic NOEC 2.35 ppb	Fish - Oncorhynchus mykiss	98 days	
Mixture 2 Acidic Compounds Acetonitrile	Acute IC50 3685000 µg/l Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 3600000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 1000000 µg/l Fresh water	Aquatic plants - Lemna minor	96 hours

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bentazone (ISO)	Chronic NOEC 160000 µg/l Fresh water Acute EC50 60 µg/l Marine water	Daphnia - Daphnia magna Algae - Chaetoceros gracilis	21 days 3 days
dinoseb (ISO)	Acute LC50 100 ppm Fresh water Chronic NOEC 10 µg/l Marine water Acute LC50 2500 µg/l Fresh water	Fish - Oncorhynchus mykiss Algae - Chaetoceros gracilis Crustaceans - Gammarus fasciatus - Instar	96 hours 3 days 48 hours
1-(3,5-Dichloro-4-(1,1,2,2-tetrafluoroethoxy)phenyl)-3-(2,6-difluorobenzoyl)urea	Acute LC50 240 µg/l Fresh water Acute LC50 28 µg/l Fresh water Chronic NOEC 4.32 µg/l Fresh water	Daphnia - Daphnia magna Fish - Ictalurus punctatus Fish - Pimephales promelas - Embryo	48 hours 96 hours 64 days
	Acute EC50 0.111 ppb Fresh water	Daphnia - Daphnia magna	48 hours
	Chronic NOEC 0.001 ppb Fresh water	Daphnia - Daphnia magna	21 days

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Mixture 1 Basic Compounds Acetonitrile	OECD 310 Ready Biodegradability - CO ₂ in Sealed Vessels (Headspace Test)	70 % - Readily - 21 days	-	Activated sludge
Atrazine (ISO)	-	9.86 % - Not readily - 28 days	-	-
Mixture 2 Acidic Compounds Acetonitrile	OECD 310 Ready Biodegradability - CO ₂ in Sealed Vessels (Headspace Test)	70 % - Readily - 21 days	-	Activated sludge

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Mixture 1 Basic Compounds Acetonitrile	-	-	Readily
Atrazine (ISO)	-	-	Not readily
Diazinon (ISO)	Fresh water 78 days, pH 7, 20°C	-	Not readily
Mixture 2 Acidic Compounds Acetonitrile	-	-	Readily

12.3 Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Mixture 1 Basic Compounds			
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
Dimethoate (ISO)	0.78	1.58	low
1-[2-(Allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole	3.82	170	low
Malathion (ISO)	2.36	33.11	low
2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide	2.13	-	low
n-(2,6-Dichloro-3-methylphenyl)-5,7-dimethoxy-[1,2,4]triazolo(1,5-a)-pyrimidin-2-sulphonamid	3.08	-	low
Molinate (ISO)	3.21	25.7	low
Pyraclostrobin	3.99	230	low
Mixture 2 Acidic Compounds			
Acetonitrile	-0.34	3	low
bentazone (ISO)	2.34	-	low
dinoseb (ISO)	1.26	61.66	low
1-(3,5-Dichloro-4-(1,1,2,2-tetrafluoroethoxy)phenyl)-3-(2,6-difluorobenzoyl)urea	5.68	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. 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. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Section 13. Disposal considerations

Ingredient	CAS #	Status	Reference number
Mixture 1 Basic Compounds Acetonitrile (I,T)	75-05-8	Listed	U003
Mixture 2 Acidic Compounds Acetonitrile (I,T)	75-05-8	Listed	U003

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

IATA

[Additional information](#)

Remarks: De minimis quantities

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.

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](#)

U.S. Federal regulations : **TSCA 8(a) PAIR:** Acetonitrile; Atrazine (ISO)
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 307: Acetonitrile
Clean Water Act (CWA) 311: Carbofuran (ISO); Diazinon (ISO); Malathion (ISO); 2,4,5-T (ISO); fenoprop (ISO)

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

[SARA 302/304](#)

Section 15. Regulatory information

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Mixture 1 Basic Compounds						
Carbofuran (ISO)	≤0.1	Yes.	10 / 10000	-	10	-
Dimethoate (ISO)	<0.1	Yes.	500 / 10000	-	10	-
Mixture 2 Acidic Compounds						
dinoseb (ISO)	≤0.024	Yes.	100 / 10000	-	1000	-

SARA 304 RQ : 157480.3 lbs / 71496.1 kg

SARA 311/312

Classification :

Mixture 1 Basic Compounds	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A
Mixture 2 Acidic Compounds	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A

Composition/information on ingredients

Name	%	Classification
Mixture 1 Basic Compounds		
Acetonitrile	≥90	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
Mixture 2 Acidic Compounds		
Acetonitrile	≥90	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Mixture 1 Basic Compounds Acetonitrile	75-05-8	≥90
	Mixture 2 Acidic Compounds Acetonitrile	75-05-8	≥90
Supplier notification	Mixture 1 Basic Compounds Acetonitrile	75-05-8	≥90
	Mixture 2 Acidic Compounds Acetonitrile	75-05-8	≥90

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: ACETONITRILE

New York : The following components are listed: Acetonitrile; Ethanenitrile; Methyl cyanide

Section 15. Regulatory information

New Jersey : The following components are listed: ACETONITRILE; METHYL CYANIDE; CYANOMETHANE

Pennsylvania : The following components are listed: ACETONITRILE

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Imazalil and Malathion, which are known to the State of California to cause cancer, and Atrazine, Molinate and Dinoseb, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Mixture 1 Basic Compounds		
Atrazine	-	Yes.
Imazalil	Yes.	-
Malathion	Yes.	-
Molinate	-	-
Mixture 2 Acidic Compounds		
Dinoseb	-	-

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.
Europe : Not determined.
Japan : **Japan inventory (CSCL):** Not determined.
Japan inventory (ISHL): Not determined.
New Zealand : Not determined.
Philippines : Not determined.
Republic of Korea : Not determined.
Taiwan : Not determined.
Thailand : Not determined.
Turkey : Not determined.
United States : Not determined.
Viet Nam : Not determined.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
Mixture 1 Basic Compounds FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method
Mixture 2 Acidic Compounds FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

History

Date of issue : 09/29/2021

Date of previous issue : 11/01/2020

Version : 8

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 UN = United Nations

✔ Indicates information that has changed from previously issued version.

Notice to reader

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