SAFETY DATA SHEET

According to JIS Z 7253:2019
Revision date 17-Jan-2024
Revision Number 2.02

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Pesticide Mixture Standard Solution PL-4-2 (each 20µg/mL Acetone Solution)
Product Code	166-24591,162-24593

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
Reference material (as defined in Japanese Industrial Standards (JIS) Q0030)

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 1
Chronic aquatic toxicity	Category 2

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
H400 - Very toxic to aquatic life
H411 - Toxic 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
- Collect spillage

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
Monocrotophos	0.0020 w/v %	223.16	N/A	2-(7)-264	6923-22-4
Mefenacet	0.0020 w/v %	298.36	N/A	8-(7)-827	73250-68-7
Mevinphos	0.0020 w/v %	224.14	N/A	N/A	7786-34-7
Imazamethabenz-methyl	0.0020 w/v %	288.34	N/A	N/A	81405-85-8
Ametryn	0.0020 w/v %	227.33	(5)-3847	*	834-12-8
(S)-Uniconazole P	0.0020 w/v %	291.78	N/A	8-(3)-718	83657-17-4
Imibenconazole	0.0020 w/v %	411.74	N/A	N/A	86598-92-7
Diethofencarb	0.0020 w/v %	267.32	N/A	N/A	87130-20-9
Dimethenamid	0.0020 w/v %	275.79	N/A	N/A	87674-68-8
Fosthiazate	0.0020 w/v %	283.35	N/A	N/A	98886-44-3
2,6-Dichloro-4-nitroaniline	0.0020 w/v %	207.01	(3)-423	4-(12)-199	99-30-9
Halfenprox	0.0020 w/v %	477.34	N/A	N/A	111872-58-3
2,4,4',5-Tetrachlorodiphenyl Sulfone	0.0020 w/v %	356.05	(3)-61	*	116-29-0
1-Nitro-2,3,5,6-tetrachlorobenzene	0.0020 w/v %	260.89	N/A	4-(12)-276	117-18-0
Pyridaphenthion	0.0020 w/v %	340.33	(5)-5598	N/A	119-12-0
Phosphamidon	0.0020 w/v %	299.69	N/A	2-(7)-182,2-(7)-183	13171-21-6

Mefenpyr-diethyl	0.0020 w/v %	373.23	N/A	N/A	135590-91-9
(E)-Pyriminobac-methyl	0.0020 w/v %	361.35	N/A	8-(2)-1700	147411-69-6
Etoxazole	0.0020 w/v %	359.41	N/A	N/A	153233-91-1
Fluacrypyrim	0.0020 w/v %	426.39	N/A	N/A	178813-81-5
Chlorthal dimethyl	0.0020 w/v %	331.96	N/A	4-(7)-541	1861-32-1
Lenacil	0.0020 w/v %	234.29	(5)-914	*	2164-08-1
Butachlor	0.0020 w/v %	311.85	N/A	4-(10)-861	23184-66-9
Phenthoate	0.0020 w/v %	320.36	(3)-2615	*	2597-03-7
Fthalide	0.0020 w/v %	271.91	1-261	8-(4)-356	27355-22-2
delta-Hexachlorocyclohexane	0.0020 w/v %	290.83	(3)-2250,(9)-1652	*	319-86-8
5-Butyl-2-ethylamino-6-methylpyrimidin-4-yldimethylsulphamate	0.0020 w/v %	316.42	N/A	N/A	41483-43-6
Pretilachlor	0.0020 w/v %	311.85	N/A	N/A	51218-49-6
Ethalfluraline	0.0020 w/v %	333.26	N/A	N/A	55283-68-6
Tolclofos-methyl	0.0020 w/v %	301.13	N/A	4-(9)-127	57018-04-9
Pyroquilon	0.0020 w/v %	173.21	N/A	8-(1)-1760	57369-32-1
Azaconazole	0.0020 w/v %	300.14	N/A	N/A	60207-31-0
Dimepiperate	0.0020 w/v %	263.40	N/A	8-(1)-1822	61432-55-1
Anilofos	0.0020 w/v %	367.85	N/A	4-(9)-296	64249-01-0
Tralomethrin	0.0020 w/v %	665.01	(3)-3892	N/A	66841-25-6

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/m³)	ISHL/ACL: 500 ppm	STEL: 500 ppm TWA: 250 ppm
Monocrotophos 6923-22-4	N/A	N/A	TWA: 0.05 mg/m³ inhalable fraction and vapor Skin
Mevinphos 7786-34-7	N/A	N/A	TWA: 0.01 mg/m³ inhalable fraction and vapor Skin

Ametryn 834-12-8	N/A	N/A	TWA: 2 mg/m^3 inhalable particulate matter
Pyridaphenthion 119-12-0	TWA: 0.2 mg/m^3 OEL Skin	N/A	N/A
Fthalide 27355-22-2	TWA: 10 mg/m^3 OEL	N/A	N/A

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 slightly yellow - yellow
Turbidity clear
Appearance liquid
Odor characteristic odor
Melting point/freezing point -95.3 °C
Boiling point, initial boiling point and boiling range 56 °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: 13.0 vol%
Lower: 2.15 vol%
Flash point -18 °C
Auto-ignition temperature: 538 °C
Decomposition temperature: no data available
pH no data available
Viscosity (coefficient of viscosity) no data available
Dynamic viscosity no data available
Solubilities water , Ethanol , Diethyl ether : freely soluble .
n-Octanol/water partition coefficient:(log Pow) -0.24
Vapour pressure 24.7
Specific Gravity / Relative density 0.789 - 0.792 g/mL
Vapour density 2.0
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 (CO2), Nitrogen oxides (NOx), Halides, Phosphorus oxide, Sulfur oxides (SOx)

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)
Monocrotophos	14 mg/kg (Rat)	112 mg/kg (Rat)	0.0408 mg/L (Rat) 4 h
Mevinphos	3.4 mg/kg (Rat) 3 mg/kg (Rat)	4.2 mg/kg (Rat) 4.7 mg/kg (Rabbit) 33.8 mg/kg (Rabbit)	14 ppm (Rat) 1 h
Imazamethabenz-methyl	>5000 mg/kg (Rat)	>2000 mg/kg (Rat)	N/A
Ametryn	1405 mg/kg (Rat) 508 mg/kg (Rat)	8160 mg/kg (Rabbit)	> 2200 mg/m³ (Rat) 4 h
(S)-Uniconazole P	430 mg/kg (Rat)	N/A	N/A
Imibenconazole	2800 mg/kg (Rat)	>2000 mg/kg (Rat)	>1.02 mg/L (Rat)
Diethofencarb	> 5 g/kg (Rat)	> 5 g/kg (Rat)	N/A
Dimethenamid	371 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 6.6 mg/L (Rat) 4 h (mist)
Fosthiazate	57 mg/kg (Rat)	861 mg/kg (Rat)	0.558 mg/L (Rat) 4 h
2,6-Dichloro-4-nitroaniline	2400 mg/kg(Rat)	>5 g/kg (Mouse)	>21600 mg/m³ (Rat) 1 h
Halfenprox	132 mg/kg (Rat)	> 2000 mg/kg (Rat)	0.36 mg/L (Rat)
2,4,4',5-Tetrachlorodiphenyl Sulfone	5000 - 14700 mg/kg (Rat)	> 10000 mg/kg (Rabbit) > 20000 mg/kg (Rat)	> 3 mg/L (Rat) 4 h
Pyridaphenthion	813 mg/kg (Rat) 424 mg/kg (Rat)	> 2 g/kg (Rabbit) 2100 mg/kg (Rat)	1100 mg/m³ (Rat) 4 h
Phosphamidon	17 mg/kg (Rat)	374 mg/kg (Rat)	0.102 mg/L (Rat) 4 h
(E)-Pyriminobac-methyl	> 5000 mg/kg (Rat)	N/A	N/A
Etoxazole	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	N/A
Fluacrypyrim	> 5000 mg/kg (Rat)	N/A	N/A
Chlorthal dimethyl	3 g/kg (Rat)	> 10000 mg/kg (Rat) 10 g/kg (Rabbit)	> 5700 mg/m³ (Rat) 4 h
Lenacil	> 5000 mg/kg(Rat)	> 5000 mg/kg(Rabbit) > 2000 mg/kg(Rat)	4.4 - 5.2 mg/L(Rat) 4 h
Butachlor	1740 mg/kg (Rat)	> 13000 mg/kg (Rabbit)	> 3.34 mg/L (Rat) 4 h
Phenthoate	249 mg/kg (Rat)	2,620 mg/kg (Rat)	59 mg/m³ (Rat) 4 h
Fthalide	> 10,000 mg/kg (Rat)	> 10,000 mg/kg (Rat)	> 4.1 mg/L (Rat) 4 h
delta-Hexachlorocyclohexane	1 g/kg (Rat)	N/A	N/A
5-Butyl-2-ethylamino-6-methyl pyrimidin-4-yldimethylsulphamate	4 g/kg(Rat)	500 mg/kg(Rat)	N/A
Pretilachlor	2200 mg/kg (Rat)	> 4000 mg/kg (Rat)	> 2800 mg/m³ (Rat) 4 h
Ethalfluraline	>5000 mg/kg (Rat)	>5000 mg/kg (Rat)	4980 mg/m³ (Rat) 4 h
Tolclofos-methyl	>5000 mg/kg (Rat)	>2000 mg/kg (Rat) >2000 mg/kg (Rabbit)	>2.07 mg/L (Rat) 4 h
Pyroquilon	321 mg/kg (Rat)	> 3100 mg/kg (Rat)	N/A
Azaconazole	308 mg/kg (Rat)	>2560 mg/kg (Rat)	N/A
Dimepiperate	946 mg/kg (Rat)	> 5 g/kg (Rat) > 2 g/kg (Rabbit)	> 1600 mg/m³ (Rat) 4 h
Anilofos	472 mg/kg(Rat)	> 2 g/kg (Rat) > 2 g/kg (Rabbit)	N/A
Tralomethrin	70.6 mg/kg (Rat)	>5000 mg/kg (Rat)	> 0.286 mg/L (Rat) 4 h

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.
Monocrotophos	Based on the NITE GHS	Based on the NITE GHS	Based on the NITE GHS

	classification results.	classification results.	classification results.
Mefenacet	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Dimethenamid	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Phosphamidon	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Butachlor	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tolclofos-methyl	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tralomethrin	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.
Monocrotophos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Mefenacet	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Dimethenamid	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Phosphamidon	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Butachlor	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tolclofos-methyl	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tralomethrin	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.
Monocrotophos	Based on the NITE GHS classification results.
Mefenacet	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.
Dimethenamid	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.
Phosphamidon	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.
Butachlor	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.
Tolclofos-methyl	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.
Tralomethrin	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.
Monocrotophos	Based on the NITE GHS classification results.
Mefenacet	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.
Dimethenamid	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.
Phosphamidon	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.
Butachlor	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.
Tolclofos-methyl	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.
Tralomethrin	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.
Monocrotophos	Based on the NITE GHS classification results.
Mefenacet	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.
Dimethenamid	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.
Phosphamidon	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.
Butachlor	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.
Tolclofos-methyl	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.
Tralomethrin	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.
Monocrotophos	Based on the NITE GHS classification results.
Mefenacet	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.
Dimethenamid	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.
Phosphamidon	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.
Butachlor	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.
Tolclofos-methyl	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.
Tralomethrin	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Acetone	Based on the NITE GHS classification results.
Monocrotophos	Based on the NITE GHS classification results.
Mefenacet	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.
Dimethenamid	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.

Phosphamidon	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.
Butachlor	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.
Tolclofos-methyl	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.
Tralomethrin	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
Monocrotophos 6923-22-4		Group 2A		
Mevinphos 7786-34-7		Group 2A		
Ametryn 834-12-8			A3	
Halfenprox 111872-58-3		Group 2A		
Pyridaphenthion 119-12-0	-	Group 2A	-	-
Phosphamidon 13171-21-6		Group 2A		
delta-Hexachlorocyclohexane 319-86-8		Group 2B		
Tralomethrin 66841-25-6		Group 2A		

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Acetone	Based on the NITE GHS classification results.
Monocrotophos	Based on the NITE GHS classification results.
Mefenacet	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.
Dimethenamid	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.
Phosphamidon	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.
Butachlor	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.
Tolclofos-methyl	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.
Tralomethrin	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.
Monocrotophos	Based on the NITE GHS classification results.
Mefenacet	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.

Dimethenamid	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.
Phosphamidon	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.
Butachlor	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.
Tolclofos-methyl	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.
Tralomethrin	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.
Monocrotophos	Based on the NITE GHS classification results.
Mefenacet	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.
Dimethenamid	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.
Phosphamidon	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.
Butachlor	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.
Tolclofos-methyl	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.
Tralomethrin	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Acetone	Based on the NITE GHS classification results.
Monocrotophos	Based on the NITE GHS classification results.
Mefenacet	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.
Dimethenamid	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.
Phosphamidon	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.
Butachlor	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.
Tolclofos-methyl	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.

Tralomethrin	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*
Monocrotophos	*N/A*	*N/A*	*LC50 : Gammarus fasciatus 160 ug/L 96 h*
Mefenacet	*ErC50 : Pseudokirchneriella subcapitata 0.226 mg/L 72 h*	*N/A*	*N/A*
Ametryn	*N/A*	*LC50:Lepomis macrochirus 2.55 - 6.55 mg/L 96 h LC50:Pimephales promelas 2.8 - 11.7 mg/L 96 h LC50:Oncorhynchus mykiss 3 - 5.2 mg/L 96 h LC50:Poecilia reticulata 0.3 mg/L 96 h LC50:Leuciscus idus 15 mg/L 96 h LC50:Poecilia reticulata 17 mg/L 96 h LC50:Salmo gairdneri 3.2 mg/L 96 h*	*N/A*
(S)-Uniconazole P	*N/A*	*LC50 : 14.8 mg/L 96 h*	*EC50 : 10 mg/L 48 h*
Imibenconazole	*N/A*	*N/A*	*LC50 : Daphnia magna 0.185 mg/L 48 h*
Dimethenamid	*ErC50 : Desmodesmus subspicatus 0.151 mg a.i./L 72 h*	*LC50 : Cyprinus carpio 6800 ug/L 96 h*	*EC50 : Daphnia magna 16000 ug/L 48 h*
Fosthiazate	*ErC50 : Chlorophyta > 100 mg/L*	*N/A*	*N/A*
Halfenprox	*N/A*	*LC50 : Cyprinus carpio 0.0035 ppm 96 h*	*N/A*
2,4,4',5-Tetrachlorodiphenyl Sulfone	*N/A*	*LC50 : Oncorhynchus mykiss 1.2 mg/L 96 h*	*LC50 : Gammarus fasciatus 0.110 mg/L 96 h*
1-Nitro-2,3,5,6-tetrachlorobenzene	*N/A*	*LC50 : 0.37 mg/L 96 h*	*N/A*
Pyridaphenthion	*N/A*	*LC50 : Oncorhynchus mykiss 7.5 mg/L 96 h*	*EC50:Daphnia magna 0.00051 mg/L 48 h*
Phosphamidon	*N/A*	*N/A*	*EC50 : Daphinia pulex 0.01 mg/L 48 h*
Etoxazole	*N/A*	*LC50:Oncorhynchus mykiss 2.8 mg/L 96 h*	*EC50:Daphnia magna 0.0071 mg/L 72 h*
Fluacrypyrim	*N/A*	*LC50: Fathead minnow 0.195 mg/L 96h*	*LC50: Daphnids 0.18 mg/L 48h*
Chlorthal dimethyl	*N/A*	*LC50:Oncorhynchus mykiss 6.6 mg/L 96 h LC50:Lepomis macrochirus 6.7 mg/L 96 h*	*N/A*
Lenacil	*N/A*	*>2.0 mg/L 96 h*	*N/A*
Butachlor	*ErC50 : Pseudokirchneriella subcapitata 0.0033 mg/L 72 h*	*LC50 : Oryzias latipes 0.28 mg/L 96 h LC50 : Pimephales Promelas*	*N/A*

		0.28 mg/L 96 h	
Phenthoate	*N/A*	*N/A*	*EC50 : Daphnia magna 0.00025 mg/L 48 h*
Fthalide	*ErC50 : Pseudokirchneriella subcapitata > 0.0871 mg/L 72 h*	*LC50 : Cyprinus carpio > 23.4 mg/L 96 h*	*EC50 : Daphnia magna > 3.52 mg/L 48 h*
5-Butyl-2-ethylamino-6-methyl pyrimidin-4-yldimethylsulpham ate	*N/A*	*LC50 : 1.0 mg/L 96 h*	*N/A*
Pretilachlor	*ErC50 : Pseudokirchneriella subcapitata 0.0032 mg/L 72 h*	*N/A*	*N/A*
Ethalfluraline	*EC50 : 0.009 mg/L 72 h*	*LC50 : 0.136 mg/L 96 h*	*EC50 : 0.0237 mg/L 48 h*
Tolclofos-methyl	*ErC50 : Desmodesmus subspicatus >1100 ug/L 72 h*	*LC50 : Cyprinus carpio 2700 ug/L 96 h*	*EC50 : Daphnia magna >930 ug/L 48 h*
Tralomethrin	*N/A*	*N/A*	*EC50:Daphnia magna 0.091 ug/L 48 h*

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.
Monocrotophos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Mefenacet	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Mevinphos	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Ametryn	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Imibenconazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fosthiazate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Halfenprox	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
2,4,4',5-Tetrachlorodiphenyl Sulfone	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pyridaphenthion	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Phosphamidon	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Lenacil	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Butachlor	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Phenthoate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fthalide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Pretilachlor	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Dimepiperate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tralomethrin	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	Yes

IMDG

UN number	UN1090
Proper shipping name:	Acetone
UN classfication	3
Subsidiary hazard class	
Packing group	II
Marine pollutant (Sea)	Yes
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	Yes

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	Specified Poisonous Substances 1st. 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) Working Environment Evaluation Standards, Administrative Control Levels (Law Art.65-2, Para.1) Dangerous Substances - Flammable Substance (Enforcement Order Attached Table 1 Item 4)
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 Law	Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Z
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	-
Monocrotophos 6923-22-4 (0.0020 w/v %)	Applicable	-	-
Halfenprox 111872-58-3 (0.0020 w/v %)	Applicable	-	-
Phosphamidon 13171-21-6 (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