GE Healthcare

Indium Oxine

(Indium-111 Oxyquinoline)

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Indium Oxine

Product Code: IN.15PA

Synonyms: Indium-111 Oxyquinoline

Manufacturer/Distributor: GE Healthcare
Medi-Physics, Inc.
3350 North Ridge Avenue
Arlington Heights, IL 60004

Technical Information No.: (800) 654-0118

CHEMTREC Emergency No.: (800) 424-9300 for US / (708) 527-3887 outside US

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient :	CAS No.	% V
Indium (In-111)	7440-74-6	0.0002%
Polysorbate 80	9005-65-6	0.01%
8-hydroxyquinoline	148-24-3	0.005%
HEPES	7365-45-9	0.6%
Sodium Chloride	8028-77-1	0.0075%
Water	7732-18-5	99.4%

3. HAZARD IDENTIFICATION

Emergency Overview: Read package insert prior to use. Indium Oxine is a diagnostic radiopharmaceutical for intravenous use only. It emits radiation and must be handled with appropriate safety measures to minimize radiation exposure to clinical personnel and patients. Radiopharmaceuticals should be used by or under the control of physicians who are qualified by specific training and experience in the safe use and handling of radionuclides, and whose training and

experience has been approved by the appropriate government agency authorized to license the use of radionuclides.

Physical & Chemical Hazard Ratings (0 = no hazard)

NFPA:	Health 1	Flammability 0	Stability 0
HMIS:	Health 1	Flammability 0	Stability 0

Potential Health Effects:

Inhalation: Not considered an acute health hazard.

Ingestion: May cause asymptomatic physiological uptake by the red bone marrow, spleen, liver or other tissues.

Skin Contact: Not considered an acute health hazard.

Eye Contact: Not considered an acute health hazard.

Chronic Exposure: Data on biological effects of ionizing radiation are based on exposures much higher than those permitted occupationally. No effects are expected from exposures received as a result of normal use.

Aggravation of Pre-existing Conditions: May cause allergic reaction in individuals sensitive to indium.

4. FIRST AID MEASURES

Eyes: In case of eye contact, immediately flush eyes with water for at least 15 minutes. Notify Radiation Safety Officer immedately. Call a physician if irritation develops.

Skin: Wash exposed area with soap and water or other approved decontamination media. Notify Radiation Safety Officer immediately. Call a physician if irritation develops.

Ingestion: Notify Radiation Safety Officer immediately.

Inhalation: Notify Radiation Safety Officer immediately

Note to Physician: Treat symptomatically

5. FIRE FIGHTING MEASURES

Flammable Properties: Not flammable

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Hazardous Combustion products: Carbon oxides, Nitrogen oxides, volitilized In-111 fumes

Explosion Data: None

Protective Equipment and Precautions for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand. MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENT RELEASE MEASURES

Any cleaup of spilled radioactive material shold be conducted under the direction of site radiation safety personnel. Any packages received with leaking internal components should be reported to GE Healthcare Technical Services at (800) 654-0118. Any packages delivered in damaged condiition should be reported to Chemtrec at (800) 424-9300.

7. HANDLING AND STORAGE

Handling: Always observe good health physics and hygiene pratices when handling radioactive material.

Storage: Store at 15 - 30º C. Do not freeze or expose to heat . Material should be shielded when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Limit (In-111)
NRC Occupational Concentration Limit: (3.0x10-6 µCi/cc) ; Nonoccupational : (9.0x10-9 µCi/cc)

8-Hydroxyquinoline:
Airborne Exposure Limits Not Established

Polysorbate 80:
Airborne Exposure Limits Not Established

HEPES:
Airborne Exposure Limits Not Established

Engineering Measures: Eyewash station and good general room ventilation

Eye/Face Protection: Avoid contact with eyes & face, use eye protection

Skin & Body Protection: Disposable latex or nitrile gloves examination glove, lab coat

Respiratory Protection: Not required under normal conditions of use.

Hygiene Measures: No smoking, eating, drinking or application of cosmetics should be allowed in area where radioactive materials are handled or stored.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: Clear Liquid

Odor: Odorless

Solubility: Soluble in water

Specific Gravity: No data available

Viscosity: No data available

pH: No data avaliable

Flash Point: None

Autoignition Temperature: None

Flammable Limits: None

Boiling Point: 100ºC

Melting Point: 0ºC

Vapor Pressure (mm Hg): No data available

Evaporation Rate: Not data available

Vapor Density: No data available

Radioactivity: 1 mCi (37 MBq) at time of calibration

Specific Activity: 1 mCi/ml (37 MBq/ml) at time of calibration

Half-Life: 67.9 hours

10. STABILITY AND REACTIVITY

Stability: Stable under specified conditions of use and storage.

Conditions to Avoid: None known

Incompatible Products: None known

Hazardous Decomposition Products: Carbon oxides, Nitrogen oxides, volitized In-111 fumes

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: No known acute toxilogicial effects

Carcinogenicity: Suffiencient exposure to ionizing radiation may cause harmful biological effects such as cancer.

Reproductive Toxicity: See section 15 California Proposition 65.

Target Organ Effects: No Known target organ effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

13. DISPOSAL CONSIDERATIONS

Indium Oxine is considered radioactive waste until the activity has decayed to nondetectable levels. Radioactive waste must be handled in accordance with procedures established by your Radiation Safety Program. Consult local, state and federal regulations for proper disposal.

14. TRANSPORT INFORMATION

DOT:

Proper Shipping Name: Radioactive Material, n.o.s.

Hazard Class: 7

Identification Number: UN2982

15. REGULATORY INFORMATION

OSHA Hazard Communication: This product is a pharmaceutical, it is not regulated under the under the OSHA Hazard Communcation Standard (29 CFR 1910.1200) guidelines.

CERCLA Reportable Quantites: In-111 = 100 Ci (3.7x1012 Bq)
Releases to the environment which exceed the Reportable Quanity (RQ) must be reported to the National Response Center at (800) 424-8802.

SARA Title III:
302 Extremely Hazardous Substances: None
311/312 Hazardous Catagories: Acute, Chronic
313 Toxic Substances subject to annual reporting requirements: None

CWA: Not regulated

RCRA hazrdous Waste Status: Non-hazardous (See Section 12 for details)

California Proposition 65: This product contains a substance (radioactive material) known to the State of California to cause reproductive toxicity.

Canada: This MSDS contains all of the information required by the Controlled Products Regulations (CPR).

16. OTHER INFORMATION

Issue Date: **April 2003**

Revision Date: **September 2012**

Disclaimer:

This information is furnished without warranty, representation, or license of any kind, except that it is accurate to the best of GE Healthcare's knowledge or obtained from sources believed to be accurate. GE Healthcare does not assume any legal responsibility for use or reliance upon same. Customers are encouraged to conduct their own evaluation. Before using any product, read the product insert and label. Adreview is a trademark of GE Healthcare. GE and GE Monogram are trademarks of the General Electric Company.

End of MSDS