

Physical Developer (Solution B)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date:12/27/2012

Supersedes:01/27/2011

Version:

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
 Product name. : Physical Developer (Solution B)
 Product code : LPD100B

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/preparation : Latent fingerprint developer

1.3. Details of the supplier of the safety data sheet

SIRCHIE Finger Print Laboratories
 100 Hunter Place
 27596 Youngsville, NC - USA
 T 919-554-2244; 800-356-7311 - F 919-554-2266; 800-899-8181
<http://www.sirchie.com>

1.4. Emergency telephone number

Emergency number : 1.800.424.9300

SECTION 2: Hazards Identification**2.1. Classification of the substance or mixture**

Classification (GHS-US)

Not classified

2.2. Label elements**GHS-US labeling**

Hazard statements (GHS-US) : If this product is used as indicated it is unlikely that any adverse health issues will occur .
 Inhalation or ingestion of significant amounts may cause respiratory irritation and/or gastric disturbances.
 USA: This product is not a hazardous material as defined by 29 CFR1910.1200, OSHA Hazard Communication Evaluation. This product meets the definition of an "article".

Precautionary statements (GHS-US) : P202 - Do not handle until all safety precautions have been read and understood
 P280 - Wear Dust mask, eye protection, protective gloves.
 P301+P312 - If swallowed, call a doctor if you feel unwell.
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 - If eye irritation persists: Get medical advice/attention

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification (GHS-US)
AQUA	(CAS No.)7732-18-5	> 90.75	Not classified
ammonium iron(II)sulfate,hexahydrate	(CAS No.)7783-85-9	< 4.25	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
iron(III) nitrate,nonahydrate	(CAS No.)7782-61-8	> 1.75	Ox. Sol. 3, H272 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
citric acid, monohydrate	(CAS No.)5949-29-1	> 1.25	Eye Irrit. 2A, H319
Dodecylamine acetate	(CAS No.)2016-56-0	< 1	Skin Irrit. 2, H315 Eye Irrit. 2B, H320
nonylphenoxypoly(ethyleneoxy)ethanol	(CAS No.)9016-45-9	< 1	Not classified

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SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). It is anticipated that no First Aid treatment will be necessary after using this product.
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Reactivity : No reactivity hazard other than the effects described in sub-sections below.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
- Incompatible products : Strong bases. strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ammonium iron(III)sulfate hexahydrate (7783-85-4)

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USA ACGIH	ACGIH TWA (mg/m³)	1 mg/m³
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Iron(III) nitrate, nonahydrate (7782-61-8)

USA ACGIH	ACGIH TWA (mg/m³)	1 mg/m³
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8.2. Exposure controls

Personal protective equipment : Gloves. Safety glasses. Dust/aerosol mask. Avoid all unnecessary exposure.



Hand protection : Wear protective gloves.
Eye protection : Chemical goggles or safety glasses.
Respiratory protection : Wear approved mask.
Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Clear, colorless liquid.
Color : colorless. Colorless.
Odor : Mild odour. characteristic.
Odor threshold : No data available
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Self ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available
Relative density : No data available
Solubility : Soluble in water.
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2. Chemical stability

Stable under normal conditions. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

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11.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

ammonium iron(II)sulfate,hexahydrate (7783-85-9)

LD50 oral rat	3250 mg/kg (Rat)
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citric acid, monohydrate (5949-29-1)

LD50 oral rat	3000 mg/kg (Rat)
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iron(III) nitrate,nonahydrate (7782-61-8)

LD50 oral rat	3250 mg/kg (Rat)
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Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classifiedBased on available data, the classification criteria are not met

Carcinogenicity : Not classified

Reproductive toxicity : Not classifiedBased on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classifiedBased on available data, the classification criteria are not met

Aspiration hazard : Not classifiedBased on available data, the classification criteria are not met

potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

ammonium iron(II)sulfate,hexahydrate (7783-85-9)

EC50 other aquatic organisms 1	1 - 8 mg/l (336 h; Lemna sp.; ANHYDROUS FORM)
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citric acid, monohydrate (5949-29-1)

LC50 fish 1	1516 mg/l (96 h; Lepomis macrochirus; ANHYDROUS FORM)
EC50 Daphnia 1	85 mg/l (72 h; Daphnia magna; ANHYDROUS FORM)
EC50 Daphnia 2	120 mg/l (Daphnia magna; ANHYDROUS FORM)
Threshold limit algae 1	80 mg/l (192 h; Microcystis aeruginosa; ANHYDROUS FORM)
Threshold limit algae 2	640 mg/l (168 h; Scenedesmus quadricauda; ANHYDROUS FORM)

12.2. Persistence and degradability

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Persistence and degradability	Not established.
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ammonium iron(II)sulfate,hexahydrate (7783-85-9)

Persistence and degradability	Biodegradability in water: no data available.
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citric acid, monohydrate (5949-29-1)

Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.481 g O ₂ /g substance
Chemical oxygen demand (COD)	0.665 g O ₂ /g substance

iron(III) nitrate,nonahydrate (7782-61-8)

Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established
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Ammonium iron(II)sulfate,hexahydrate (7783-85-9)

Bioaccumulative potential	Not bioaccumulative.
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citric acid, monohydrate (5949-29-1)

Log Pow	-1.72 (Experimental value)
Bioaccumulative potential	Bioaccumulation: not applicable.

iron(III) nitrate,nonahydrate (7782-61-8)

Bioaccumulative potential	Not bioaccumulative.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

R8

Full text of R-phrases: see section 16

15.2.2. National regulations

No additional information available

15.3. US State regulations

No additional information available

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SECTION 16: Other information

Indication of changes

: Revision - See : *

Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information

: None.

Full text of H-phrases: see section 16:

Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Ox. Sol. 3	Oxidizing solids Category 3
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H272	May intensify fire; oxidizer
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

NFPA health hazard

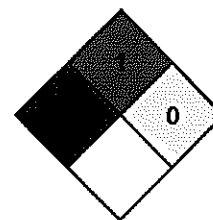
: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard

: 1 - Must be preheated before ignition can occur.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



MIS III Rating

Health

: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability

: 1 Slight Hazard

Physical

: 0 Minimal Hazard

Personal Protection

: G

SDS US (GHS HazCom 2012)

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