SAFETY DATA SHEET

According to JIS Z 7253:2012

Revision Date 31-Oct-2014
Version 1.03

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product name	Tricyclazole Reference Material
Product code	202-19111
CAS No	41814-78-2

Formula C9H7N3S

Manufacturer
Wako Pure Chemical Industries, Ltd.
1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
Phone: +81 (0)6-6203-3741
Fax: +81 (0)6-6201-5964

Supplier
Wako Pure Chemical Industries, Ltd.
1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
Phone: +81 (0)6-6203-3741
Fax: +81 (0)6-6201-5964

Emergency telephone number +81-6-6203-3741 / +81-3-3270-8571

Recommended uses and restrictions on use For research purposes

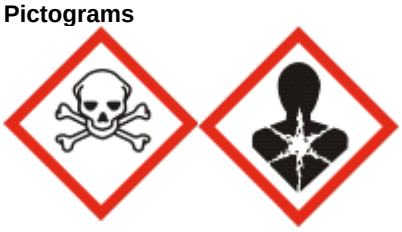
Section 2: HAZARDS IDENTIFICATION

GHS classification

Classification of the substance or mixture

Acute toxicity - Oral	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Category 2 liver	
aquatic environment (acute hazard)	Category 3
aquatic environment (long-term hazard)	Category 3

Pictograms



Signal word Danger

Hazard statements
H301 - Toxic if swallowed
H402 - Harmful to aquatic life
H412 - Harmful to aquatic life with long lasting effects
H373 - May cause damage to the following organs through prolonged or repeated exposure: liver

Precautionary statements-(Prevention)
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Do not breathe dust/fume/gas/mist/vapors/spray
- Avoid release to the environment

Precautionary statements-(Response)

- Get medical advice/attention if you feel unwell
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- Rinse mouth.

Precautionary statements-(Storage)

- Store locked up.

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 Substance

Formula C9H7N3S

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS No
Tricyclazole	99.0	189.24	N/A	8-(3)-520	41814-78-2

Impurities and/or Additives： Not applicable

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

Water spray (fog), carbon dioxide (CO2), Foam, Extinguishing powder, Sand

Unsuitable extinguishing media

No information available

Special extinguishing method

No information available

Specific hazards arising from the chemical product

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Protection of 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

Do not touch spilled material without suitable protection(See section 8). After material is completely picked up, wash the spill sit e with soap and water and ventilate the area. Put all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or di spose of contaminated clothing.

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

Avoid contact with strong oxidizing agents. 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

Use personal protective equipment as required.

Storage

Safe storage conditions

Storage conditions	Store away from sunlight in a cool (2-10 ℃= 36-50 ° F) well-ventilated dry place. Store locked up.
Safe packaging material	Glass
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	Japan	ISHL Working Environmental Evaluation Standards - Administrative Control Levels	ACGIH
Tricyclazole 41814-78-2	TWA: 3 mg/m³ OEL	N/A	N/A

Personal protective equipment

Respiratory protection	Dust mask
Hand protection	Protection gloves
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	white - pale reddish yellow

Appearance	crystalline powder
Odor	No data available
pH	No data available
Melting point/freezing point	186-190 °C
Boiling point, initial boiling point and boiling range	275 °C
Flash point	No data available
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
Vapour pressure	No data available
Vapour density	No data available
Specific Gravity (relatinve density)	1.28
Solubilities	organic solvents , acetone : soluble . water : practically insoluble,or insoluble .
n-Octanol/water partition coefficient:(log Pow)	1.7
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity (coefficient of viscosity)	No data available
Dynamic viscosity	No data available

Section 10: STABILITY AND REACTIVITY

Stability

Stability May be altered by light.
Reactivity No data available

Hazardous reactions

May cause ignition on contact with strong oxidizing agents

Conditions to avoid

Extremes of temperature and direct sunlight

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monooxide (CO), carbon dioxide (CO2), Nitrogen oxides (NOx), Sulfur oxides (SOx)

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Tricyclazole	250mg/kg(Rat)	>5gm/kg(Rat)	3030mg/m³/1H(Rat)

Component	Acute toxicity -oral- source information	Based on the NITE GHS classification results.	Acute toxicity -inhalation gas- source information
Tricyclazole 41814-78-2 (99.0)	LD50(orl,rat,メス)：223mg/kg、289.7mg/kg、301.9mg/kg(Pesticide Abstract).	LD50(skn,rat):＞5000ｍｇ/kg(農薬抄録)	Based on the NITE GHS classification results.

Component	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
Tricyclazole 41814-78-2 (99.0)	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Component	Skin corrosion irritation source information
Tricyclazole 41814-78-2 (99.0)	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Component	Serious eye damage source information
Tricyclazole 41814-78-2 (99.0)	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Component	Respiratory, Skin sensitization source information
Tricyclazole 41814-78-2 (99.0)	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Component	Mutagenic source information
Tricyclazole 41814-78-2 (99.0)	Based on the NITE GHS classification results.

Carcinogenicity

Component	Carcinogenicity source infotmation
Tricyclazole 41814-78-2 (99.0)	Based on the NITE GHS classification results.

Reproductive toxicity

Component	Reproductive toxicity source information
Tricyclazole 41814-78-2 (99.0)	Based on the NITE GHS classification results.

STOT-single exposure

Component	STOT -single exporsure- source information
Tricyclazole 41814-78-2 (99.0)	Based on the NITE GHS classification results.

STOT-repeated exposure

Component	STOT -repeated exposure- source information
Tricyclazole 41814-78-2 (99.0)	Based on the NITE GHS classification results.

Aspiration hazard

Component	Aspiration Hazard source information
Tricyclazole 41814-78-2 (99.0)	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Tricyclazole	*N/A*	*LC50: 7.3mg/L/96hr*	*N/A*

Other data

Component	Aquatic toxicity -Acute- source information	Aquatic toxicity -Chronic- source information
Tricyclazole 41814-78-2 (99.0)	ErC50(Chlorophyta):16mg/L(Pesticide registration application materials、2003).	Acute toxicity Category 3, It is estimated that bio-accumulation is low.(log Kow=1.7(PHYSPROP Database、2005))、Estimated that there is no rapid degradation.(BIOWIN).

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	UN2811
Proper shipping name:	Toxic solid, organic, n.o.s. (Tricyclazole)
UN classfication	6.1
Subsidiary hazard class	
Packing group	III
ERG Code	6L
Marine pollutant	Not applicable

IMDG

UN number	UN2811
Proper shipping name:	Toxic solid, organic, n.o.s. (Tricyclazole)
UN classfication	6.1
Subsidiary hazard class	
Packing group	III
EmS-No	F-A, S-A
Marine pollutant (Sea)	Not applicable

IATA

UN number	UN2811
Proper shipping name:	Toxic solid, organic, n.o.s. (Tricyclazole)
UN classfication	6.1
Subsidiary hazard class	
Packing group	III
Enviromenntally Hazardous Substance	Not applicable

Section 15: REGULATORY INFORMATION

International Inventories

EINECS/ELINCS	Listed
TSCA	Listed

Japanese regulations

Fire Service Act	Not applicable
Poisonous and Deleterious Substances Control Law	Deleterious Substances 3rd. Grade
Industrial Safety and Health Act	Notifiable Substances (Law Art.57-2, Enforcement Oder Art.18-2 Attached Table No.9, and Law Art.56-1)
Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc	Not applicable
Regulations for the carriage and storage of dangerous goods in ship	Toxic Substances - Poison (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law	Toxic and Infectious Substances (Ordinance Art.194, MITL Nortification for Air Transportation of Explosives etc., Attached Table 1)
Pollutant Release and Transfer Register Law	Not applicable
Export Trade Control Order	Not applicable

Section 16: OTHER INFORMATION

Literature and references

Revision Note No information available

Disclaimer

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 acoording to JIS Z7252(2010). *JIS: Japanese Industrial Standards

End of Safety Data Sheet