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MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

TRADE NAME **PROPIDIUM IODIDE**

CAS NUMBER 25535-16-4

ROI NUMBER 0731P

SYNONYMS 3,8-Diamino-5-(3-diethylaminopropyl)-6-phenylphenanthridinium iodide methiodide

MANUFACTURER/ SUPPLIER
Research Organics
4353 E 49th Street
Cleveland, Ohio
44125 USA

TELEPHONE NUMBERS - 24 HOUR EMERGENCY ASSISTANCE:

INFOTRAC 800-535-5053

TELEPHONE NUMBERS - GENERAL ASSISTANCE:

Product Information 800-321-0570

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percentage*	Exposure Limits/Health Hazards
PROPIDIUM IODIDE	25535-16-4	>99 %	Particulates Not Otherwise Classified - TWA Respirable particulate (1995) = 3 mg/m3(e)
			MAY BE IRRITATING, MAY BE HARMFUL.
		%	POSSIBLE MUTAGEN.

***Values do not reflect absolute minimums and maximums; those values may vary from time to time.**

3 HAZARDS IDENTIFICATION

Emergency Overview

CAUTION!

MAY BE IRRITATING TO THE SKIN, EYES, AND UPPER RESPIRATORY TRACT.

MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN

POSSIBLE MUTAGEN - MAY CAUSE HERITABLE GENETIC DAMAGE.

Potential Health Effects Skin

This material May cause skin irritation. Reddening, itching and inflammation may result. May be absorbed through the skin.

Potential Health Effect Eyes

Direct contact may cause irritation, redness, tearing and blurred vision.

Potential Health Effects Inhalation

May cause irritation to the respiratory tract.

This material may cause injury or illness if inhaled.

Potential Health Effect Ingestion

If ingested, this material may cause irritation to the mouth, throat and gastrointestinal tract.
May be harmful if swallowed.
If ingested, this material may cause irritation to the mouth, throat and gastrointestinal tract.

Special Toxic Effects

Limited laboratory experiments have shown mutagenic effects. Until further testing is done, it should be treated as a possible mutagen in humans.
CAUTION! THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED.

Target Organs

ND

4 FIRST AID MEASURES

Skin

Immediately flush skin with plenty of water, for at least 15 minutes, while removing contaminated clothing and shoes. Contaminated clothing must be laundered before reuse. Get medical attention if irritation develops or persists.

Eyes

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing.
Get medical attention.

Inhalation

Safely remove victim to fresh air. If not breathing, institute artificial respiration/rescue breathing. If breathing is difficult, ensure clear airway and give oxygen.
Get medical attention.

Ingestion

If swallowed, wash out mouth with water provided person is conscious.
Never give anything by mouth to an unconscious person.
Get medical attention.

5 FIRE FIGHTING MEASURES

Hazardous Combustion Products

MAY EMIT TOXIC FUMES UNDER FIRE CONDITIONS.

Extinguishing Media

Use a water spray, dry chemical, alcohol foam, all purpose foam or carbon dioxide to extinguish fire.

Basic Fire Fighting Procedure

As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear. Evacuate the area and fight fire from a safe distance.

Unusual Fire and Explosion Hazards

None known to manufacturer.

Flash Point Temperature	ND
Autoignition Temperature	ND
Flammability Limits in Air Lower	ND
Flammability Limits in Air Upper	ND

6 ACCIDENTAL RELEASE MEASURES

Emergency Action

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind. (See Personal Protection Information Section.)

Environmental Precautions

Isolate hazard area and deny entry. Keep unnecessary people away. Take immediate steps to stop and contain the spill. Caution should be exercised regarding personnel safety and exposure to the spilled material.

Spill or Leak Procedure

Vacuum or sweep up material and place in a disposal container. Clean up spills immediately under quailfied supervision observing precautions in Protective Equipment section. Avoid clean up procedures that generate dust or result in water pollution.

After removal, scrub the contaminated area with detergent and flush thoroughly with water. Absorb wash liquid and place in the disposable container. Do not flush to sewer. Avoid runoff into storm sewers and ditches which lead to waterways.

7 HANDLING AND STORAGE

Handling

DO NOT GET IN EYES, ON SKIN OR CLOTHING.
Minimize dust generation during handling and contact.
Wash hands thoroughly before eating, drinking or smoking.

Storage

Store in refrigerator.
Use desiccant.
Keep containers tightly closed and upright when not in use.

Storage Hazards

Store away from oxidizers.
Sensitive to Light.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Contols

Facilities using or storing this material must be equipped with an eyewash station and safety shower.

Local exhaust ventilation, process enclosures, and other forms of engineering controls are the preferred means for controlling exposures.

Eye Protection PPE

Do not wear contact lenses when working with this substance.

Avoid eye contact with this material. Wear chemical safety goggles.

Skin Protection PPE

Avoid skin contact with this material. Use appropriate chemical protective gloves when handling.

Additional protection may be necessary to prevent skin contact including use of apron, armcovers, face shield, or boots.

Showering and changing into street clothing after work is recommended.

Respiratory Protection PPE

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

A NIOSH/MSHA approved air purifying respirator is recommended where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited.

Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstance where air purifing respirators may not provide adequate protection.

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirators use.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance

RED CRYSTALS

Boiling Point	ND
Melting Point	224-228C
Freezing Point	ND
Vapor Density	ND
Vapor Pressure	ND
Specific Gravity	ND
Molecular Formula	C27H34N4I2
Molecular Weight	668.4
pH	ND

10 STABILITY REACTIVITY

Stability/Incompatibility

Stable under normal conditions of use.

Incompatible with strong oxidizing agents.

Decomposition Products

Combustion may produce CO, CO2, NOx and/or Hydrogen Iodide.

Hazardous Polymerization

Will not occur.

11 TOXICOLOGICAL INFORMATION

MUTATION DATA:

Mutation in microorganisms - Bacteria (Salmonella typhimurium) = 200 ug/plate. Mutation in microorganisms - Yeast (Saccharomyces cerevisiae) = 25 umol/L. Gene conversion and miotic recombination - Yeast (Saccharomyces cerevisiae) = 50 umol/L/3D (continuous).

Only selected toxicological data is presented here. See actual entry in RTECS for complete information.

CAUTION! THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED. FOLLOW GOOD LABORATORY PRACTICES WHEN HANDLING.

Routes of Exposure

Inhalation, ingestion, skin and eye contact.

LD50

REGISTRY OF THE TOXIC EFFECTS OF CHEMICAL SUBSTANCES(RTECS)

RTECS # SF7949600

NO ORAL LD50 IN RATS INFORMATION IS AVAILABLE.

Subcutaneous LD50 - mouse = 16 mg/kg.

Only selected data is presented here. See actual entry in RTECS for complete information.

Carcinogenicity

NOT LISTED BY IARC, NTP OR OSHA AS A CARCINOGEN

12 ECOLOGICAL INFORMATION

EcoToxicological Information

DATA NOT YET AVAILABLE.

Chemical Fate Information

DATA NOT YET AVAILABLE.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

If the material is determined to be a hazardous waste, the transportation, storage, treatment and disposal of this waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can occur only in properly permitted facilities.

14 TRANSPORTATION INFORMATION

Department of Transportation (DOT) Requirements

Proper Shipping Name	NOT REGULATED	**UN/NA Code**	NA
Hazard Class	NA		
Packaging Group	NA		
Reportable Quantity	None		
Labels Required	NA		

Marine Pollutant (49 CFR 172.101 Appendix B) No

15 REGULATORY INFORMATION

Federal Regulations

This product is NOT on the EPA Toxic Substances Control Act (TSCA) inventory. The following notices are required by 40 CFR 720.36 (C) for those products NOT on the inventory list: (i) This product is supplied solely for use in Research and Development by

or under the supervision of a technically qualified individual as defined by 40 CFR 720.0 et.sec. (ii) The health risks of this product have not fully been determined. Any information that is or becomes available will be supplied on a Material Safety

Data Sheet. Uses other than for Research and Development may constitute a violation of TSCA.

EPA Genetox Program 1988, Positive: In vitro mammalian nonhuman micronucleus

State Regulations

Based on available information this material does not contain any components or chemicals currently known to the State of California to cause cancer, birth defects or reproductive harm at levels which would be subject to Proposition 65.

Reformulation, use or processing of this product may affect its composition and would require re-evaluation

International Regulations

OEL=MAK

International Phrases

R -	46	May cause heritable genetic damage.
	36/37/38	Irritating to eyes, respiratory system and skin.

S -	22	Do not breathe dust.
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical
	36/37/39	Wear suitable protective clothing, gloves & eye/face protection.
	38	In case of insufficient ventilation, wear suitable respiratory equipment.

SARA TITLE III RATINGS

Immediate Hazard	Delayed Hazard	Fire Hazard	Pressure Hazard	Reactivity Hazard	SARA 313 Chemical
☑	☑	☐	☐	☐	☐

NFPA Ratings

Health	Flammability	Reactivity	Special Hazards
-	-	-	-

HMIS RATINGS

Health	Flammabilty	Reactivity	Personal Protection Equipment
2	0	0	J

16 OTHER INFORMATION

Disclaimer

The data contained in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. Research Organics, Inc. provides the information contained herein in good faith but make no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining it appropriateness for a particular purpose. Research Organics, Inc. makes no representations, or warranties, either expressed or implied, of merchantability, fitness for a particular purpose with respect to the information refers. Accordingly, Research Organics, Inc. will not be responsible for damages resulting from the use of reliance upon this information. In no instance is any Research Organics, Inc. product offered for drug, food, food additive or clinical use in humans.

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Completed By: Environmental and Safety Department