

Material Safety Data Sheet

Printing date 23/06/2011

Version 2

Reviewed on 23/06/2011

1. Chemical and Company Identification

Product Name: Trilite™ Fluorescent Nanocrystals – Carboxy, Amine, Hydroxyl

Emission: 450-685nm

Manufacturer/Supplier: CytoDiagnostics Inc., 919 Fraser Drive, Unit 11, Burlington, Ontario, Canada, L7L 4X8

Phone: 905-635-2966

Web: www.cytodiagnostics.com

Information and Support: customer_service@cytodiagnosics.com

2. Composition/Information on Ingredients

This product contains: Fluorescent semiconductor alloy water soluble nanocrystals

Component 1: Water, 96.0-98.5% (w/w), CAS 7732-18-5.

Component 2: CdSxSe1-x/ZnS core/shell nanocrystal compound, 0.5-1.5% (w/w), CAS 1306-24-7.

3. Hazards Identification

Appearance: Opaque liquid. CAUTION! The toxicological properties of this material have not been fully investigated. May cause eye and skin irritation. May cause respiratory and digestive tract irritation.

Target Organs: None known.

Effect of overexposure:

Eye: May cause eye irritation. The toxicological properties of this material have not been fully investigated.

Skin: May cause skin irritation. The toxicological properties of this material have not been fully investigated.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated.

Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Chronic: No information found.

4. First Aid Measures

Skin contact: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Material Safety Data Sheet

Printing date 23/06/2011

Version 2

Reviewed on 23/06/2011

Eye contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Physician: Treat symptomatically and supportively.

5. Fire Fighting Measures

Not a fire hazard.

6. Accidental Release Measures

Wear NIOSH approved chemical safety gloves, goggles, and rubber boots. Sweep up product and place in a sealed bag. Hold for disposal. Avoid generating dusty conditions. Provide ventilation.

7. Handling and Storage**Handling:**

Gentle sonication to disperse beads in solution is recommended prior to use. Beads may be centrifuged to change solvent if desired.

Storage: Store in a dark cool (2-25 °C) place.

8. Exposure Controls/Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Personal protection equipment:

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149 approved respirator when necessary.

Material Safety Data Sheet

Printing date 23/06/2011

Version 2

Reviewed on 23/06/2011

9. Physical and Chemical Properties

Physical State: Solution / Suspension

Appearance: White

Odour: None reported.

Vapor Pressure: 17 mm Hg @20°C

Vapor Density: <1

Evaporation Rate: Not available.

Viscosity: Not available.

pH: 8.0.

10. Stability and Reactivity

Stability: Stable, std temp & pressure

Conditions to avoid: Incompatible materials

Incompatible Materials: Oxidizing agents

11. Toxicological Information

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: No information available.

Sensitization: No sensitizing effect known.

Other Studies: No data available.

Special notes about cadmium selenide

Cadmium selenide exists in trace quantities in this product. The following information is provided for reference.

Acute Toxicity

Primary irritant effects

on the skin: Irritant to skin and mucous membranes.

on the eyes: Irritating effect.

Subacute to chronic toxicity

Cadmium compounds are highly toxic and experimental carcinogens. Exposure affects the respiratory tract, kidneys, and liver. Ingestion may cause nausea, salivation, vomiting and diarrhea. Ingestion or inhalation of cadmium/Selenium compounds may be fatal. Selenium may cause bronchial irritation, gastrointestinal distress, vasopharyngeal irritation, garlic odor on breath and sweat, metallic taste, pallor, irritability, excessive fatigue, loss of fingernails and hair, pulmonary edema, anemia and weight loss.

Additional toxicological information

Material Safety Data Sheet

Printing date 23/06/2011

Version 2

Reviewed on 23/06/2011

Danger through skin absorption. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. EPA-B1: Probable human carcinogen, limited evidence of carcinogenicity from epidemiologic studies. IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity. NTP-2: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals. Carcinogen is defined by OSHA. ACGIH A2: Suspected human carcinogen: Agent is carcinogenic in experimental animals at dose levels, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans.

12. Ecological Information

Do not allow material to be release to the environment without proper governmental permits.

13. Disposal Considerations

Disposal: Consult a licensed waste disposal specialist for proper destruction. Observe all local, state and federal regulations.

14. Transport Information

U.S. DOT: no shipping name provided

15. Regulatory Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the material safety data sheet contains all of the information required by those regulations.

Material Safety Data Sheet

Printing date 23/06/2011

Version 2

Reviewed on 23/06/2011

16. Other Information

This product is for research purposes, not for diagnostic or therapeutic use.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Users should make independent decisions regarding completeness of the information based on all sources available. Cytodiagnostics Inc. shall not be held liable for any damage resulting from handling or contact with the above product.

END OF MSDS