

## SAFETY DATA SHEET

According to JIS Z 7253:2019  
Revision date 01-Feb-2023  
Revision Number 3.03

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	5,5-Dimethylhydantoin
Product Code	049-02992,043-02995

Manufacturer	FUJIFILM Wako Pure Chemical Corporation 1-2 Doshomachi 3-Chome Chuo-ku, Osaka 540-8605, Japan Phone: +81-6-6203-3741 Fax: +81-6-6203-5964
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 and restrictions on use	For research use only

## Section 2: HAZARDS IDENTIFICATION

## GHS classification

Classification of the substance or mixture

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

## Pictograms

Signal word None

## Hazard statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

## Precautionary statements-(Prevention)

- Not applicable

## Precautionary statements-(Response)

- Not applicable

## Precautionary statements-(Storage)

- Not applicable

## Precautionary statements-(Disposal)

- Not applicable

## Others

Other hazards Not available

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Substance

Formula C<sub>5</sub>H<sub>8</sub>N<sub>2</sub>O<sub>2</sub>

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
5,5-Dimethylhydantoin	97.0 - 103.0	128.13	(5)-441	公表	77-71-4

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

**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 (CO<sub>2</sub>), 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.

### **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 contaminant and methods and materials for cleaning up**

Sweep up and gather scattered particles, and collect it in an empty airtight container.

### **Recovery, 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**

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

**Storage****Safe storage conditions****Storage conditions**

Keep container protect from light, store in well-ventilated place at room temperature (preferably cool). Keep container tightly closed.

**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**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**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

**Appearance**

crystals - crystalline powder

**Odor**

no data available

**Melting point/freezing point**

173 - 178 °C

**Boiling point, initial boiling point and boiling range**

no data available

**Flammability**

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

**Flash point**

no data available

**Auto-ignition temperature:**

no data available

**Decomposition temperature:**

no data available

**pH**

4 - 6(100g/l)

**Viscosity (coefficient of viscosity)**

no data available

**Dynamic viscosity**

no data available

**Solubilities**

water , Ethanol : soluble . benzene : slightly soluble . ether : insoluble .

**n-Octanol/water partition coefficient:(log Pow)**

no data available

**Vapour pressure**

no data available

**Specific Gravity / Relative density**

no data available

**Vapour density**

no data available

**Particle characteristics**

no data available

## Section 10: STABILITY AND REACTIVITY

**Stability**

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

**Hazardous reactions**

None under normal processing

**Conditions to avoid**

Extremes of temperature and direct sunlight

**Incompatible materials**

Strong oxidizing agents

**Hazardous decomposition products**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>)

## Section 11: TOXICOLOGICAL INFORMATION

**Acute toxicity**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
5,5-Dimethylhydantoin	7800 mg/kg ( Rat )	> 20000 mg/kg ( Rabbit )	> 14.68 mg/L ( Rat ) 1 h

**Skin irritation/corrosion** no data available  
**Serious eye damage/ irritation** no data available  
**Respiratory or skin sensitization** no data available  
**Reproductive cell mutagenicity** no data available  
**Carcinogenicity** no data available

**Reproductive toxicity** no data available  
**STOT-single exposure** no data available  
**STOT-repeated exposure** no data available  
**Aspiration hazard** no data available

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity**

Chemical Name	Algae/aquatic plants	Fish	Crustacea
5,5-Dimethylhydantoin	N/A	LC50: <i>Pimephales promelas</i> 14600 - 18500 mg/L 96 h	N/A

**Other data** no data available

**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** Not regulated  
**UN number** -

Proper shipping name:  
 UN classification  
 Subsidiary hazard class  
 Packing group  
 Marine pollutant Not applicable

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

IATA Not regulated  
 UN number -  
 Proper shipping name:  
 UN classification  
 Subsidiary hazard class  
 Packing group  
 Environmentally 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 Not applicable  
 Industrial Safety and Health Act Not applicable  
 Regulations for the carriage and storage of dangerous goods in ship Not applicable  
 Civil Aeronautics Law Not applicable  
 Pollutant Release and Transfer Register Law Not applicable  
 (~2023.3.31)  
Pollutant Release and Transfer Register Law  
 (2023/4/1~)  
 Export Trade Control Order Not 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 Organic Chemistry, SSOCJ, Koudansha Scientific Co.Ltd.  
 Chemical Dictionary, Kyouritsu Publishing Co., Ltd.  
 etc

### **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 Z7252(2019). \*JIS: Japanese Industrial Standards

**End of Safety Data Sheet**