Wako Pure Chemical Industries, Ltd.

SAFETY DATA SHEET

According to JIS Z 7253:2012

Revision Date 25-Sep-2014
Version 2

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product name	Tolfenpyrad Standard
Product code	203-16841
CAS No	129558-76-5

Formula C21H22ClN3O2

Manufacturer
Wako Pure Chemical Industries, Ltd.
1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
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Supplier
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Recommended uses and restrictions on use For research purposes

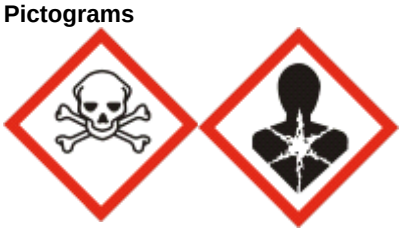
Section 2: HAZARDS IDENTIFICATION

GHS classification

Classification of the substance or mixture

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 3
Serious eye damage/eye irritation	Category 2A
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 1
Category 1 systemic toxicity	
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 liver, pancreas, reproductive system	
Category 2 heart	
aquatic environment (long-term hazard)	Category 4

Pictograms



Signal word Danger

Hazard statements

H301 - Toxic if swallowed
H316 - Causes mild skin irritation
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H361 - Suspected of damaging fertility or the unborn child
H413 - May cause long lasting harmful effects to aquatic life
H370 - Causes damage to the following organs: systemic toxicity
H372 - Causes damage to the following organs through prolonged or repeated exposure: liver, pancreas, reproductive system
H373 - May cause damage to the following organs through prolonged or repeated exposure: heart

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 eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Do not breathe dust/fume/gas/mist/vapors/spray
- Avoid release to the environment

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
- If skin irritation occurs: Get medical advice/attention
- 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
- 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 C21H22ClN3O2

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS No
Tolfenpyrad	98.0	383.87	N/A	8-(2)-1836	129558-76-5

Impurities and/or Additives： Not applicable

Section 4: FIRST AID MEASURES

Inhalation

Remove to fresh air Call a physician immediately

Skin contact

Wash off immediately with soap and plenty of water Immediate medical attention is required

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 Immediate medical attention is required 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,

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 See Section 12 for additional ecological information

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	Keep container protect from light tightly closed. Store in a cool (2-10 degree C) place. Store locked up
Safe packaging material	Glass
Incompatible substances	Strong oxidizing agents

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

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.

Exposure limits

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

When using do not eat, drink or smoke

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form	white - pale yellow crystalline powder - powder
Odor	No data available
pH	No data available
Melting point/freezing point	87 - 89 °C
Boiling point, initial boiling point and boiling range	No data available
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)	No data available
Solubilities	Water : practically insoluble,or insoluble . Ethanol , acetone : soluble .
n-Octanol/water partition coefficient: (log Pow)	5.61
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

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), Halides

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Tolfenpyrad	77.2 mg/kg (Rat)	N/A	1.50mg/l (Rat)

Component	Acute toxicity -oral- source information	Based on the NITE GHS classification results.	Acute toxicity -inhalation gas- source information
Tolfenpyrad 129558-76-5 (98.0)	LD50(orl,rat): 77.2 mg/kg (Value of statistical processing from 3data, Pesticide registration application materials)	Based on the NITE GHS classification results.	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
Tolfenpyrad 129558-76-5 (98.0)	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	LC50(ihl,rat):1.50 mg/L (Pesticide registration application materials) .

Skin irritation/corrosion

Component	Skin corrosion irritation source information
Tolfenpyrad 129558-76-5 (98.0)	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Component	Serious eye damage source information
Tolfenpyrad 129558-76-5 (98.0)	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Component	Respiratory, Skin sensitization source information
Tolfenpyrad 129558-76-5 (98.0)	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Component	Mutagenic source information
Tolfenpyrad 129558-76-5 (98.0)	Based on the NITE GHS classification results.

Carcinogenicity

Component	Carcinogenicity source infotmation
Tolfenpyrad 129558-76-5 (98.0)	Based on the NITE GHS classification results.

Reproductive toxicity

Component	Reproductive toxicity source information
Tolfenpyrad 129558-76-5 (98.0)	Based on the NITE GHS classification results.

STOT-single exposure

Component	STOT -single exporsure- source information
Tolfenpyrad 129558-76-5 (98.0)	Based on the NITE GHS classification results.

STOT-repeated exposure

Component	STOT -repeated exposure- source information
Tolfenpyrad 129558-76-5 (98.0)	Based on the NITE GHS classification results.

Aspiration hazard

Component	Aspiration Hazard source information
Tolfenpyrad 129558-76-5 (98.0)	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Tolfenpyrad	*N/A*	LC50=0.049mg/l 96h	*N/A*

Other data

Component	Aquatic toxicity -Acute- source information	Aquatic toxicity -Chronic- source information
Tolfenpyrad 129558-76-5 (98.0)	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 UN2761
Proper shipping name: Organochlorine pesticide, solid, toxic (Tolfenpyrad)
UN classfication 6.1
Subsidiary hazard class
Packing group III
ERG Code 6L
Marine pollutant Not applicable

IMDG

UN number UN2761
Proper shipping name: Organochlorine pesticide, solid, toxic (Tolfenpyrad)
UN classfication 6.1
Subsidiary hazard class
Packing group III
EmS-No F-A, S-A
Marine pollutant (Sea) Not applicable

IATA

UN number UN2761
Proper shipping name: Organochlorine pesticide, solid, toxic (Tolfenpyrad)
UN classfication 6.1
Subsidiary hazard class
Packing group III
Enviromenntally Hazardous Substance Not applicable

Section 15: REGULATORY INFORMATION

International Inventories

EINECS/ELINCS -
TSCA -

Japanese regulations

Fire Service Act Not applicable
Poisonous and Deleterious Substances Control Law Deleterious Substances 3rd. Grade

Industrial Safety and Health Act Not applicable
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)
Marine Pollution Prevention Law
Pollutant Release and Transfer Register Law Class 1

Water Pollution Control Act Not applicable
Export Trade Control Order Not applicable

Pollution Release and Transfer Registry

Class	Chemical Name in Regulation	(Metal Name)	Ordinance Number	Content Rate
Class 1	4-Chloro-3-ethyl-1-methyl-N-[4-(paratolyl oxy)benzyl]pyrazole-5-carb oxamide	-	92	98.0%

Poisonous and Deleterious Substances Control Law

SECTION	Chemical Name in Regulation
Deleterious Substances (LawArt.2, Attached Table 2, Designating Order Art.2)	4-Chloro-3-ethyl-1-methyl-N-[p-(paratolyloxy)benzyl]pyrazole-5-carboxamide and its preparation

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