

MSDS - Material Safety Data Sheet**Product Name: Lightning Formula Ninhydrin Spray**

MSDS No.: 201CL

I. Basic Information:

Manufacturer: Sirchie Finger Print Laboratories

Address: 100 Hunter Place

City, ST Zip: Youngsville, NC 27596

Emergency Contact: ChemTrec

Emergency Telephone Number: 800-424-9300

Contact: Tech Support

Information Telephone Number: 919-554-2244

Last Update: 01/06/2011

Expiration Date:

Chemical State: Liquid Gas SolidChemical Type: Pure Mixture

2	Health
4	Flammability
1	Reactivity
H	Pers. Protection

II. Ingredients: Trade Secret

CAS No.	Chemical Name	% Range	EHS		IARC		SARA		OSHA PEL	ACGIH TLV	Other Limits
			NTP		SUB Z	313					
485472	2,2-Dihydroxyindane-1,3-dione (Ninhydrin)	Trace						NE	NE	255 C	
64197	Acetic acid	>1						10 ppm	10 ppm	103 F	
0	Blank	Trace						NE	NE	255C	
64175	Ethanol	>5						1,000 ppm	1,000 ppm	57 F	
141786	Ethyl acetate	>1						400 ppm	400 ppm	24 F	
163702076	Methyl nonafluorobutyl ether	30-50									
163702087	Methyl nonafluoroisobutyl Ether	50-70									

III. Hazardous Identification:

Hazard Category:

 Acute Chronic Fire Pressure Reactive**Hazardous Identification Information:**

FLAMMABLE! May form explosive peroxides. May be fatal or cause blindness if ingested. May be harmful if inhaled. May be absorbed through the skin. May cause respiratory and digestive tract irritation. Skin irritant. Severe eye irritant. Aspiration hazard. May cause central nervous system depression. May cause liver and kidney damage. May cause adverse reproductive and fetal effects based on animal testing.

This material is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

IV. First Aid Measures:**Route(s) of Entry:**

Inhalation, ingestion, skin, eyes

Health Hazards (Acute and Chronic):

Acute: Mild to severe pulmonary injury (if aspirated into lungs)

Chronic: Dermatitis, anemia, leukocytosis, cloudy swelling, fatty degeneration of the viscera

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Signs and Symptoms:

Inhalation: Headache, dizziness, anesthesia, drowsiness, unconsciousness, coma, possible death

Ingestion: Excitement, headache, dizziness, drowsiness, nausea, collapse, unconsciousness, coma, possible death due to respiratory failure

Eyes: Burning, redness, tearing, inflammation

Medical Conditions Generally Aggravated by Exposure:

Skin, eye, respiratory diseases

Emergency and First Aid Procedures:

Inhalation: Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen (To be administered by qualified medical personnel only!) Keep victim at rest. Get medical attention.

Ingestion: DO NOT induce vomiting. If victim is conscious and alert, give 2-4 cups of milk or water. (Never give anything by mouth to an unconscious person!) Aspiration hazard. Get medical attention immediately.

Skin: Flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing. Seek medical attention.

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Do not allow victim to rub or keep eyes closed. Get medical aid immediately.

Other Health Warnings:

V. Fire Fighting Measures:

Flash Point: 24 F

Lower Explosive Limit: 1.9

Upper Explosive Limit: 9.0

F.P. Method:

Fire Extinguishing Media: Foam, dry chemical

Special Fire Fighting Procedures:

Wear self-contained breathing apparatus and protective clothing. Water may be ineffective, but may be used to cool fire-exposed containers. Cool containers with flooding quantities until well after fire is out. Avoid spraying water directly into containers due to danger of boilover.

Unusual Fire and Explosion:

Containers may explode in heat of fire. May form explosive peroxides. Vapors from this product may travel some distance from original point to an ignition source and flash back. Vapors may be heavier than air. They may spread along the ground and collect in low or confined areas. Material can accumulate static charges which can cause an incendiary electrical discharge.

"Empty" containers may contain product residue and may be dangerous. Empty containers should be completely drained and bunged and then disposed of according to local, state, and federal regulations.

VI. Accidental Release Measures:

Steps to be Taken in Case Material is Released or Spilled:

Wear vapor respirator, safety goggles, and rubber gloves. Remove sources of ignition (i.e. open flames, sparks). Prevent additional discharge of material, if possible to do so without risk. Soak up with inert absorbent material (dry sand, earth, or vermiculite recommended; do not use flammable substances such as sawdust). A vapor-suppressing foam may be used to reduce vapors. Dispose according to local, state, and federal regulations.

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VII. Handling and Storage:

Precautions to be Taken:

Keep in tightly closed container. Store between 15-25 C. Keep cool and dry. Avoid direct sunlight. Avoid all ignition sources (heat, open flame, spark). Avoid incompatible materials. Electrically bond and ground all containers and equipment before transfer or use of material. Use only in well-ventilated areas. Avoid contact with skin, eyes, and clothing. Avoid ingestion and inhalation. Wash thoroughly after handling.

Other Precautions:

"Empty" containers may contain product residue and may be dangerous. Empty containers should be completely drained and bunged and then disposed of according to local, state, and federal regulations.

VIII. Exposure Controls/Personal Protection:

Ventilation Requirements:

Use only in well-ventilated areas.

Personal Protective Equipment:

Safety goggles, gloves, vapor respirator, protective clothing

IX. Physical and Chemical Properties:

Boiling Point: 77 C

Melting Point: -65 F

Evaporation Rate (Butyl Acetate = 1): 6.0

Vapor Pressure (mm Hg.): 19

Specific Gravity (H2O = 1):

Vapor Density (AIR = 1): 3.66

Solubility In Water: <0.10 wt. %

Appearance and Odor: Yellowish liquid; irritable odor

Other Information:

X. Stability and Reactivity:

Stability:

Stable. May be sensitive to peroxide formation.

Incompatibility (Materials to Avoid):

Acids; azo, diazo, and hydrazines; isocyanates; metals; nitrides; peroxides; hydroperoxides; epoxides; oxidizing agents; reducing agents; water reactive substances; ignition sources (heat, open flame, spark); halogens; molten sulfur; lithium aluminum hydride + 2-chloromethylfuran; lithium tetrahydroaluminate; oleum; potassium tert-butoxide; nitrates; strong alkalis

Decomposition/By Products:

Carbon monoxide and dioxide, peroxides

Hazardous Polymerization:

Has not been reported.

XI. Toxicological Information:

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May be fatal or cause blindness if ingested. May be harmful if inhaled. May be absorbed through the skin. May cause central nervous system depression. May cause liver and kidney damage. May cause adverse reproductive and fetal effects based on animal testing.

Carcinogenicity

Ethyl benzene

A draft report on a study conducted by the National Toxicology Program states that a lifetime inhalation of rats and mice to concentrations of ethyl benzene (750 ppm) resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations of ethyl benzene (75 ppm or 250 ppm). The draft report does not address the relevance of these results to humans.

XII. Ecological Information:

Prevent from entering sewers or waterways. May be toxic to some aquatic life.

Discharge or spills which produce a visible sheen on either surface water, or in waterways/sewers which lead to surface water, must be reported to the National Response Center at 800-424-8802.

The xylene-ethyl benzene product, as sold, is derived from a fraction of crude oil and is excluded from the spill reporting requirements of CERCLA Section 101(14)(F). When this product is used in a mixture, or as an ingredient in another product, or in a manufacturing operation, the petroleum exclusion may terminate and an accidental spill may require reporting to the National Response Center at 800-424-8802.

XIII. Disposal Considerations:

Dispose according to local, state, and federal regulations.

Ethyl acetate

RCRA U-Series: waste no. U112 (Ignitable waste)

XIV. Transport Information:

Keep in tightly closed container. Transport between 15-25 C. Keep cool and dry. Avoid direct sunlight. Avoid all ignition sources (heat, open flame, spark). Avoid incompatible materials. Electrically bond and ground all containers and equipment before transfer or use of material. Avoid contact with skin, eyes, and clothing. Avoid ingestion and inhalation. Wash thoroughly after handling.

IATA

Shipping name: Flammable liquid, n.o.s., (ethanol, xylenes)

Hazard class: 3

Sub Class:

UN no.: 1993

Packing group: II

Flammable liquid

XV. Regulatory Information:

All ingredients, except for xylene, ethyl benzene, and ninhydrin, are listed on the TSCA inventory.

The xylene-ethyl benzene product is classified as an oil under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Act of 1990.

The xylene-ethyl benzene product is hazardous as defined in 29 CFR 1910.1200.

This material is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

XVI. Other Information:

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This product contains STADIS 450 Conductivity Improver. Typical additive concentration is 10 mL additive per 1,000 gallons of product. STADIS 450 has a reported shelf life of 10 years with no loss of conductivity-improving effectiveness. However, since product history/age is not always known, and unique conditions may occur which unknowingly impact the effectiveness of the additive, safe handling procedures and precautions should continue to be followed. Materials which may have a static accumulation hazard should be handled in accordance with guidance provided in NFPA Publication 77 or API Recommended Practice 2003 to ensure adequate protection to workers and facilities.

Using this product under normal, properly instructed procedures should not be hazardous.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, expressed or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes.