SAFETY DATA SHEET

According to JIS Z 7253:2019
Revision date 17-Jan-2024
Revision Number 8.03

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Pesticide Mixture Standard Solution PL-6-3 (each 20µg/mL Acetone Solution)
Product Code	169-24601,165-24603

Supplier
FUJIFILM Wako Pure Chemical Corporation
1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
Phone: +81-6-6203-3741
Fax: +81-6-6203-2029

Emergency telephone number +81-6-6203-3741 / +81-3-3270-8571
Recommended uses For research use only
Restrictions on use Seek expert judgment when using for purposes other than those recommended.

Section 2: HAZARDS IDENTIFICATION

GHS classification
Classification of the substance or mixture

Flammable liquids	Category 2
Serious eye damage/eye irritation	Category 2B
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Category 3 Respiratory irritation, Narcotic effects	
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 central nervous system, respiratory system	
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 3

Pictograms

Signal word Danger

Hazard statements
H225 - Highly flammable liquid and vapor
H320 - Causes eye irritation
H361 - Suspected of damaging fertility or the unborn child
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H401 - Toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects
H372 - Causes damage to the following organs through prolonged or repeated exposure: central nervous system, respiratory system

Precautionary statements-(Prevention)
• Obtain special instructions before use

- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Wash face, hands and any exposed skin thoroughly after handling
- Do not breathe dust/fume/gas/mist/vapors/spray
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Avoid release to the environment
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ ventilating / lighting / equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Keep cool

Precautionary statements-(Response)

- IF exposed or concerned: Get medical advice/attention
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists: Get medical advice/attention
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- In case of fire: Use suitable extinguishing media for extinction

Precautionary statements-(Storage)

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

Precautionary statements-(Disposal)

- Dispose of contents/container to an approved waste disposal plant

Others

Other hazards Not available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Mixture

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Acetone	<100	58.08	(2)-542	*	67-64-1
Metalaxyl-M	0.0020 w/v %	279.33	N/A	4-(7)-2441	70630-17-0
Bromobutide	0.0020 w/v %	312.25	N/A	4-(7)-1142	74712-19-9
Paclobutrazol	0.0020 w/v %	293.79	N/A	N/A	76738-62-0
Oxadixyl	0.0020 w/v %	278.30	N/A	8-(7)-1153	77732-09-3
Hexaconazole	0.0020 w/v %	314.21	(5)-6899	8-(3)-760 8-(3)-1150	79983-71-4
(E)-Pyrifenox	0.0020 w/v %	295.16	N/A	8-(1)-1873	83227-22-9
Pyributicarb	0.0020 w/v %	330.44	N/A	8-(1)-2038	88678-67-5
diphenamid	0.0020 w/v %	239.31	N/A	N/A	957-51-7
Dichlofenthion	0.0020 w/v %	315.15	(3)-4112	4-(9)-190	97-17-6
Benoxacor	0.0020 w/v %	260.12	N/A	N/A	98730-04-2
Flumioxazin	0.0020 w/v %	354.33	N/A	N/A	103361-09-7
Nitrothal-isopropyl	0.0020 w/v %	295.29	N/A	N/A	10552-74-6
Fenoxanil	0.0020 w/v %	329.22	N/A	N/A	115852-48-7
Tebufenpyrad	0.0020 w/v %	333.86	N/A	N/A	119168-77-3
Cyhalofop-butyl	0.0020 w/v %	357.38	N/A	4-(7)-1745	122008-85-9
cafenstrole	0.0020 w/v %	350.44	N/A	8-(3)-834	125306-83-4
Tolfenpyrad	0.0020 w/v %	383.87	N/A	8-(2)-1836	129558-76-5
Thifluzamide	0.0020 w/v %	528.06	N/A	N/A	130000-40-7
Pyrazophos	0.0020 w/v %	373.36	N/A	8-(2)-1226	13457-18-6
Quinalphos	0.0020 w/v %	298.30	N/A	8-(2)-1065	13593-03-8

Propazine	0.0020 w/v %	229.71	N/A	N/A	139-40-2
Trifloxystrobin	0.0020 w/v %	408.37	N/A	N/A	141517-21-7
Napropamide	0.0020 w/v %	271.35	(9)-2333	5-359	15299-99-7
Prohydrojasmon	0.0020 w/v %	254.37	N/A	3-(3)-129	158474-72-7
Edifenphos	0.0020 w/v %	310.37	N/A	4-(9)-91	17109-49-8
Benfluralin	0.0020 w/v %	335.28	N/A	4-(12)-373	1861-40-1
Cyanazine	0.0020 w/v %	240.69	N/A	8-(3)-498	21725-46-2
Piperophos	0.0020 w/v %	353.48	N/A	N/A	24151-93-7
Phenothrin	0.0020 w/v %	350.45	(3)-4219	N/A	26002-80-2
CYAP	0.0020 w/v %	243.22	(3)-2625	*	2636-26-2
3,5-Xylyl Methylcarbamate	0.0020 w/v %	179.22	(3)-2210	3-(3)-70	2655-14-3
2-Amino-3-chloro-1,4-naphthoquinone	0.0020 w/v %	207.61	(4)-390	7-(2)-29	2797-51-5
Bromacil	0.0020 w/v %	261.12	(5)-937	*	314-40-9
Butamifos	0.0020 w/v %	332.36	N/A	N/A	36335-67-8
Diclofop-methyl	0.0020 w/v %	341.19	N/A	N/A	51338-27-3
N-Benzoyl-N-(3-chloro-4-fluorophenyl)-DL-alanin emethyl ester	0.0020 w/v %	335.76	N/A	N/A	52756-25-9

Note on ISHL No.: * in the table means announced chemical substances.

Section 4: FIRST AID MEASURES

Inhalation

Remove to fresh air. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Protection of first-aiders

Use personal protective equipment as required.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media

Carbon dioxide (CO2), Foam, Extinguishing powder, Sand

Unsuitable extinguishing media

No information available

Specific hazards arising from the chemical product

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Vapors may form explosive mixtures with air

Special extinguishing method

No information available

Special protective actions for fire-fighters

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for contaminent and methods and materials for cleaning up

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Recoverly, neutralization

No information available

Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: HANDLING AND STORAGE

Handling

Technical measures

Highly flammable. Avoid contact with high temperature objects, spark, and strong oxidizing agents. To cut with care and wear protective gloves and protective goggles to ampoule time of the opening (Cutting method to check the label). Use with local exhaust ventilation.

Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Storage

Safe storage conditions

Storage conditions	Container protected from light, and store tightly closed in freezer (-20°C). Packed with an inert gas. Store locked up.
Safe packaging material	Ampoule
Incompatible substances	Strong oxidizing agents

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

Chemical Name	JSOH (Japan)	ISHL (Japan)	ACGIH
Acetone 67-64-1	200ppm(470mg/m^3)	ISHL/ACL: 500 ppm	STEL: 500 ppm TWA: 250 ppm
Propazine 139-40-2	N/A	N/A	TWA: 2 mg/m^3 inhalable particulate matter
Cyanazine 21725-46-2	N/A	N/A	TWA: 0.1 mg/m^3 inhalable particulate matter
Bromacil 314-40-9	N/A	N/A	TWA: 10 mg/m^3

Personal protective equipment

Respiratory protection gas mask for organic gas (JIS T 8152)
Hand protection chemical protective gloves (JIS T 8116)
Eye protection protective eyeglasses or chemical safety goggles
Skin and body protection Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form	
Color	yellow
Turbidity	clear
Appearance	liquid
Odor	characteristic odor
Melting point/freezing point	no data available
Boiling point, initial boiling point and boiling range	57 °C
Flammability	Highly flammable liquid and vapor
Evaporation rate:	no data available
Flammability (solid, gas):	no data available
Upper/lower flammability or explosive limits	
Upper:	no data available
Lower:	no data available
Flash point	-18 °C
Auto-ignition temperature:	538 °C / 1000 °F
Decomposition temperature:	no data available
pH	no data available
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Solubilities	water , Ethanol , ether : freely soluble .
n-Octanol/water partition coefficient:(log Pow)	no data available
Vapour pressure	no data available
Specific Gravity / Relative density	0.792
Vapour density	no data available
Particle characteristics	no data available

Section 10: STABILITY AND REACTIVITY

Stability

Reactivity no data available
Chemical stability May be altered by light.

Hazardous reactions

None under normal processing

Conditions to avoid

Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monooxide (CO), Carbon dioxide (CO_2), Nitrogen oxides (NOx), Sulfur oxides (SOx), Phosphorus oxide, Halides

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Acetone	5800 mg/kg (Rat)	> 7400 mg/kg (Rabbit)	32000 ppm (Rat) 4 h(vapor)
Metalaxyl-M	953 mg/kg (Rat)	>2000 mg/kg (Rat)	>2.29 mg/L (Rat)

Paclobutrazol	1300 mg/kg (Rat)	> 2000 mg/kg (Rat) > 1 g/kg (Rat) > 1 g/kg (Rabbit)	3.13 mg/L (Rat) 4 h 369 g/m³ (Rat) 4 h 4.79 mg/L (Rat) 4 h
Oxadixyl	1860 mg/kg (Rat)	>2 g/kg (Rat)	> 6 g/m³ (Rat) 6 h
Hexaconazole	2189 mg/kg (Rat)	>2 g/kg (Rat)	> 5.9 mg/L (Rat) 4 h
Pyributicarb	>5000 mg/kg (Rat)	>5000 mg/kg (Rat)	>6.52 mg/L (Rat) 4 h
diphenamid	685 mg/kg (Rat)	>6320 mg/kg (Rat)	N/A
Dichlofenthion	172 mg/kg (Rat) 136 mg/kg (Rat)	355 mg/kg (Rat)	N/A
Benoxacor	> 5 g/kg (Rat)	2010 mg/kg (Rabbit)	> 2 g/m³ (Rat) 4 h
Flumioxazin	> 5000 mg/kg (Rat)	N/A	> 3930 mg/m³ (Rat) 4 h
Nitrothal-isopropyl	>6400 mg/kg (Rat)	>2500 mg/kg (Rat)	N/A
Tebufenpyrad	50 - 300 mg/kg (Rat)	> 2000 mg/kg (Rat)	2.7 mg/L (Rat) 4 h > 3.1 mg/L (Rat) 4 h
Cyhalofop-butyl	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5.63 mg/L (Rat) 4 h
cafenstrole	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 1.97 mg/L (Rat) 4h
Tolfenpyrad	75 mg/kg (Rat)	> 2000 mg/kg (Rat)	1.50 mg/L 4 h (Rat)
Thifluzamide	> 5000 mg/kg (Rat)	> 5000 mg/kg(Rabbit)	> 5.0 mg/L(Rat) 4h
Pyrazophos	151 mg/kg (Rat)	> 2 g/kg (Rat)	N/A
Quinalphos	26 mg/kg (Rat)	300 mg/kg (Rat)	N/A
Propazine	3840 mg/kg (Rat)	>3100 mg/kg (Rat)	N/A
Trifloxystrobin	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	N/A
Napropamide	5 g/kg (Rat)	4640 mg/kg (Rabbit)	N/A
Prohydrojasmon	> 5,000 mg/kg (Rat)	N/A	N/A
Edifenphos	100 mg/kg (Rat)	615 mg/kg (Rat)	0.65 mg/L (Rat) 4 h 650 mg/m³ (Rat) 4 h
Benfluralin	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	N/A
Cyanazine	149 mg/kg (Rat) 306 mg/kg (Rat)	> 2 g/kg (Rabbit) 1200 mg/kg (Rat)	> 0.809 mg/L (Rat) 4 h > 960 mg/m³ (Rat) 4 h
Piperophos	324 mg/kg (Rat)	> 2150 mg/kg (Rat)	＞ 0.98 mg/L (Rat) 4 h
Phenothrin	> 10 g/kg (Rat)	> 2000 mg/kg (Rat) > 5 g/kg (Rat)	> 3760 mg/m³ (Rat) 4 h
CYAP	580 mg/kg (Rat)	560 mg/kg (Rat)	1.09 mg/L (Rat) 4 h
3,5-Xylyl Methylcarbamate	542 mg/kg (Rat)	> 5,000 mg/kg (Rat)	> 1.02 mg/L (Rat)
2-Amino-3-chloro-1,4-naphtho quinone	500 mg/kg (Rat)	> 2000 mg/kg (Rat)	0.79 mg/L (Rat) 4 h
Bromacil	691 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 4.2 mg/L (Rat) 4 h
Butamifos	630 mg/kg (Rat)	> 5000 mg/kg (Rat)	> 1.2 mg/L (Rat) 4 h
Diclofop-methyl	512 mg/kg	>2000 mg/kg	8300 mg/m³ (Rat) 4 h
N-Benzoyl-N-(3-chloro-4-fluoro phenyl)-DL-alaninemethyl ester	1200 mg/kg (Rat)	> 294 mg/kg (Rat)	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Acetone	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pyributicarb	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tolfenpyrad	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Thifluzamide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.	Based on the NITE GHS classification results	Based on the NITE GHS classification results.
Trifloxystrobin	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Edifenphos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
CYAP	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
Acetone	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pyributicarb	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tolfenpyrad	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Thifluzamide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS Classification results.
Trifloxystrobin	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results
Edifenphos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
CYAP	Based on the NITE GHS	Based on the NITE GHS	Based on the NITE GHS

	classification results.	classification results.	classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
Acetone	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.
Pyributicarb	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.
Tolfenpyrad	Based on the NITE GHS classification results.
Thifluzamide	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.
Trifloxystrobin	Based on the NITE GHS classification results.
Edifenphos	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.
CYAP	Based on the NITE GHS classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Acetone	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.
Pyributicarb	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.
Tolfenpyrad	Based on the NITE GHS classification results.
Thifluzamide	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.
Trifloxystrobin	Based on the NITE GHS classification results.
Edifenphos	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.
CYAP	Based on the NITE GHS classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Acetone	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.
Pyributicarb	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.
Tolfenpyrad	Based on the NITE GHS classification results.
Thifluzamide	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.
Trifloxystrobin	Based on the NITE GHS classification results.
Edifenphos	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.
CYAP	Based on the NITE GHS classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagencity source information
Acetone	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.
Pyributicarb	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.
Tolfenpyrad	Based on the NITE GHS classification results.
Thifluzamide	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.
Trifloxystrobin	Based on the NITE GHS classification results.
Edifenphos	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.
CYAP	Based on the NITE GHS classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Acetone	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.
Pyributicarb	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.

Tolfenpyrad	Based on the NITE GHS classification results.
Thifluzamide	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.
Trifloxystrobin	Based on the NITE GHS classification results.
Edifenphos	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.
CYAP	Based on the NITE GHS classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
Dichlofenthion 97-17-6		Group 2A		
Tebufenpyrad 119168-77-3		Group 2A		
Tolfenpyrad 129558-76-5	-	Group 2A	-	-
Pyrazophos 13457-18-6	-	Group 2A	-	-
Quinalphos 13593-03-8		Group 2A		
Propazine 139-40-2			A3	
Cyanazine 21725-46-2			A3	
Phenothrin 26002-80-2		Group 2A		
CYAP 2636-26-2		Group 2A		
3,5-Xylyl Methylcarbamate 2655-14-3		Group 2A		
Bromacil 314-40-9	-	-	A3	-

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Acetone	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.
Pyributicarb	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.
Tolfenpyrad	Based on the NITE GHS classification results.
Thifluzamide	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.
Trifloxystrobin	Based on the NITE GHS classification results.
Edifenphos	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.

CYAP	Based on the NITE GHS classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Acetone	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.
Pyributicarb	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.
Tolfenpyrad	Based on the NITE GHS classification results.
Thifluzamide	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.
Trifloxystrobin	Based on the NITE GHS classification results.
Edifenphos	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.
CYAP	Based on the NITE GHS classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Acetone	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.
Pyributicarb	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.
Tolfenpyrad	Based on the NITE GHS classification results.
Thifluzamide	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.
Trifloxystrobin	Based on the NITE GHS classification results.
Edifenphos	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.
CYAP	Based on the NITE GHS classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Acetone	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.

Pyributicarb	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.
Tolfenpyrad	Based on the NITE GHS classification results.
Thifluzamide	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.
Trifloxystrobin	Based on the NITE GHS classification results.
Edifenphos	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.
CYAP	Based on the NITE GHS classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Acetone	*N/A*	*LC50 : Fathead minnow >100 mg/L 96 h*	*N/A*
Oxadixyl	*N/A*	*LC50 : 300 mg/L 96 h*	*EC50 : 530 mg/L 48 h*
Pyributicarb	*EbC50:Chlorophyta Pascher 0.0977 mg/L 72 h*	*N/A*	*N/A*
diphenamid	*N/A*	*LC50 : 97 mg/L 96 h*	*EC50 : 0.058 mg/L 48 h*
Tebufenpyrad	*N/A*	*LC50 : Oncorhynchus mykiss 0.0178 mg/L 96 h*	*EC50: Daphnia magna 0.046 mg/L 48 h*
cafenstrole	*EC50:Pseudokirchneriella subcapitata > 0.0021 mg/L 72h*	*N/A*	*N/A*
Tolfenpyrad	*ErC50 : Chlorophyta >0.76 mg/L 72 h*	*N/A*	*EC50 : Daphnia magna 0.001 mg/L 48 h*
Thifluzamide	*N/A*	*N/A*	*EC50 : Daphnia magna 1.4 mg/L 48h*
Propazine	*EC50:Spirodela polyrhiza 0.1 mg/L 14 d*	*LC50:Oncorhynchus mykiss 17 mg/L 96 h LC50:Lepomis macrochirus 100 mg/L 96 h*	*EC50:Daphnia magna 5.32 mg/L 48 h*
Trifloxystrobin	*N/A*	*LC50 : Oncorhynchus mykiss 0.015 mg/L 96 h*	*N/A*
Benfluralin	*N/A*	*N/A*	*LC50 : Mysidopsis bahia 0.043 mg/L 96 h*
Piperophos	*N/A*	*LC50: Poecilla reticulata 4000 ug/L 96 h*	*N/A*
Phenothrin	*N/A*	*LC50 : Bluegills 0.016 mg/L 96 h*	*N/A*
CYAP	*N/A*	*N/A*	*EC50 : Daphnia magna 0.097 mg/L 48 h*
3,5-Xylyl Methylcarbamate	*N/A*	*LC50 : Black carp 40.0 mg/L 96 h*	*EC50 : Daphnia magna 0.0301 mg/L 48 h*

2-Amino-3-chloro-1,4-naphthoquinone	*N/A*	*LC50 : Oncorhynchus mykiss 0.044 mg/L 96 h*	*N/A*
Bromacil	*EC50:Pseudokirchneriella subcapitata 0.00844mg/L 72 h*	*N/A*	*N/A*
Butamifos	*ErC50 : Pseudokirchneriella subcapitata 0.033 mg/L 72 h*	*N/A*	*EC50 : Daphnia magna 1.9 mg/L 48 h*
Diclofop-methyl	*N/A*	*LC50 : 0.31mg/L 96 h*	*N/A*

Other data

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
Acetone	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Hexaconazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pyributicarb	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Dichlofenthion	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tebufenpyrad	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Cyhalofop-butyl	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
cafenstrole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tolfenpyrad	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Thifluzamide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pyrazophos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Quinalphos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Propazine	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Trifloxystrobin	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Edifenphos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Benfluralin	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Cyanazine	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Piperophos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
CYAP	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
3,5-Xylyl Methylcarbamate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
2-Amino-3-chloro-1,4-naphthoquinone	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Bromacil	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Butamifos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Persistence and degradability No information available
Bioaccumulative potential No information available
Mobility in soil No information available
Hazard to the ozone layer No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from residues

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated container and contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION

ADR/RID

UN number	UN1090
Proper shipping name:	Acetone
UN classfication	3
Subsidiary hazard class	
Packing group	II
Marine pollutant	Not applicable

IMDG

UN number	UN1090
Proper shipping name:	Acetone
UN classfication	3
Subsidiary hazard class	
Packing group	II
Marine pollutant (Sea)	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

IATA

UN number	UN1090
Proper shipping name:	Acetone
UN classfication	3
Subsidiary hazard class	
Packing group	II
Environmentally Hazardous Substance	Not applicable

Section 15: REGULATORY INFORMATION

Japanese regulations

Fire Service Act	Category IV, Class I petroleums, dangerous grade 2 water-soluble
Poisonous and Deleterious Substances Control Law	Deleterious Substances 3rd. Grade
Industrial Safety and Health Act	Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57) Notifiable Substances (Law Art.57-2) Class 2 Organic Solvents (Enforcement Order Attached Table No.6-2, Ordinance on Prevention of Organic Solvent Poisoning Art.1, Para.1, Item 5) Dangerous Substances - Flammable Substance (Enforcement Order Attached Table 1 Item 4) Working Environment Evaluation Standards, Administrative Control Levels (Law Art.65-2, Para.1)
Regulations for the carriage and storage of dangerous goods in ship	Flammable Liquids (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law	Flammable Liquids (Ordinance Art.194, MITL Nortification for Air Transportation of Explosives etc., Attached Table 1)
Marine Pollution Prevention	Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Z

Law
Pollutant Release and Transfer Register Law (2023.4.1-) Not applicable
Export Trade Control Order Appendix 2 Export Approval Item
Narcotics and Psychotropics Control Law

Chemical Name	Poisonous and Deleterious Substances Control Law	Industrial Safety and Health Act Substances (Law Art.57-2)	Pollutant Release and Transfer Register Law (2023.4.1-)
Acetone 67-64-1 (<100)	-	Applicable	-
Tebufenpyrad 119168-77-3 (0.0020 w/v %)	Applicable	-	-
Tolfenpyrad 129558-76-5 (0.0020 w/v %)	Applicable	-	-
Pyrazophos 13457-18-6 (0.0020 w/v %)	Applicable	-	-
Quinalphos 13593-03-8 (0.0020 w/v %)	Applicable	-	-

Section 16: OTHER INFORMATION

Key literature references and sources for data etc.
NITE: National Institute of Technology and Evaluation (JAPAN)
http://www.safe.nite.go.jp/japan/db.html
IATA dangerous Goods Regulations
RTECS:Registry of Toxic Effects of Chemical Substances
Japan Industrial Safety and Health Association GHS Model SDS
Dictionary of Synthetic Oraganic Chemistry , SSOCJ, Koudansha Scientific Co.Ltd.
Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
etc

Record of SDS revisions
The following contents were revised. Prodauct and company Identification. Composition/information on ingredients. Fire fighting measures. Exposure controls/personal protection. Stability and reactivity. Toxicological information. Ecological information. Regulatory information.

Disclaimer
This SDS is according to JIS Z 7253: 2019. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
GHS Classification is according to JIS Z 7252:2019. *JIS: Japanese Industrial Standards

End of Safety Data Sheet