Material Safety Data Sheet:
Lead Sulfide Quantum Dots in Toluene

Section 1: Chemical Product and Company Identification

Product Name:	Lead Sulfide quantum dots in toluene
Created Date:	July 06, 2015
Manufacturer/Supplier by:	Mesolight Inc
Address:	4607 W 61st Street Little Rock, Arkansas 72209 USA
Telephone:	+1 501-562-2070
Web Site:	www.mesolight.com

Section 2: Composition, Information or Ingredients

INGREGIENT	CAS#
Lead Sulfide	1314-87-0
Oleic acid	112-80-1
Toluene	108-88-3

Section 3: Hazard Identification

Emergency Overview

OSHA Hazards

Flammable liquid, Target Organ Effect, Irritant, Teratogen, Reproductive hazard

Target Organs

Bladder, Liver, Kidney, Brain.

GHS Classification

Flammable liquids (Category 2)
Acute toxicity, Inhalation (Category 4)
Skin irritation (Category 2)
Eye irritation (Category 2A)
Reproductive toxicity (Category 2)
Specific target organ toxicity - single exposure (Category 2)
Specific target organ toxicity - single exposure (Category 3)
Aspiration hazard (Category 1)
Acute aquatic toxicity (Category 2)

GHS Label elements, including precautionary statements

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.

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H361	Suspected of damaging fertility or the unborn child.
H371	May cause damage to organs.
H401	Toxic to aquatic life.

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P281	Use personal protective equipment as required.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331	Do NOT induce vomiting.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	3
Physical hazards:	0

NFPA Rating

Health hazard:	2
Fire:	3
Reactivity Hazard:	0

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation. Vapours may cause drowsiness and dizziness.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage

Section 4: First Aid Measures

Skin Contact:	Wash the skin thoroughly with soap and water and seek medical advice.
Eye contact:	If eye contact occurs, rinse eye thoroughly and seek medical advice
Inhalation:	If inhaled, supply fresh air or respirator and seek medical advice.
Ingestion:	If swallowed, seek medical attention immediately

Section 5: Fire-Fighting Measures

Flammable Limits:	Hazard on contact with acid
Extinguishing Media:	Do not use water, use dry chemical, dry ice, CO2
Special Fire Fighting Procedures:	Wear a self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes
Unusual Fire and Explosion Hazards:	Can react with moisture or acids to liberate, H_2S which are fire and explosion hazard. When heated to decomposition, it may emit toxic fumes of SO_2.

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Section 6: Accidental Release Measures

Personal Precautions: Always use proper protective equipment.

Environmental Precautions: Do not allow material to reach drains or ground water.

Cleanup of small spills: Vacuum up spill using a high efficiency unit and place in a container for proper disposal.

Disposal: Collect and dispose of all waste in an appropriate container.

Section 7: Handling and Storage

Handling: Follow safe laboratory practices. The product should only be used by or closely supervised by an individual trained to handle potentially hazardous materials.

Storage: Store in a dark, cool (4-25 °C) place in a tightly sealed container. Store in same type of container (glass/plastic) as shipped. Do not freeze.

Section 8: Exposure Controls and Personal Protection

Engineering Controls: Use fume hood with proper ventilation.

Personal Protection: Gloves, lab coat, and goggles.

Section 9: Physical and Chemical Properties

Form:	liquid
Color:	Dark black
pH:	Not disclosed
Specific Gravity:	Not disclosed
Boiling point:	110 - 111 °C (230 - 232 °F)
Melting point:	n.a.
Freezing point:	n.a
Vapor Pressure:	0 mmHg
Odor:	Not disclosed
Solubility:	soluble in organic solvents, chloroform, toluene, tetrahydrofuran

Section 10: Stability and Reactivity

Stability:	The product is stable
Incompatibility (Conditions to Avoid):	Strong acids, oxidants.
Thermal decomposition:	Not determined
Materials to avoid:	Not determined
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Heat, flame and incompatible materials
Hazardous Decomposition Products:	PbO, S,H_2S, SO_2

Section 11: Toxicological Information

RTECS Number: Not disclosed

Toxicity: Not disclosed

Health Hazards: Refer to section 4

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Carcinogenicity: No information is available

Section 12: Ecological Information

No data available. See section 6

Section 13: Disposal considerations

Dispose of in accordance with local, state, or national regulations.

Section 14: Transport information

U.S. DOT Classification: Not a hazardous material for land or air transport.
Identification Number: Not applicable
Packing Group: Not applicable
Proper Shipping Name: Not applicable

Section 15: Regulations

No data available for TSCA, EEC EINECS number, EEC risk statements, or other regulations.

Section 16: Other information

Disclaimer: For R&D only. Not intended for food, drug, household, agricultural or cosmetic use. The above information is believed to be correct. Mesolight Inc shall not be held any liable for any damage resulting from handling or contact with the above product.

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