



The Evolution of BioPurity

IMAZAPYR
MATERIAL SAFETY DATA SHEET

Revised 09/2011

1. SUBSTANCE IDENTITY

Product Name	Imazapyr
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.	81334-34-1
Formula	$C_{13}H_{15}N_3O_3$
Molecular Weight	261.28

3. HAZARD IDENTIFICATION

Label Precautionary Statements

P305, 251, 338: If in eyes, rinse cautiously with water for several minutes. Remove contacts (if present and easy to do). Continue rinsing

Label Hazard Statements

H313: May be harmful if in contact with skin

H319: Causes serious eye irritation

H402: Harmful to aquatic life

GHS Classification

Acute toxicity, Dermal (Category 5)

Eye irritation (Category 2A)

Acute aquatic toxicity (Category 3)

OSHA Hazards

Irritant

HMIS Classification

Health hazard: 2

Chronic Health Hazard: *

Flammability: 0

Physical Hazards: 0

NFPA Rating

Health Hazard: 2

Fire: 0

Reactivity Hazard: 0

In case of accident or if you feel unwell, seek medical advice immediately (show label when

possible). Wear suitable protective clothing, gloves, and eye/face protection.

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 inhaled

Remove to fresh 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

5. FIRE-EXTINGUISHING MEASURES

Suitable extinguishing media

Carbon dioxide, dry chemical powder, water spray, or alcohol-resistant foam

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin

Unusual fire and explosion hazards

May form hazardous decomposition products under fire conditions, including carbon and nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Evacuate area. Avoid dust formation and breathing vapors, mist, or gas

Methods for cleaning up

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

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid
pH	No data available
Melting point	172-173°C
Solubility	No data available
Other solvents	No data available

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions

Materials to avoid

No data available

Hazardous decomposition products

Carbon and nitrogen oxides, hydrogen chloride gas, and hydrogen fluoride gas 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 May be harmful if inhaled. May cause respiratory tract irritation

Skin May be harmful if absorbed through the skin. Causes skin irritation

Eyes Causes eye irritation

Ingestion May be harmful if swallowed

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

Toxicity Data

Oral Rat LD ₅₀	5,000 mg/kg
Skin Rat LD ₅₀	No data available
Skin Rabbit LD ₅₀	2,000 mg/kg
Skin Mouse LD ₅₀	No data available
Intraperitoneal Mouse LD ₅₀	No data available
Intravenous Mouse LD ₅₀	No data available

Only selected registry of toxic effects of chemical substances (RTECS # US5682500) data is

presented here. See actual entry in trees for complete information

12. ECOLOGICAL INFORMATION

Toxicity to fish:

LC₅₀ Oncorhynchus mykiss (rainbow trout)- 100 mg/L, 96h

EC₅₀ Daphnia magna (Water flea)- 100 mg/L, 48h

In the event of improper disposal or handling may cause an environmental hazard

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

No data available

US Information

OSHA Hazards: Irritant

No SARA 302 or 313 Components

Sara 311/312 Hazards: Acute Health Hazard

Massachusetts Right to Know Components: No components are subject to the Massachusetts Right to Know Act

Pennsylvania Right to Know Components

	CAS-No.	Revision Date
Imazapyr	81334-34-1	
New Jersey Right to Know Components		

	CAS-No.	Revision Date
Imazapyr	81334-34-1	

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

Not on the Canadian DSL nor NDSL lists

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.