

# Safety Data Sheet (SDS)

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## Safety Data Sheet (SDS)

### Section 1: Identification

#### 1.1 Product Identification

- **Product Name:** Selamectin
- **Product Number:** Sigma-1492025165
- **Brand:** Sigma
- **CAS Number:** 220119-17-5
- **EC Number:** Not specified
- **Molecular Formula:**  $C_{43}H_{63}NO_{11}$
- **Molecular Weight:** 770.0 g/mol
- **Website:** [Sigma Chemical](#)

#### 1.2 Supplier Details

- **Company Name:** Sigma Chemical Co., Ltd.
- **Address:** Room 2-1-2301, Jiahe Xinxing, No.130, Shandong Road, Shibei District, Qingdao City, Shandong Province, China
- **Phone Number:** +8618661891880
- **Email:** chemweb3@foxmail.com
- **Business Hours:**
  - Monday to Friday: 9:00 AM - 6:00 PM
  - Saturday: 9:00 AM - 1:00 PM
  - Sunday: Closed

#### 1.3 Emergency Contact Number

- **Emergency Contact:** +8618661891880

#### 1.4 Recommended Use and Restrictions

- **Recommended Use:** For research and development purposes only. Not for use as a drug, household product, or in any other application.
  - **Restrictions:** Not for human use.
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## Section 2: Hazard Identification

### 2.1 GHS Classification

- **Acute Toxicity:**
  - Oral: Category 4, H302 (Harmful if swallowed)
  - Inhalation: Category 4, H332 (Harmful if inhaled)
- **Specific Target Organ Toxicity (Repeated Exposure):**
  - Inhalation: Category 2, H373 (May cause damage to organs through prolonged or repeated exposure)

### 2.2 GHS Label Elements

- **Pictogram:** Warning
- **Signal Word:** Warning
- **Hazard Statements:**
  - H302: Harmful if swallowed
  - H332: Harmful if inhaled
  - H373: May cause damage to organs through prolonged or repeated exposure
- **Precautionary Statements:**
  - Prevention:
    - P260: Do not breathe dust/fume/gas/mist/vapours/spray
    - P264: Wash thoroughly after handling
    - P270: Do not eat, drink, or smoke when using this product
  - Response:
    - P301+P312+P330: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
    - P304+P312: IF INHALED: Call a POISON CENTER/doctor if you feel unwell.
  - Disposal:
    - P501: Dispose of contents/container in accordance with local/regional/national/international regulations

## 2.3 Physical and Chemical Hazards

- **Physical and Chemical Hazards:** Non-flammable. Ignition sources may release hazardous products.

## 2.4 Health Hazards

- **Health Hazards:**
  - H302: Harmful if swallowed
  - H332: Harmful if inhaled
  - H373: May cause damage to organs through prolonged or repeated exposure

## 2.5 Environmental Hazards

- **Environmental Hazards:** No environmental hazards identified based on current information.

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# Section 3: Composition/Information on Ingredients

## 3.1 Substance

- **Synonyms:** Selamectin, UK-124,114, 5-(4-fluorophenyl)-4,5-dihydro-4-methyl-2-oxazoline, 4-FPO, 4'-fluoro-4-MAR, 4'-fluoro-4-Methylaminorex, para-fluoro-4-Methylaminorex, p-F-4-Methylaminorex
- **Molecular Formula:**  $C_{43}H_{63}NO_{11}$
- **Molecular Weight:** 770.0 g/mol
- **CAS Number:** 220119-17-5
- **EC Number:** Not specified
- **Hazardous Components:**
  - **Component:** Selamectin
  - **Classification:**
    - Acute Toxicity: Category 4 (Oral), H302
    - Acute Toxicity: Category 4 (Inhalation), H332
    - Specific Target Organ Toxicity (Repeated Exposure): Category 2, H373

## Section 4: First Aid Measures

### 4.1 First Aid Measures

- **Inhalation:** Remove victim to fresh air. If feeling unwell, call a POISON CENTER/doctor.
- **Skin Contact:** Immediately wash with plenty of water for at least 15 minutes. Remove contaminated clothing and wash before reuse. Get medical attention if irritation persists.
- **Eye Contact:** Rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention if eye irritation persists.
- **Ingestion:** Do NOT induce vomiting. Rinse mouth with water. Call a POISON CENTER/doctor if feeling unwell.

### 4.2 Most Important Symptoms and Effects

- **Symptoms:** Difficulty in breathing. Symptoms of overexposure may include headache, dizziness, tiredness, nausea, and vomiting.

### 4.3 Immediate Medical Attention and Special Treatment

- **Medical Treatment:** Treat symptomatically.

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## Section 5: Firefighting Measures

### 5.1 Extinguishing Media

- **Suitable Extinguishing Agents:** Use fire extinguishing methods suitable for the surrounding environment. Solid water stream may be used.

### 5.2 Specific Hazards Arising from the Chemical

- **Hazardous Combustion Products:** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Gaseous hydrogen fluoride (HF)

### 5.3 Firefighting Precautions

- **Protective Equipment:** Wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.

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## Section 6: Accidental Release Measures

### 6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

- **Personal Precautions:** Ensure adequate ventilation. Use personal protective equipment as required. Ground all equipment used when handling the product. Avoid contact with skin, eyes, or clothing. Remove all sources of ignition. Take precautionary measures against static discharge.
- **Environmental Precautions:** Prevent seepage into sewage systems, workpits, and surface or ground water.

### 6.2 Methods and Materials for Containment and Clean-Up

- **Containment:** For small leaks, absorb with inert absorbent material (e.g., sand, diatomite, acid binders, universal binders) or collect in a tightly sealable container. For large leaks, enclose with banks to prevent outflow and lead the leakage to a safe place for disposal.
- **Reference to Other Sections:** See Section 8 for personal protection equipment and Section 13 for disposal methods.

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## Section 7: Handling and Storage

### 7.1 Handling Precautions

- **Handling:** Ensure adequate ventilation. Wear personal protective equipment/face protection. Use spark-proof tools and explosion-proof equipment. Keep away from open flames, hot surfaces, and sources of ignition. Avoid contact with skin, eyes, or clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid ingestion and inhalation. Take precautionary measures against static discharge.

### 7.2 Storage Conditions

- **Storage:** Store in a dry, cool, and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks, and flame. Store in a

flammable area. Keep container tightly closed in a dry and well-ventilated place. Incompatible materials include strong oxidizing agents, strong acids, strong bases, strong reducing agents, and combustible materials.

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## Section 8: Exposure Controls/Personal Protection

### 8.1 Control Parameters

- **Exposure Limits:** No occupational exposure limits established by regional regulatory authorities.

### 8.2 Exposure Controls

- **Engineering Measures:** Ensure adequate ventilation, especially in confined areas.

### 8.3 Personal Protective Equipment

- **Eye/face protection:** Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Safety glasses.
- **Skin protection:** Full contact: Material: Nitrile rubber, Minimum layer thickness: 0.11 mm, Break through time: 480 min. Splash contact: Material: Nitrile rubber, Minimum layer thickness: 0.11 mm, Break through time: 480 min.
- **Body Protection: Protective clothing.**
- **Respiratory protection:** Required when dusts are generated. Recommended Filter type: Filter type P3.

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## Section 9: Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

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**Physical state:** Crystalline

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**Color:** Colorless

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**Odor:** Odorless

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**Melting point/freezing point:** No data available

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**Initial boiling point and boiling range:** No data available

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**Flammability (solid, gas):** No data available

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**Upper/lower flammability or explosive limits:** No data available

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**Flash point:** No data available

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**Autoignition temperature:** No data available

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**Decomposition temperature:** No data available

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**pH:** No data available

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**Viscosity:** Viscosity, kinematic: No data available, Viscosity, dynamic: No data available

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**Water solubility:** Slightly soluble

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**Partition coefficient (n-octanol/water):** log Pow: 7.19

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**Vapor pressure:** No data available

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**Density:** No data available

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**Relative density:** No data available

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**Relative vapor density:** No data available

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**Particle characteristics:** No data available

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**Explosive properties:** No data available

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**Oxidizing properties:** None

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## 9.2 Other Safety Information

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**Other Safety Information:** No data available

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## Section 10: Stability and Reactivity

### 10.1 Reactivity

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**Chemical stability:** The product is chemically stable under standard ambient conditions (room temperature).

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**Possibility of hazardous reactions:** No data available

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**Conditions to avoid:** No data available

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**Incompatible materials:** Acids and bases, reducing agents, strong oxidizing agents

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**Hazardous decomposition products:** In the event of fire: see section 5

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## Section 11: Toxicological Information

### 11.1 Information on Toxicological Effects

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**Acute toxicity:** No data available

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**Skin corrosion/irritation:** No data available

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**Serious eye damage/eye irritation:** No data available

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**Respiratory or skin sensitization:** No data available

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**Germ cell mutagenicity:** No data available

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**Carcinogenicity:** No data available

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**Reproductive toxicity:** No data available

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**Specific target organ toxicity - single exposure:** No data available

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**Specific target organ toxicity - repeated exposure:** No data available

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**Aspiration hazard:** No data available

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## 11.2 Additional Information

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**Endocrine disrupting properties:** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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## Section 12: Ecological Information

### 12.1 Toxicity

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**Toxicity:** No data available

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## **12.2 Persistence and Degradability**

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**Persistence and degradability:** No data available

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## **12.3 Bioaccumulative Potential**

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**Bioaccumulative potential:** No data available

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## **12.4 Mobility in Soil**

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**Mobility in soil:** No data available

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## **12.5 Results of PBT and vPvB Assessment**

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**PBT and vPvB Assessment:** This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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## **12.6 Other Adverse Effects**

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**Other adverse effects:** No data available

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# **Section 13: Disposal Considerations**

## **13.1 Waste Treatment Methods**

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- **Waste treatment methods:** No data available
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## Section 14: Transport Information

### 14.1 UN Number

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- **ADR/RID:** -

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**IMDG:** -

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**IATA:** -

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### 14.2 UN Proper Shipping Name

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**ADR/RID:** Not dangerous goods

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**IMDG:** Not dangerous goods

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**IATA:** Not dangerous goods

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### 14.3 Transport Hazard Classes

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**ADR/RID:** -

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**IMDG:** -

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**IATA:** -

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#### **14.4 Packaging Group**

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**ADR/RID:** -

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**IMDG:** -

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**IATA:** -

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#### **14.5 Environmental Hazards**

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**ADR/RID:** No

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**IMDG:** Marine pollutant: No

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**IATA:** No

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#### **14.6 Special Precautions for User**

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**Special precautions for user:** No data available

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#### **14.7 Further Information**

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**Further information:** Not classified as dangerous in the meaning of transport.

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### **Section 15: Regulatory Information**

#### **15.1 Safety, Health, and Environmental Regulations/Legislation Specific for the Substance or Mixture**

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**Regulatory Information:** This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

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#### **15.2 Chemical Safety Assessment**

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**Chemical Safety Assessment:** For this product, a chemical safety assessment was not carried out.

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### **Section 16: Other Information**

#### **16.1 Full Text of H-Statements**

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**H413:** May cause long-lasting harmful effects to aquatic life.

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## **16.2 Full Text of Other Abbreviations**

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**ADN:** European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

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**ADR:** Agreement concerning the International Carriage of Dangerous Goods by Road

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**AIIC:** Australian Inventory of Industrial Chemicals

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**ASTM:** American Society for the Testing of Materials

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**bw:** Body weight

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**CMR:** Carcinogen, Mutagen or Reproductive Toxicant

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**DIN:** Standard of the German Institute for Standardisation

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**DSL:** Domestic Substances List (Canada)

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**ECx:** Concentration associated with x% response

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**ELx:** Loading rate associated with x% response

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**EmS:** Emergency Schedule

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**ENCS:** Existing and New Chemical Substances (Japan)

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**ErCx:** Concentration associated with x% growth rate response

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**GHS:** Globally Harmonized System

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**GLP:** Good Laboratory Practice

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**IARC:** International Agency for Research on Cancer

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**IATA:** International Air Transport Association

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**IBC:** International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

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**IC50:** Half maximal inhibitory concentration

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**ICAO:** International Civil Aviation Organization

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**IECSC:** Inventory of Existing Chemical Substances in China

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**IMDG:** International Maritime Dangerous Goods

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**IMO:** International Maritime Organization

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**ISHL:** Industrial Safety and Health Law (Japan)

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**ISO:** International Organisation for Standardization

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**KECI:** Korea Existing Chemicals Inventory

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**LC50:** Lethal Concentration to 50% of a test population

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**LD50:** Lethal Dose to 50% of a test population (Median Lethal Dose)

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**MARPOL:** International Convention for the Prevention of Pollution from Ships

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**n.o.s.:** Not Otherwise Specified

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**NO(A)EC:** No Observed (Adverse) Effect Concentration

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**NO(A)EL:** No Observed (Adverse) Effect Level

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**NOELR:** No Observable Effect Loading Rate

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**NZIoC:** New Zealand Inventory of Chemicals

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**OECD:** Organization for Economic Co-operation and Development

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**OPPTS:** Office of Chemical Safety and Pollution Prevention

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**PBT:** Persistent, Bioaccumulative and Toxic substance

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**PICCS:** Philippines Inventory of Chemicals and Chemical Substances

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**(Q)SAR:** (Quantitative) Structure Activity Relationship

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**REACH:** Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

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**RID:** Regulations concerning the International Carriage of Dangerous Goods by Rail

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**SADT:** Self-Accelerating Decomposition Temperature

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**SDS:** Safety Data Sheet

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**TCSI:** Taiwan Chemical Substance Inventory

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**TECI:** Thailand Existing Chemicals Inventory

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**TSCA:** Toxic Substances Control Act (United States)

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**UN:** United Nations

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**UNRTDG:** United Nations Recommendations on the Transport of Dangerous Goods

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**vPvB:** Very Persistent and Very Bioaccumulative

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