SAFETY DATA SHEET

According to JIS Z 7253:2019
Issue Date 28-Oct-2025
Revision Number 3.07

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	28 Pesticides Mixture Standard Solution WQ-3 (each 20µg/ml Acetonitrile Solution)
Product Code	160-23891,166-23893

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
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Vapors)	Category 4
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 1
Category 1 central nervous system, respiratory system	
Specific target organ toxicity (repeated exposure)	Category 2
Category 2 blood system, central nervous system, respiratory system, liver, kidneys	

Pictograms

Signal word Danger

Hazard statements

H225 - Highly flammable liquid and vapor
H319 - Causes serious eye irritation
H311 - Toxic in contact with skin
H332 - Harmful if inhaled
H370 - Causes damage to the following organs: central nervous system, respiratory system
H373 - May cause damage to the following organs through prolonged or repeated exposure: blood system, central nervous system, respiratory system, liver, kidneys

Precautionary statements-(Prevention)

- Wear protective gloves/protective clothing/eye protection/face protection
- Use only outdoors or in a well-ventilated area
- 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
- 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

Precautionary statements-(Response)

- IF exposed: Call a POISON CENTER or doctor/physician
- 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
- Call a POISON CENTER or doctor/physician if you feel unwell
- Wash contaminated clothing before reuse
- 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
- Call a POISON CENTER or doctor/physician if you feel unwell
- In case of fire: Use suitable extinguishing media for extinction

Precautionary statements-(Storage)

- Store locked up
- Store in a well-ventilated place. Keep cool

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
Acetonitrile	99.93	41.05	2-1508	*	75-05-8
Bensulfuron-methyl	0.0026	410.40	N/A	8-(2)-1338	83055-99-6
(2,4-Dichlorophenoxy)acetic acid	0.0026	221.04	(3)-927	4-(4)-234	94-75-7
Halosulfuron methyl	0.0026	434.81	N/A	8-(2)-1594	100784-20-1
Carpropamid	0.0026	334.67	N/A	N/A	104030-54-8
Flazasulfuron	0.0026	407.33	N/A	8-(2)-1393	104040-78-0
Fipronil	0.0026	437.15	(5)-6414	N/A	120068-37-3
Azoxystrobin	0.0026	403.39	N/A	8-(2)-1798	131860-33-8
Thiuram	0.0026	240.43	(2)-1820	2-(5)-87	137-26-8
MPP Oxon Sulfone	0.0026	294.26	N/A	N/A	14086-35-2
Carbofuran	0.0026	221.25	(5)-5540	8-(4)-935	1563-66-2
Methomyl	0.0026	162.21	N/A	2-(5)-130	16752-77-5
Siduron	0.0026	232.32	(3)-2485	4-(13)-97	1982-49-6
Bentazone	0.0026	240.28	N/A	8-(7)-44	25057-89-0
Probenazole	0.0026	223.25	(5)-3433	*	27605-76-1
DCMU	0.0026	233.09	(3)-2194	4-(13)-42	330-54-1
Asulam	0.0026	230.24	(9)-2098	*	3337-71-1
Iprodione	0.0026	330.17	N/A	8-(2)-1131	36734-19-7
Fenthion-sulfoxide	0.0026	294.33	N/A	4-(9)-246	3761-41-9
MPP Sulfone	0.0026	310.33	N/A	N/A	3761-42-0
Tricyclazole	0.0026	189.24	N/A	8-(3)-520	41814-78-2
Dymron	0.0026	268.35	(3)-3227	⁎	42609-52-9
MPP	0.0026	278.33	N/A	4-(9)-130	55-38-9
Triclopyr	0.0026	256.47	N/A	N/A	55335-06-3

Thiodicarb	0.0026	354.47	N/A	2-(12)-235	59669-26-0
Fenthion-oxon	0.0026	262.26	N/A	N/A	6552-12-1
MPP Oxon Sulfoxide	0.0026	278.26	N/A	N/A	6552-13-2
Mecoprop (MCPP)	0.0026	214.65	N/A	4-(4)-211	7085-19-0
Bensulide	0.0026	397.51	(3)-3373	4-(9)-185	741-58-2

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

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.Use with local exhaust ventilation. 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 Packed with an inert gas. Container protected from light, and store tightly closed in freezer (-20°C). 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
Acetonitrile 75-05-8	N/A	N/A	TWA: 20 ppm、34 mg/m³ Skin
(2,4-Dichlorophenoxy)acetic acid 94-75-7	TWA: 2 mg/m³ OEL Skin	N/A	TWA: 10 mg/m³ inhalable particulate matter
Thiuram 137-26-8	TWA: 0.1 mg/m³ OEL	N/A	TWA: 0.05 mg/m³ inhalable fraction and vapor
Carbofuran 1563-66-2	N/A	N/A	TWA: 0.1 mg/m³ inhalable fraction and vapor
Methomyl 16752-77-5	N/A	N/A	TWA: 0.2 mg/m³ inhalable fraction and vapor Skin
DCMU 330-54-1	N/A	N/A	TWA: 10 mg/m³
Tricyclazole 41814-78-2	TWA: 3 mg/m³ OEL	N/A	N/A
MPP 55-38-9	TWA: 0.2 mg/m³ OEL Skin	N/A	TWA: 0.05 mg/m³ inhalable fraction and vapor Skin
Thiodicarb 59669-26-0	N/A	N/A	TWA: 0.1 mg/m³ inhalable fraction and vapor

Chemical Name	Concentration standard value set by the Minister of Health, Labor and Welfare (8hr)	Concentration standard value set by the Minister of Health, Labor and Welfare (Short-Term)
Acetonitrile	10 ppm	N/A

Chemical Name	Concentration standard value set by the Minister of Health, Labor and Welfare (8hr)	Concentration standard value set by the Minister of Health, Labor and Welfare (Short-Term)
75-05-8		
(2,4-Dichlorophenoxy)acetic acid 94-75-7	2 mg/m^3	N/A
Thiuram 137-26-8	0.2 mg/m^3	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 (JIS T 8147)
Skin and body protection	Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.
If this product is classified as ”Chemical Substances Hazardous to Skin, etc.”, use appropriate protective equipment to them.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Data except for the appearance is described as a solvent.

Form	
Color	colorless
Turbidity	clear
Appearance	liquid
Odor	characteristic odor
Melting point/freezing point	-45 °C
Boiling point, initial boiling point and boiling range	82 °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：	16vol%
Lower：	4.4vol%
Flash point	9.5 °C
Auto-ignition temperature:	524 °C
Decomposition temperature:	no data available
pH	no data available
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Solubilities	water , general organic solvents : freely soluble .
n-Octanol/water partition coefficient:(log Pow)	-0.34
Vapour pressure	9.7kPa
Specific Gravity / Relative density	0.780 - 0.784
Vapour density	1.4(Air=1)
Particle characteristics	no data available

Section 10: STABILITY AND REACTIVITY

Stability

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

Hazardous reactions

Reacts with strong oxidants causing fire/explosion hazard. The substance decomposes on burning producing toxic or

corrosive gases and fumes. Reacts violently with acids, may cause fire or explosion. Reacts with bases to produce toxic gas.

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)

Section 11: TOXICOLOGICAL INFORMATION

*NITE: National Institute of Technology and Evaluation (JAPAN)
https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Acetonitrile	>2,000 mg/kg (Rat)	978.8 mg/kg (Rabbit)	16,000 ppm (Rat) 4 h
Bensulfuron-methyl	＞5 g/kg(Rat)	> 2 g/kg (Rat) > 2 g/kg (Rabbit)	N/A
(2,4-Dichlorophenoxy)acetic acid	443 mg/kg (Rat)	= 1400 mg/kg (Rabbit)	N/A
Halosulfuron methyl	7758 mg/kg (Rat)	>2000 mg/kg (Rat)	> 6 mg/L (Rat) 4 h
Carpropamid	>5000 mg/kg (Rat)	N/A	N/A
Flazasulfuron	> 5 g/kg (Rat)	> 2 g/kg (Rat)	> 5.99 mg/L (Rat) 4 h
Fipronil	= 97 mg/kg (Rat)	354 mg/kg (Rabbit)	0.36 mg/L (Rat) 4 h 0.42 mg/L (Rat) 4 h 0.68 mg/L (Rat) 4 h
Azoxystrobin	>5000 mg/kg (Rat)	>2000 mg/kg (Rat)	0.698 mg/L (Rat) 4 h
Thiuram	1080 mg/kg (Rat)	> 7940 mg/kg (Rabbit)	500 mg/m^3 (Rat) 4 h
MPP Oxon Sulfone	30mg/kg (Rat)	N/A	N/A
Carbofuran	5 mg/kg (Rat) 7 mg/kg (Rat)	4403 mg/kg (Rabbit) 120 mg/kg (Rat) 885 mg/kg (Rabbit)	0.11 mg/L (Rat) 1 h
Methomyl	51 mg/kg (Rat)	1,050 mg/kg (Rat)	0.15 mg/L (Rat) 4 h
Siduron	5 g/kg (Rat)	> 2000 mg/kg (Rabbit) > 5500 mg/kg (Rat)	N/A
Bentazone	1100 mg/kg (Rat)	2500 mg/kg (Rat)	5100 mg/m^3 (Rat) 4 h (mist)
Probenazole	2030 mg/kg (Rat)	> 5000 mg/kg (Rat)	> 5.03 mg/L (Rat) 4 h
DCMU	3400 mg/kg (Rat)	> 2000 gm/kg (Rat)	> 5.05 mg/L (Rat) 4 h
Asulam	2 g/kg (Rat)	N/A	N/A
Iprodione	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 3.29 mg/L (Rat) 4 h > 5.16 mg/L (Rat) 4 h
Fenthion-sulfoxide	125 mg/kg (Rat)	N/A	N/A
MPP Sulfone	= 125 mg/kg (Rat)	N/A	N/A
Tricyclazole	250 mg/kg (Rat) 223 mg/kg (Rat)	> 5000 mg/kg (Rat) > 5 g/kg (Rat) > 2 g/kg (Rabbit)	N/A
Dymron	>5,000 mg/kg (Rat)	＞2000 mg/kg(Rat)	＞3.25 mg/L(Rat)
MPP	405 mg/kg (Rat)	963 mg/kg (Rabbit)	0.507 mg/L (Rat) 4 h
Triclopyr	2140 mg/kg (Rat)	> 3980 mg/kg (Rabbit)	> 5.43 mg/L (Rat) 4h
Thiodicarb	39.1 mg/kg (Rat)	> 2000 mg/kg (Rabbit) > 2000 mg/kg (Rat)	0.52 mg/L (Rat) 4 h
Fenthion-oxon	130mg/kg(Mouse)	N/A	N/A
MPP Oxon Sulfoxide	50mg/kg(Rat)	N/A	N/A
Mecoprop (MCPP)	650 mg/kg (Rat)	900 mg/kg (Rat)	N/A
Bensulide	271 mg/kg (Rat)	3950 mg/kg (Rabbit) 3950 mg/kg (Rat) 2 g/kg (Rabbit)	> 8 mg/L (Rat) 1 h

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Acetonitrile	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
DCMU	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
MPP	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Triclopyr	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Mecoprop (MCPP)	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
Acetonitrile	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
DCMU	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

MPP	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Triclopyr	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Mecoprop (MCPP)	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
Acetonitrile	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.
DCMU	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.
MPP	Based on the NITE GHS classification results.
Triclopyr	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.
Mecoprop (MCPP)	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Acetonitrile	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.
DCMU	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.
MPP	Based on the NITE GHS classification results.
Triclopyr	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.
Mecoprop (MCPP)	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Acetonitrile	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.

DCMU	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.
MPP	Based on the NITE GHS classification results.
Triclopyr	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.
Mecoprop (MCPP)	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagencity source information
Acetonitrile	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.
DCMU	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.
MPP	Based on the NITE GHS classification results.
Triclopyr	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.
Mecoprop (MCPP)	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Acetonitrile	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.
DCMU	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.
MPP	Based on the NITE GHS classification results.
Triclopyr	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.
Mecoprop (MCPP)	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH
Acetonitrile 75-05-8	N/A	N/A	A4	-
(2,4-Dichlorophenoxy)acetic acid 94-75-7	N/A	Group 2B	N/A	Group 2B
Thiuram 137-26-8	N/A	Group 3	N/A	N/A
Thiodicarb 59669-26-0	N/A	N/A	A3	-

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Acetonitrile	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.
DCMU	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.
MPP	Based on the NITE GHS classification results.
Triclopyr	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.
Mecoprop (MCPP)	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Acetonitrile	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.
DCMU	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.
MPP	Based on the NITE GHS classification results.
Triclopyr	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.
Mecoprop (MCPP)	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Acetonitrile	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.
DCMU	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.
MPP	Based on the NITE GHS classification results.
Triclopyr	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.
Mecoprop (MCPP)	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Acetonitrile	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.
DCMU	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.
MPP	Based on the NITE GHS classification results.
Triclopyr	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.
Mecoprop (MCPP)	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

*NITE: National Institute of Technology and Evaluation (JAPAN)
https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Acetonitrile	*EC50 : Pseudokirchneriella subcapitata >700 mg/L 72 h*	*LC50 : Oryzias latipes >100 mg/L 96 h*	*LC50 : Daphnia magna >100 mg/L 96 h*
Bensulfuron-methyl	*ErC50 : Pseudokirchneriella subcapitata 0.0574 mg/L 72 h NOEC : Pseudokirchneriella subcapitata 0.04 mg/L 72 h*	*LC50 : Oncorhynchus mykiss >66 mg/L 96 h*	*EC50 : Daphnia magna 130 mg/L 48 h*
(2,4-Dichlorophenoxy)acetic acid	*EC50: 23.7 - 24.7mg/L (96h, Pseudokirchneriella subcapitata)*	*LC50 : Morone saxatilis 70.1 mg/L 96 h*	*EC50: 17.6 - 32.6mg/L (48h, Daphnia magna)*
Halosulfuron methyl	*EC50 : Lemna gibba 0.042 ppb 14 d*	*N/A*	*N/A*
Carpropamid	*N/A*	*LC50 : 5.6 mg/L 96 h*	*N/A*
Fipronil	*ErC50 : Chlorophyta 0.074 mg/L*	*LC50 : Lepomis macrochirus 0.083 mg/L 96 h*	*N/A*
Azoxystrobin	*N/A*	*N/A*	*EC50 : Mysidopsis bahia 0.055 mg/L 96 h*
Thiuram	*EC50 : Desmodesmus subspicatus 0.1 mg/L 96 h*	*LC50 : Oncorhynchus mykiss 0.090 - 0.170 mg/L 96 h*	*LC50 : Mysidopsis bahia 0.0036 mg/L 96 h*
Carbofuran	*N/A*	*LC50 : Bluegills 80 ug/L 96 h*	*N/A*
Methomyl	*N/A*	*LC50:Lepomis macrochirus 0.71 mg/L 96 h*	*EC50 : Daphnia magna 0.009 mg/L 48 h*
Siduron	*N/A*	*N/A*	*EC50 : Daphnia magna > 13.7 mg/L 48 h*
Probenazole	*N/A*	*LC50 : 3410ug/L 96 h*	*EC50 : Daphnia magna 2.71 mg a.i./L 48 h*
DCMU	*ErC50 : Pseudokirchneriella subcapitata*	*NOEC : Danio rerio 0.001 mg/L 35 d*	*EC50 : Daphnia magna 1.4 mg/L 48 h*

	0.025 mg/L 72 h		
Iprodione	*EC50 : Pseudokirchneriella subcapitata 1.9 mg/L 120 h*	*LC50 : Oncorhynchus mykiss 4.1 mg/L 96 h*	*EC50 : Daphnia magna 0.31 - 0.61 mg/L 48 h EC50 : Daphnia magna 0.34 - 0.39 mg/L 48 h EC50 : Daphnia magna 0.25 mg/L 48 h*
Fenthion-sulfoxide	*N/A*	*N/A*	*EC50 : Daphnia magna 0.0113 mg/L 48 h*
Tricyclazole	*ErC50 : Chlorophyta 16 mg/L*	*N/A*	*LC50 : < 32 mg/L 96 h*
Dymron	*Erc50 : >0.5 mg/L 72 h*	*LC50 : >0.42 mg/L 96 h*	*EC50 : >0.5 mg/L 48 h*
MPP	*EC50:Desmodesmus subspicatus 1.79 mg/L 96 h*	*LC50 : Lepomis macrochirus 1.08 - 1.77 mg/L 96 h LC50 : Lepomis macrochirus 0.950 - 3.60 mg/L 96 h LC50 : Cyprinus carpio 532 - 2550 µg/L 96 h LC50 : Oncorhynchus mykiss 490 - 1100 µg/L 96 h LC50 : Oncorhynchus mykiss 550 µg/L 96 h LC50 : Pimephales promelas 1370 - 2060 µg/L 96 h LC50 : Poecilia reticulata 1990 - 2220 µg/L 96 h*	*LC50 : Palaemon macrodactylus 0.0053 mg/L 96 h*
Triclopyr	*N/A*	*LC50 : Oncorhynchus gorbuscha 1.2 mg/L 96 h*	*N/A*
Thiodicarb	*N/A*	*LC50 : Cyprinodon variegatus 0.53 mg/L 96 h*	*EC50 : Daphnia magna 0.027 ppm 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
Acetonitrile	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
(2,4-Dichlorophenoxy)acetic acid	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Halosulfuron methyl	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fipronil	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Azoxystrobin	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Thiuram	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Carbofuran	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Methomyl	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Probenazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
DCMU	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Iprodione	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Fenthion-sulfoxide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Tricyclazole	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
MPP	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Triclopyr	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Thiodicarb	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Mecoprop (MCPP)	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 UN1648
Proper shipping name: ACETONITRILE
UN classfication 3
Subsidiary hazard class
Packing group II
Marine pollutant Not applicable

IMDG
UN number UN1648
Proper shipping name: ACETONITRILE
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 UN1648
Proper shipping name: ACETONITRILE
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 2nd. 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) Chemical Substances Hazardous to Skin, etc.(Regulations Article 594-2 Paragraph 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 Law	Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Z
Pollutant Release and Transfer Register Law (2023.4.1-)	Not applicable
Water Pollution Control Act	Harmful Substances (Law Art.2, Enforcement Order Art.2, Ordinace Designating Wastewater Standards Art.1)
Air Pollution Control Law	Hazardous Air Pollutants
Soil Contamination Control Law	Designated Hazardous Substances

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-)
Acetonitrile 75-05-8 (99.93)	Applicable	Applicable	-
Methomyl 16752-77-5 (0.0026)	Applicable	-	-
Fenthion-sulfoxide 3761-41-9 (0.0026)	Applicable	-	-
Thiodicarb 59669-26-0 (0.0026)	Applicable	-	-

Section 16: OTHER INFORMATION

Key literature references and sources for data etc.	NITE: National Institute of Technology and Evaluation (JAPAN) https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput 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. Composition/information on ingredients. 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