

1. SUBSTANCE IDENTITY

Product Name	Imipenem
Brand	TOKU-E
Company	715 W Orchard Drive Suite 3 Bellingham, WA 98225
EMERGENCY PHONE (US only)	+1-800-535-5053
INF	+86-21-5206-9530

2. CHEMICAL COMPOSITION AND DATA ON COMPONENTS

CAS No.	64221-86-9
Formula	$C_{12}H_{17}N_3O_4S$
Molecular Weight	299.38

3. HAZARD IDENTIFICATION

Label Precautionary Statements

May be harmful by inhalation, in contact with skin, and if swallowed. Obtain special instructions before use. If exposed or concerned: get medical advice/ attention

Label Elements Under CLP

Hazard Statements

H315: Causes skin irritation
H319: Causes serious eye irritation
H335: May cause respiratory irritation

Signal Words: Warning

Hazard Pictograms

GHS07: Exclamation mark



Precautionary Statements

P261: Avoid breathing dust
P280: Wear protective gloves/protective clothing/eye protection/face protection
P271: Use only outdoors or in a well-ventilated area

Label Elements Under CHIP

Hazard Symbols: Irritant



Risk Phrases

R 36/37/38: Irritating to eyes, respiratory system, and skin

Safety Phrases

S22: Do not breathe dust

S 36/37: Wear suitable protective clothing and gloves

S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Chemwatch Hazard Ratings

Flammability: 1

Toxicity: 2

Body Contact: 1

Reactivity: 1

Chronic: 2

4. FIRST-AID MEASURES

In case of eye and skin contact

Immediately flush eyes or skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes. Ensure proper flushing of eyes by separating eyelids with fingers. If soap is available, use on skin.

If inhaled

Remove to fresh air. Encourage the blowing of the nose to ensure clear passage of air. If breathing is difficult, call a physician.

If swallowed

Wash out mouth with water (provided person is conscious). Call a physician immediately.

Wash all contaminated clothing before reuse

Notes to Physician

Treat symptomatically

No appreciable absorption of imipenem occurs in the gastrointestinal tract. The half-life is about 1 hour and up to 20% is plasma-bound. Widely distributed in body tissues and fluids. Excreted mainly in the urine by glomerular filtration and tubular secretion. Undergoes partial metabolism in the kidneys by dehydropeptidase I to an inactive metabolite; 5-45% is excreted unchanged.

5. FIRE-EXTINGUISHING MEASURES

Suitable extinguishing media

Dry chemical powder or alcohol-resistant foam

Special protective equipment for fire-fighters

Wear a particulate respirator, chemical goggles, and protective gloves

Unusual fire and explosion hazards

May form hazardous decomposition products under fire conditions, including carbon, sulfur, and nitrogen oxides. Avoid contamination with oxidizing agents, i.e. nitrates, chlorine bleaches, pool

chlorine, etc. as ignition may result.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Evacuate area. Avoid dust formation and breathing vapors, mist, or gas. Remove all ignition sources

Methods for cleaning up

Clean all spills immediately. Sweep up, avoid raising dust, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete. Do not let product enter drains

7. HANDLING AND STORAGE

Handling

Wear government-approved respirator, chemical-resistant gloves, safety goggles, and all other protective clothing. Use only in a chemical fume hood. Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

Storage

Keep tightly closed and in a dry, well-ventilated area

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Contains no substances with occupational exposure limit values (OELs)

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards, such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves

Eye protection

Safety glasses

Skin and body protection

Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product

Engineering Controls

Enclosed local exhaust ventilation is required at points of dust, fume, or vapor generation. HEPA-terminated local exhaust ventilation should be considered at point of generation of dust, fumes, or vapors.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Crystalline solid

pH

No data available

Melting point

No data available

Solubility	Partly miscible in water
Other solvents	5 mg/ml in methanol 0.2 mg/ml in ethanol 0.3 mg/ml in dimethylsulfoxide
Volatility	Negligible

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions

Materials to avoid

Oxidizing agents

Hazardous decomposition products

Carbon, nitrogen, and sulfur oxides may be formed under fire conditions. Otherwise, no data available

Hazardous polymerization products

Hazardous polymerization has not been shown to occur

11. TOXOLOGICAL INFORMATION

Potential health effects

Inhalation There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

Skin May be harmful if absorbed through the skin. May cause irritation and redness.

Eyes May cause eye irritation and redness. The eyes may water profusely.

Ingestion May be harmful if swallowed, especially if individual has pre-existing organ damage

Signs and symptoms of exposure

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC, ACGIH, NTP, or OSHA

Beta-lactam antibiotics often cause allergies, including rash, itching wheals, blood changes, and occasionally shock. Digestive symptoms include diarrhea, nausea, and vomiting.

Principal routes of exposure are by accidental skin and eye contact and inhalation of dust.

In case of accident or if you feel unwell, seek immediate medical attention.

Toxicity Data

Oral Rat LD₅₀ 5,000 mg/kg

Subcutaneous Rat LD₅₀ 5,000 mg/kg

Intravenous Rat LD₅₀ 1972 mg/kg

Oral Mouse LD₅₀ 5,000 mg/kg

Subcutaneous Mouse LD₅₀ 5,000 mg/kg

Diarrhea, convulsions, and dyspnea recorded.

Only selected registry of toxic effects of chemical substances (RTECS # CL 5446510) data is presented here. See actual entry in trees for complete information

12. ECOLOGICAL INFORMATION

No data available

Treat as if harmful if released into environment

13. DISPOSAL CONSIDERATIONS

Product

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14. TRANSPORT INFORMATION

Proper shipping name	NA. Not dangerous goods
UN No.	NA
Class	NA
Packing group	NA
Hazard label	NA
PIH	NA

15. REGULATORY INFORMATION**EU Information**

See section 3, Hazard Identification

US Information

Considered a Hazardous Substance according to OSHA 29 CFR 1910. 1200

California Prop.65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm

Canada Information

Listen on the Canada National Pollutant Release Inventory (NPRI)

16. OTHER INFORMATION**Further Information**

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. TOKU-E Co. shall not be held liable for any damage resulting from handling or from contact with the above product. Please see reverse side of invoice or packing slip for additional terms and conditions of sale.