

MSDS - Material Safety Data Sheet**Product Name: Physical Developer (Solution A)**

EVIDENT, INC.
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MSDS No.: LPD100/1A**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:** 01/27/2011**Expiration Date:****Chemical State:** Liquid Gas Solid**Chemical Type:** Pure Mixture

2	Health
0	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					
7761888	Silver nitrate	20					X	.01 mg/m3	.01 mg/m3		
7732185	Water (Distilled)	80						None	None	212 F	

III. Hazardous Identification:**Hazard Category:**

Acute Chronic Fire Pressure Reactive

Hazardous Identification Information:

Oxidizer. May be fatal if swallowed. May be harmful if inhaled. Respiratory and digestive tract irritant. May cause skin and eye burns. May cause argyria, a blue-grey discoloration of the skin, eyes, and mucous membranes.

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: Skin and eye burns

Chronic: Argyria, a blue-grey discoloration of the skin, eyes, and mucous membranes.

Signs and Symptoms:

Ingestion: Burns, abdominal pain, vomiting, nausea, diarrhea, dizziness

Medical Conditions Generally Aggravated by Exposure:

Skin, eye, respiratory diseases

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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!) Get medical attention.

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

Skin: Flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing. Destroy contaminated shoes. 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.

Note to physicians: Absorption of silver nitrate into the body leads to the formation of methemoglobin that, in sufficient concentrations, causes cyanosis. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleaning of the entire contaminated area of the body, including scalp and nails, is of utmost importance. If cyanosis is severe, intravenous injection of methylene blue, 1 milligram per kilogram (1 mg/kg) of body weight, may be of value.

Other Health Warnings:

V. Fire Fighting Measures:

Flash Point: NE

Lower Explosive Limit: NE

Upper Explosive Limit: NE

F.P. Method:

Fire Extinguishing Media: Flood with water

Special Fire Fighting Procedures:

Wear self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion:

Oxidizer--contact with combustible materials may cause a fire.

"Empty" containers may contain product residue and may be dangerous. Empty containers should be completely drained and banded 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). Soak up with inert absorbent material (do not use flammable substances such as sawdust). Clean spill area thoroughly to remove residual contamination. Dispose according to local, state, and federal regulations.

VII. Handling and Storage:

Precautions to be Taken:

Keep in closed container. Avoid incompatible materials, ESPECIALLY combustible materials. Use only in well-ventilated areas. Avoid inhalation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling.

Other Precautions:

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

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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: ~212 F

Melting Point: ~32 F

Evaporation Rate (Butyl Acetate = 1): NE

Vapor Pressure (mm Hg.): NE

Specific Gravity (H₂O = 1):

Vapor Density (AIR = 1): NE

Solubility In Water: Complete

Appearance and Odor: Colorless liquid

Other Information:

X. Stability and Reactivity:

Stability:

Stable

Incompatibility (Materials to Avoid):

Combustible materials, reducing agents, aqueous ammonia

Decomposition/By Products:

Nitrogen oxides

Hazardous Polymerization:

Will not occur.

XI. Toxicological Information:

Oxidizer. May be fatal if swallowed. May be harmful if inhaled. Respiratory and digestive tract irritant. May cause skin and eye burns. May cause argyria, a blue-grey discoloration of the skin, eyes, and mucous membranes.

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

XII. Ecological Information:

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

XIII. Disposal Considerations:

Dispose according to local, state, and federal regulations.

XIV. Transport Information:

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Product Name: Physical Developer (Solution A)

MSDS No.: LPD100/1A

IATA

Shipping name: Silver nitrate solution

Hazard class: 5.1

UN no.: 1493

Packing group: II

XV. Regulatory Information:

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

XVI. Other Information:

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.

MSDS - Material Safety Data Sheet**Product Name: Physical Developer (Solution B)**

MSDS No.: LPD100/1B

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: 01/27/2011

Expiration Date:

Chemical State: Liquid Gas SolidChemical Type: Pure Mixture

1	Health
1	Flammability
0	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					
7783859	Ammonium iron (II) sulfate hexahydrate	<4.25							NE	NE	
5949291	Citric acid monohydrate	>1.25							NE	NE	212 F
2016560	Dodecylamine acetate	<1.0							NE	NE	66 C
9016459	Ethoxylated nonyl phenol	<1.0							NE	NE	
7782618	Iron (III) nitrate nonahydrate	>1.75							NE	NE	47.2 C
7732185	Water (Distilled)	>92.7							None	None	212 F

III. Hazardous Identification:

Hazard Category:

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

May be harmful if inhaled, ingested, or absorbed by the skin. Respiratory tract irritant. Skin irritant. Severe eye irritant.

The chemical, physical, and toxicological properties of ammonium iron (II) sulfate hexahydrate, iron (III) nitrate nonahydrate, and citric acid monohydrate have not been thoroughly investigated.

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

Inhalation, ingestion, skin, eyes

Health Hazards (Acute and Chronic):

Chronic: Damage to tooth enamel, dermatitis

Signs and Symptoms:

Exposure: Vomiting, diarrhea

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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!) Get medical attention.

Ingestion: If victim is conscious and alert, wash out mouth with water. (Never give anything by mouth to an unconscious person!) 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: NE

Lower Explosive Limit: NE

Upper Explosive Limit: NE

F.P. Method:

Fire Extinguishing Media: Water spray, carbon dioxide, dry chemical powder, appropriate foam

Special Fire Fighting Procedures:

Wear self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion:

Oxidizer--contact with combustible materials may cause a fire.

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). Soak up with inert absorbent material (do not use flammable substances such as sawdust). Ventilate and wash spill site after collection. Dispose according to local, state, and federal regulations.

VII. Handling and Storage:

Precautions to be Taken:

Keep in tightly closed container. Air and light sensitive. Keep cool and dry. Avoid ignition sources (heat, open flame, spark). Avoid incompatible materials. Use only in well-ventilated areas. Avoid inhalation. Avoid contact with skin, eyes, and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

Other Precautions:

VIII. Exposure Controls/Personal Protection:

Ventilation Requirements:

Use only in well-ventilated areas.

Personal Protective Equipment:

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Safety goggles, gloves, vapor respirator, protective clothing

IX. Physical and Chemical Properties:

Boiling Point: ~212 F

Melting Point: ~32 F

Evaporation Rate (Butyl Acetate = 1): NE

Vapor Pressure (mm Hg.): NE

Specific Gravity (H₂O = 1):

Vapor Density (AIR = 1): NE

Solubility In Water: Soluble

Appearance and Odor: Brownish yellow liquid

Other Information:

X. Stability and Reactivity:

Stability:

Stable

Incompatibility (Materials to Avoid):

Strong acids, air sensitive, light sensitive, strong oxidizing agents, bases, reducing agents, nitrates

Decomposition/By Products:

Ammonia, sulfur oxides, nitrogen oxides, carbon monoxide and dioxide

Hazardous Polymerization:

Has not been reported.

XI. Toxicological Information:

May be harmful if inhaled, ingested, or absorbed by the skin. Respiratory tract irritant. Skin irritant. Severe eye irritant.

The chemical, physical, and toxicological properties of ammonium iron (II) sulfate hexahydrate, iron (III) nitrate nonahydrate, and citric acid monohydrate have not been thoroughly investigated.

XII. Ecological Information:

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

XIII. Disposal Considerations:

Dispose according to local, state, and federal regulations.

XIV. Transport Information:

IATA

Shipping name: Ferric nitrate solution

Hazard class: 5.1

UN no.: 1466

Packing group: III

XV. Regulatory Information:

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Product Name: Physical Developer (Solution B)

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<i>XVI. Other Information:</i>

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.