LPD100B Physical Developer Part B

Safety Data Sheet

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

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : LPD100B Physical Developer Part B

Product code : LPD100B

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

Use of the substance/mixture : Latent fingerprint developer

1.3. Details of the supplier of the safety data sheet

SIRCHIE
100 Hunter Place
Youngsville, NC 27596 - 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
CHEMTREC: 1.800.424.9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion/irritation Category 2 H315

Serious eye damage/eye irritation Category 2A H319

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) : P264 - Wash hands, forearms and face thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302+P352 - If on skin: Wash with plenty of water/…
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P321 - Specific treatment (see ... on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse

2.3. Other hazards

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

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
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	Skin Corr. 1A, H314 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

Full text of H-phrases: see section 16

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 : Allow victim to breathe fresh air. 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. Prevent fire-fighting water from entering 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 eating, drinking or smoking 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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ammonium iron(II)sulfate,hexahydrate (7783-85-9)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (Iron salts, soluble, as Fe; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Not applicable		

citric acid, monohydrate (5949-29-1)
Not applicable

Dodecylamine acetate (2016-56-0)
Not applicable

iron(III) nitrate,nonahydrate (7782-61-8)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (Iron salts, soluble, as Fe; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Not applicable		

nonylphenoxypoly(ethyleneoxy)ethanol (9016-45-9)
Not applicable

AQUA (7732-18-5)
Not applicable

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 appropriate mask.

Other information : Do not eat, drink or smoke during use.

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

Melting point : No data available

Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Vapor pressure	:	No data available
Relative density	:	No data available
Relative vapor density at 20 °C	:	No data available
Solubility	:	Soluble in water. Water: Solubility in water of component(s) of the mixture : • ammonium iron(II)sulfate,hexahydrate: 27 g/100ml • citric acid, monohydrate: 67 g/100ml • iron(III) nitrate,nonahydrate: 83 g/100ml • nonylphenoxypoly(ethyleneoxy)ethanol: soluble
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	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

Strong acids. Strong bases.

10.6. 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)
ATE US (oral)	3250.000 mg/kg body weight

citric acid, monohydrate (5949-29-1)	
LD50 oral rat	3000 mg/kg (Rat; Literature study)
LD50 dermal rat	> 2000 mg/kg body weight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
ATE US (oral)	3000.000 mg/kg body weight

iron(III) nitrate,nonahydrate (7782-61-8)	
LD50 oral rat	3250 mg/kg (Rat)
ATE US (oral)	3250.000 mg/kg body weight

nonylphenoxypoly(ethyleneoxy)ethanol (9016-45-9)	
LD50 oral rat	> 2000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

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

SECTION 12: Ecological information

12.1. Toxicity

citric acid, monohydrate (5949-29-1)	
LC50 fish 2	440-760,LC50; 96 h; Pisces
EC50 Daphnia 2	120 mg/l (EC50; 72 h; Daphnia magna)
Threshold limit algae 2	640 mg/l (EC0; 168 h; Scenedesmus quadricauda)

12.2. Persistence and degradability

LPD100B Physical Developer Part B	
Persistence and degradability	Not established.

ammonium iron(II)sulfate,hexahydrate (7783-85-9)	
Persistence and degradability	Biodegradability in water: no data available.

citric acid, monohydrate (5949-29-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0.481 g O_2/g substance
Chemical oxygen demand (COD)	0.665 g O_2/g substance
BOD (% of ThOD)	0.889 (20 days)

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

12.3. Bioaccumulative potential

LPD100B Physical Developer Part B	
Bioaccumulative potential	Not established.

ammonium iron(II)sulfate,hexahydrate (7783-85-9)	
Bioaccumulative potential	Not bioaccumulative.

citric acid, monohydrate (5949-29-1)	
Log Pow	-1.72 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

iron(III) nitrate,nonahydrate (7782-61-8)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

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

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN3139 Oxidizing liquid, n.o.s. (Ferric nitrate solution) (OXIDIZER), 5.1, III

UN-No.(DOT) : UN3139

Proper Shipping Name (DOT) : Oxidizing liquid, n.o.s. (Ferric nitrate solution)
OXIDIZER

Class (DOT) : 5.1 - Class 5.1 - Oxidizer 49 CFR 173.128

Hazard labels (DOT) : 5.1 - Oxidizer

Packing group (DOT) : III - Minor Danger

Other information : No supplementary information available.

TDG

No additional information available

Transport by sea

No additional information available

Air transport

UN-No. (IATA) : UN3139

Proper Shipping Name (IATA) : Oxidizing liquid, n.o.s. (Ferric nitrate solution)

Class (IATA) : 5.1 - Oxidizing Substances

Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Dodecylamine acetate (2016-56-0)
Not subject to reporing requirements of the United States SARA Section 313 Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

Dodecylamine acetate (2016-56-0)
Not listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

Dodecylamine acetate (2016-56-0)
Not listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Dodecylamine acetate (2016-56-0)
Not listed on the Canadian IDL (Ingredient Disclosure List) Not listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

15.3. US State regulations

No additional information available

SECTION 16: Other information

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.

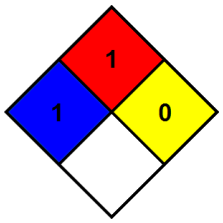
Full text of H-phrases:

H272	May intensify fire; oxidizer
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H319	Causes serious eye irritation
H320	Causes 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.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal Protection : G

G - Safety glasses, Gloves, Vapor respirator

SDS US (GHS HazCom 2012)

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