

FREESTYLE PHOTOGRAPHIC SUPPLIES

ARISTA® RA-4 BLIX PART A

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

Product Name: RA-4 BLIX PART A

5124 Sunset Blvd., Hollywood, CA 90027

Product Number: 101802, 101812

Product Use: Photographic fixer component

Customer Information Phone Number:

1-800-292-6137

CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300

Date Reviewed: 9/01/2015

Version: 3.0

2. HAZARDOUS IDENTIFICATION

2.1 Classification of the substance or mixture

Health hazard

Causes eye irritation (Category 2B), H320

Causes skin irritation (Category 2), H314

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: WARNING

Hazard statement(s)

H305	May be harmful if swallowed and enters airways/
H314	Causes skin irritation
H317	May cause allergic skin reaction
H320	Causes eye irritation
H335	May cause respiratory irritation

Precautionary statement(s)

P261	Avoid breathing mist
P264	Wash skin thoroughly after handling
P270	Do not eat, drink, or smoke when using this product
P280	Wear protective gloves, eye protection
P301 + P312	IF SWALLOWED; call a POISON CENTER or doctor/physician if you feel unwell
P302 + P352	IF ON SKIN: Wash with plenty of soap

MATERIAL SAFETY DATA SHEET



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 supplemental first aid instructions on this label).
P330 Rinse mouth.
P333 +P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse
P391 Collect spillage
P501 Dispose of contents to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS</u>	<u>OHSA PEL</u>	<u>ACGIH TLV</u>	<u>Weight %</u>
AMMONIUM THIOSULFATE	7783-18-8	N.E.	N.E.	60-65
SODIUM METABISULFITE	7681-57-4	N.E.	5mg/m ³	5-10

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

Inhalation: If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: If swallowed, give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Skin Contact: Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

Aggravated Medical Conditions: Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product. May cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Nonflammable. Use agent appropriate for surrounding fire.

5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.
Combustion Products: Carbon dioxide, carbon monoxide, and oxides of sulfur and nitrogen.

5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use

appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. For small amounts less than one gallon flush to the sewer with large amounts of water. For larger spills, prevent liquid from entering sewers, waterways or low areas. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

7.2 Conditions for safe storage, including any incompatibles

Do not store with incompatible materials. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

See Section 3.

8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal protective equipment

Eye Protection: Safety glasses with side shields (or goggles).

Respiratory Protection: When this product is used in the intended way, no respiratory protection is anticipated to be necessary.

Skin protection: Latex, rubber, or neoprene waterproof gloves are recommended.

Body protection: Rubber or plastic apron.

Respiratory protection: Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance And Odor: Clear, light yellow solution; ammonia odor.

Solubility In Water: Complete
Boiling Point: >100° C
Flash Point: Nonflammable
Specific Gravity: 1.25
Vapor Pressure: 18m Hg @ 20° C
Melting Point: Not applicable
Freezing Point: Not established
Evaporation Rate: Not established
Vapor Density: 0.6 (Air = 1)
Percent Volatile: 57.3
Ph: 5.23
Molecular Weight: Not applicable
Pounds Per Gallon: 10.38
V.O.C. = 0

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible Materials

Strong acids, strong oxidizing agents, bases, bleach. Contact with base liberates flammable material.

10.6 Decomposition Products

Strong acids will liberate sulfur dioxide, strong bases of sodium hydroxide will liberate ammonia fumes.

11. TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

Component information

Ammonium thiosulfate 7783-18-8

Acute toxicity:

Oral: LD50 (rats): 2,890 mg/kg
Dermal: No data
Inhalation: No data

Skin irritation: Rabbit
Non irritant

Eye irritation: Rabbit
No eye irritation (OECD Test Guideline 405).
Carcinogenicity/mutagenicity: none

Sodium Metabisulfite 7681-57-4

Acute toxicity: No data available
Oral LD-50 (rat): 1,540 mg/kg
Inhalation: No data available
Dermal: LD-50 (rat): > 2,000 mg/kg

Skin irritation: no data available

Eye irritation: Rabbit
Risk of serious damage to eyes.

Respiratory or Skin Sensitization Prolonged or repeated exposure may cause allergic skin reaction in certain sensitive individuals. Carcinogenicity/mutagenicity: none

12. ECOLOGICAL INFORMATION**Component information****Ammonium thiosulfate 7783-18-8****12.1 Toxicity**

Toxicity to fish	LC0-Lepomis macrochirus (bluegill) - 510 mg/l – 96h
Toxicity to daphnia and other aquatic invertebrates	LC50 – Daphnia magna (Water flea) – 230 mg/l – 21d
Toxicity to algae	EC50 – Pseudokirchneriella subcapitata - > 100 mg/l – 72 h (OECD Test Guideline 201).
Toxicity to bacteria	Respiration inhibition EC50 – Sludge Treatment - > 1,000 mg/l – 3h (OECD Test Guideline 201).

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

MATERIAL SAFETY DATA SHEET



Sodium Metabisulfite 7681-57-4

12.1 Toxicity

Toxicity to fish: LC50- Oncorhynchus mykiss (rainbow trout) – 150-220 mg/l – 96h
Toxicity to daphnia and LC50 – Daphnia magna (Water flea) – 89 mg/l – 24 h
other aquatic invertebrates
Toxicity to algae IC50 – Desmodesmus subspicatus (green algae) - > 48 mg/l – 72 h
EC50 - Pseudomonas putida - 56 mg/l – 17 h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

12.5 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

14. TRANSPORT INFORMATION

DOT (US)

Not regulated

15. REGULATORY INFORMATION

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:
None

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:
None

MATERIAL SAFETY DATA SHEET



SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

SCAQMD Rule 443.1

Photochemically Reactive: No

Maximum Grams of VOC per Liter: 0

Vapor Pressure: 18 mm Hg@ 20 Degrees C

16. OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3.

H305	May be harmful if swallowed and enters airways (Category 2)
H314	Causes skin irritation (Category 2)
H317	May cause allergic skin reaction (Category 1)
H320	Causes eye irritation (Category 2B)
H335	May cause respiratory irritation (Category 3)

HMIS RATING

Health: 1

Chronic: *

Flammability: 0

Reactivity: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

FREESTYLE PHOTOGRAPHIC SUPPLIES

ARISTA® RA-4 BLIX PART B

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

Product Name: RA-4 BLIX PART B

5124 Sunset Blvd., Hollywood, CA 90027

Product Number: 101802, 101812

Product Use: Photographic fixer component

Customer Information Phone Number:

1-800-292-6137

CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300

Date Reviewed: 9/01/2015

Version: 3.0

2. HAZARDOUS IDENTIFICATION

2.1 Classification of the substance or mixture

Health hazard

H319 May cause serious eye irritation (Category 2A)

H315 May cause skin irritation (Category 2)

H332 Harmful if inhaled (Category 4) mist

H402 Harmful to aquatic life (Category 3)

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: WARNING

Hazard statement(s)

H319 May cause serious eye irritation

H315 May cause skin irritation

H332 Harmful if inhaled

H402 Harmful to aquatic life

Precautionary statement(s)

P264 Wash skin thoroughly after handling

P261 Avoid breathing mist

P270 Do not eat, drink, or smoke when using this product

P273 Avoid release into the environment

P280 Wear protective gloves, eye protection

MATERIAL SAFETY DATA SHEET



P302 + P352 IF ON SKIN: Wash with plenty of soap
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 +P313 If skin irritation or rash occurs: Get medical advice/attention.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
FERRIC AMMONIUM EDTA	68413-60-5	50 ppm	25 ppm	40-50
ACETIC ACID	64-19-7	25mg/m ³	25 mg/m ³	1-5

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

Inhalation: If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: If swallowed, give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Skin Contact: Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Nonflammable. Use agent appropriate for surrounding fire.

5.2 Special Hazards arising from substance or mixture

Not considered a fire hazard. When involved in a fire, does not contribute any unusual hazards. Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Oxides of carbon and nitrogen are produced by the combustion of this product.

5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

7.2 Conditions for safe storage, including any incompatibles

Do not store with incompatible materials. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

8. EXPOSURE CONTROL / PERSONAL PROTECTION**8.1 Control parameters**

See Section 3.

8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal protective equipment

Eye Protection: Safety glasses with side shields (or goggles).

Respiratory Protection: When this product is used in the intended way, no respiratory protection is anticipated to be necessary. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator should be worn of organic vapor type.

Skin protection: Latex, rubber, or neoprene waterproof gloves are recommended.

Body protection: Rubber or plastic apron.

Respiratory protection: Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Appearance And Odor: Reddish brown solution; ammonia odor

Solubility In Water: Complete

Flash Point: Nonflammable

Boiling Point: > 100 °C

Freezing Point: Not established

Vapor Pressure: 18m Hg @ 20°C
Specific Gravity: 1.13
Percent Volatile: 76.77
Melting Point: Not applicable
Evaporation Rate: Not established
Pounds Per Gallon: 9.38
Vapor Density: 0.6 (Air =1)
Ph: 5.7
Molecular Weight: Not applicable
V.O.C. is 38.3 g/L or 3.4% or 0.32 lb./gal.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Metals such as aluminum, copper, copper alloys, nickel, and zinc. Aqueous solution in contact with aluminum evolves hydrogen.

10.5 Incompatible Materials

Metals

10.6 Decomposition Products

May produce oxides of nitrogen, carbon dioxide, carbon monoxide, and ammonia.

11. TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

Component information

Ferric Diammonium EDTA 68413-60-5

Acute toxicity:

Oral: LD50 (rats): is expected to be greater than 5,000 mg/kg based on similar products.
Dermal: No data
Inhalation: No data

Skin irritation: Rabbit
Non irritant

Eye irritation: Rabbit
No eye irritation (OECD Test Guideline 405).

Carcinogenicity/mutagenicity: none

Acetic Acid 64-19-7**Acute toxicity:**

Oral: LD50 (rats): 3,310 mg/kg
Dermal: LD50 (Rabbit) – 4h – 11.4 mg/l
Inhalation: LC50 (Mouse) – 1h – 5620 ppm
LC50 (Rat) – 4h -11.4 mg/l

Skin irritation: No data available

Eye irritation: Rabbit
Corrosive to eyes

Respiratory or skin sensitization No data available

Carcinogenicity/mutagenicity: none

Reproductive toxicity: No data available

Specific target organ toxicity – repeated exposure – No data available

Aspiration hazard - No data available

12. ECOLOGICAL INFORMATION**Component information*****Ferric Diammonium EDTA 68413-60-5*****12.1 Toxicity**

No experimental ecological data are available for the mixture as such. From structurally related products, the following may be expected.

Toxicity to fish	LC0-Oncorhynchus mykiss - > 100 mg/l – 96h
Toxicity to daphnia	EC50 – Daphnia magna (Water flea) → 100 mg/l – 48h
Toxicity to algae	EC50 – Pseudokirchneriella subcapitata - > 100 mg/l – 72 h (OECD Test Guideline 201).

12.2 Biodegradation

This product is not readily biodegradable.

12.3 Bioaccumulative potential

Bioaccumulation in fish and other aquatic species is not expected due to the high water solubility.

12.4 Chemical fate

This product is not expected to undergo hydrolysis. The substance is not expected to enter the atmosphere significantly due to its high water solubility.

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

Acetic Acid 64-19-7**12.1 Toxicity**

Toxicity to fish	LC0- Oncorhynchus mykiss (rainbow trout) - > 1,000 mg/l – 96h (OECD Test Guideline 203).
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MATERIAL SAFETY DATA SHEET



Toxicity to daphnia and other aquatic invertebrates

LC50 – Daphnia magna (Water flea) – > 300.82mg/l – 48h (OECD Test Guideline 202).

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Biodegradability

aerobic – exposure time 30d

Result: 99% - Readily biodegradable

Biochemical Oxygen

880 mg/g

Demand (BOD)

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

12.5 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT (US)

Not regulated

15. REGULATORY INFORMATION

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:
None

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:
None

SARA 311/312 Hazards

Acute Health Hazard

MATERIAL SAFETY DATA SHEET



California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

SCAQMD Rule 443.1

Photochemically Reactive: No

Maximum Grams of VOC per Liter: 38.3 gm/L

Vapor Pressure: 18 mmHg@ 20 °C

16. OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3.

H319	May cause serious eye irritation (Category 2A)
H315	May cause skin irritation (Category 2)
H332	Harmful if inhaled (Category 4) mist
H402	Harmful to aquatic life (Category 3)

HMIS RATING

Health: 1

Flammability: 0

Reactivity: 0

Protective: C

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

FREESTYLE PHOTOGRAPHIC SUPPLIES

ARISTA® RA DEVELOPER PART A

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

Product Name: **RA DEVELOPER PART A**

5124 Sunset Blvd., Hollywood, CA 90027

Product Number: **101802, 101812**

Product Use: Photographic developer

Customer Information Phone Number:

1-800-292-6137

CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300

Date Reviewed: 08/31/2015

Version 3.0

2. HAZARDOUS IDENTIFICATION

2.1 Classification of the substance or mixture

Health hazard

Acute toxicity, (Category 4), Inhalation

Acute toxicity, (Category 4), Dermal

Causes eye irritation (Category 2B), H320

Causes skin irritation (Category 2), H314

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: WARNING

Hazard statement(s)

H312 + H332 Harmful if contact with skin or if inhales.

H335 May cause respiratory irritation

Precautionary statement(s)

P261 Avoid breathing mist

P280 Wear protective gloves, eye protection

P303 + P361 + P353 IF ON SKIN: Wash with plenty of soap

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor if you feel unwell.

P363 Wash contaminated clothing before reuse

MATERIAL SAFETY DATA SHEET



P501 Dispose of contents to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS</u>	<u>OHSA PEL</u>	<u>ACGIH TLV</u>	<u>Weight %</u>
TRIETHANOLAMINE	102-71-6	0.2 mg/m ³	5mg/m ³	10-15
DIETHYLHYDROXYLAMINE	371084-7	N.E.	2 ppm	1-5

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart. DO NOT remove contact lenses, if worn. Get immediate medical attention if irritation persists.

Inhalation: If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Seek medical attention or contact a poison control center. If individual is drowsy or unconscious, do not give anything by mouth. Place individual on left side with head down.

Skin Contact: Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

Aggravated Medical Conditions: Skin contact may aggravate an existing dermatitis.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Nonflammable -Use agent appropriate for surrounding fire.

5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Combustion Products: Carbon dioxide, carbon monoxide, oxides of nitrogen.

5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned

using water.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Do not breathe vapor. Avoid contact with skin and eyes. Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

7.2 Conditions for safe storage, including any incompatibles

All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

See Section 3.

8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal protective equipment

Eye Protection: Safety glasses with side shields (or goggles).

Respiratory Protection: When this product is used in the intended way, no respiratory protection is anticipated to be necessary.

Skin protection: Latex, rubber, or neoprene waterproof gloves are recommended.

Body protection: Rubber or plastic apron.

Ventilation protection: Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits. Good ventilation of 10 room volumes per hour. Ventilation rates should match conditions of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance And Odor: Yellow; strong amine odor.

Solubility In Water: Complete

Boiling Point: Not established

Vapor Pressure: Not established

Specific Gravity: 1.035

Melting Point: Not applicable

Freezing Point: Not established

Evaporation Rate: Not established

Vapor Density: Not established

Percent Volatile: 86.66
Ph: 10.02
Molecular Weight: Not applicable
Pounds Per Gallon: 8.63
V.O.C. is 0 g/L.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Strong acids and oxidizing agents.

10.5 Incompatible Materials

Strong acids and oxidizing agents.

10.6 Decomposition Products

May produce oxides of nitrogen and carbon.

11. TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

Component information

Triethanolamine 102-71-6

Acute toxicity:

Oral: LD50 (Mouse): 5,846 mg/kg
Oral: LD50 (Rat): 5,530 mg/kg
Oral: LD50 (Rabbit): 2,200 mg/kg
Dermal: LD50 (Rabbit) : >22.5 g/kg
Inhalation: No data available

Skin irritation: Rabbit
Non irritant

Eye irritation: Rabbit
No eye irritation

Respiratory or skin sensitization: No data available

Carcinogenicity/mutagenicity: none



DEHA (N, N-Diethylhydroxylamine), 99% 3710-84-7

Acute toxicity:

Oral LD-50 (rat) 2,190 mg/kg
 Inhalation LC-50 (rat) 19 mg/l - 4 h
 Dermal: LD-50 (rabbit) 1,300 mg/l

Skin irritation:

May cause skin irritation and/or dermatitis

Eye irritation:

No irritation

Vapors may cause irritation to the eyes, respiratory system and the skin.

Respiratory or Skin Sensitization Did not cause sensitization on laboratory animals.

Reproductive toxicity: No data available

Carcinogenicity/mutagenicity: none

12. ECOLOGICAL INFORMATION

Component information

Triethanolamine 102-71-6

12.1 Toxicity

Toxicity to fish LC0-Lepomis macrochirus (bluegill) – 450-1,000 mg/l – 96h
 Toxicity to daphnia and LC50 – Daphnia magna (Water flea) – 609.98 mg/l – 48 h
 other aquatic invertebrates

12.2 Persistence and degradability

Biodegradability Result: 96% - Readily biodegradable

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

DEHA (N, N-Diethylhydroxylamine), 99% 3710-84-7

12.1 Toxicity

Toxicity to fish LC50: Pimephales promelas (fathead minnow) – 134 mg/l – 96h
 Toxicity to daphnia and EC50 – Daphnia magna (Water flea) – 8.2 mg/l – 48 h

other aquatic invertebrates

Toxicity to algae ErC50: Green algae > 101 mg/l – 72 h

12.2 Persistence and degradability

Not readily biodegradable 11%

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Ecotoxicology Assessment

Acute and Chronic aquatic toxicity

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

14. TRANSPORT INFORMATION**DOT (US)**

Not regulated

15. REGULATORY INFORMATION**SARA 302 Components**

The following components are subject to reporting levels established by SARA Title III, Section 302:
None

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:
None

SARA 311/312 Hazards

Chronic Health Hazard

California Prop 65 Components

This product contains N,N-Diethanolamine 111-42-2 as a component of the Triethanolamine. The following information is required by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986, or Proposition 65. This regulation does not address di minimus levels; therefore, even trace amounts of the chemicals included on Proposition 65's list of chemicals known to the State of California to cause cancer or reproductive toxicity must be noted with the "Safe Harbor" wording. WARNING: This product contains N,N-Diethanolamine known to the state of California to cause cancer.

TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

SCAQMD Rule 443.1

Photochemically Reactive: No

Maximum Grams of VOC per Liter: 0 g/L

Vapor Pressure: N.E. mm Hg@ 20 Degrees C

16. OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3.

Acute toxicity, (Category 4), Inhalation

Acute toxicity, (Category 4), Dermal

Causes eye irritation (Category 2B), H320

Causes skin irritation (Category 2), H314

HMIS RATING

Health: 1

Chronic: *

Flammability: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

FREESTYLE PHOTOGRAPHIC SUPPLIES

ARISTA® RA DEVELOPER PART B

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

Product Name: **RA DEVELOPER PART B**

5124 Sunset Blvd., Hollywood, CA 90027

Product Number: **101802, 101812**

Product Use: Photographic developer

Customer Information Phone Number:

1-800-292-6137

CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300

Date Reviewed: 08/31/2015

Version 3.0

2. HAZARDOUS IDENTIFICATION

2.1 Classification of the substance or mixture

Health hazard

Acute toxicity, Oral (Category 4), H302

Causes severe skin burns and eye damage (Skin Corr. 1B) H314

Serious eye damage (Category 1), H314

Skin sensitization (Category 2), H317

Harmful to aquatic life (Category 3), H402

Chronic aquatic toxicity (Category 1), H410

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: DANGER

Hazard statement(s)

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause allergic skin reaction
H318	Causes severe eye damage
H335	May cause respiratory irritation
H402	Harmful to aquatic life.
H410	Very toxic to aquatic life

Precautionary statement(s)

- P201 Obtain special instructions before use
 P260 Do not breathe dust or mist
 P264 Wash skin thoroughly after handling
 P270 Do not eat, drink, or smoke when using this product
 P273 Avoid release into the environment
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician Do NOT induce vomiting
 P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 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 supplemental first aid instructions on this label).
 P330 Rinse mouth.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
 P363 Wash contaminated clothing before reuse
 P391 Collect spillage
 P501 Dispose of contents to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
LITHIUM SULFATE	12003-67-7	10mg/m ³	TWA=15mg/m ³	15-20
CD-3*	25646-71-3	N.E.	N.E.	10-15
POTASSIUM SULFITE	10117-38-1	N.E.	N.E.	1-3

*Manufacturer hygiene guidelines recommend exposure limits of 1mg/m³

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

Inhalation: If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Do not induce vomiting. Only induce vomiting at the instruction of medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Skin Contact: Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

Aggravated Medical Conditions: Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Nonflammable. Water spray, carbon dioxide, dry chemical, alcohol foam.

5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide, oxides of sulfur, oxides of nitrogen.

5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes. Fire or excessive heat may produce hazardous decomposition products. Use water to keep containers cool.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Prevent liquid from entering sewers, waterways or low areas. May require neutralization if pH < 2.0. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material.

6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

7.2 Conditions for safe storage, including any incompatibles

Do not store with incompatible materials. Do not store with strong acids. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

See Section 3.

8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal protective equipment

Eye Protection: Safety glasses with side shields (or goggles).

Respiratory Protection: If use conditions generate decomposition vapors or fumes; use a NIOSH approved respirator with acid gas cartridges.

Skin protection: Latex, rubber, or neoprene waterproof gloves are recommended.

Body protection: Rubber or plastic apron.

Respiratory protection: Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits, typically 10 air changes per hour.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Appearance And Odor: Light straw color; sharp sulfur dioxide odor.

Solubility In Water: Complete

Boiling Point: > 100 °C

Flash Point: Nonflammable

Specific Gravity: 1.205

Vapor Pressure: 18m Hg @ 20° C

Melting Point: Not applicable

Freezing Point: Not established

Evaporation Rate: Not established

Vapor Density: 0.6 (Air=1)

Percent Volatile: 74.36

Ph: 1.25

Molecular Weight: Not applicable

Pounds Per Gallon: 10.05

V.O.C is 0.

10. STABILITY AND REACTIVITY**10.1 Reactivity**

None

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

May produce oxides of sulfur, carbon, and nitrogen.

10.4 Conditions to avoid

None

10.5 Incompatible Materials

Bases and strong oxidizing agents.

10.6 Decomposition Products

May produce oxides of sulfur, carbon, and nitrogen.

11. TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

Component information

Lithium Sulfate 10377-48-7

Acute toxicity: Acute Toxicity Category 4
LD50 Oral – rat – 613 mg/kg

Dermal:

Based on the available data, the classification criteria are not met.

Inhalation:

Based on the available data, the classification criteria are not met.

Skin irritation:

Non corrosive

Eye irritation:

Based on the available data, the classification criteria are not met.

Respiratory or Skin Sensitization

Based on the available data, the classification criteria are not met.

Carcinogenicity

Based on the available data, the classification criteria are not met.

Germ cell mutagenicity

Based on the available data, the classification criteria are not met.

CD-3 25646-71-3

Product is harmful by ingestion.

Acute toxicity:

LD50 Oral – rat – 248 (female)/ 400 (male) mg/kg

Dermal:

No data available

Inhalation:

No data available

Skin irritation:

No data available

Eye irritation:

No data available

Respiratory or Skin Sensitization

No data available

Carcinogenicity

No data available

Germ cell mutagenicity

No data available

Potassium Metabisulfite 16731-55-8**Acute toxicity:**

Oral LD-50 (rat) > 2,000 mg/kg

Inhalation LD-50 (rat) No data available

Dermal: No data available

Skin irritation: No data available

Eye irritation:

Eye – rabbit

Result: Risk of serious damage to eyes

Respiratory or Skin Sensitization No data available

Carcinogenicity/mutagenicity: none

Reproductive toxicity;

Rat (Oral): Effects on Newborn: Growth statistics – reduced weight gain

12. ECOLOGICAL INFORMATION**Component information*****Lithium Sulfate 10377-48-7******Ecotoxicity***

No data available for this product. Based on the available data, the classification criteria are not met.

12.2 Persistence and degradability

No data available for this product.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

CD-3 25646-71-3***Ecotoxicity***

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability

Product is not biodegradable.

Potassium Metabisulfite 16731-55-8**12.1 Toxicity**

Toxicity to fish LC50- Danio rerio (zebra fish) -464-1,000 mg/l – 96h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

14. TRANSPORT INFORMATION**DOT (US)**

DOT Class: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

(Contains: Methanesulfonamide, N-[2-[(4-Amino-3-Methylphenyl)Ethylamino-ethyl] -, Sulfate (2:3)

Hazard Class: 8

UN No.: 3265

Packing Group: II

Guide No: 153

Limited Quantity Exception may apply to this product, for “inner packagings not over 1.0L (0.3 gal) for liquids and 1.0 kg (2.2 lb) for solids”. 173.154 (b) (1). Each package must conform to the packaging requirements of Subpart B of Part 173 and may not exceed 30 kg (66 lb) gross weight. For further information consult the 49 CFR.

DOT Class: CONSUMER COMMODITY, ORM-D

Hazard Class: NOT APPLICABLE

UN No.: NOT APPLICABLE

Packing Group: NOT APPLICABLE

Ship Name: PHOTOGRAPHIC DEVELOPER

15. REGULATORY INFORMATION**SARA 302 Components**

The following components are subject to reporting: None

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313: None

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

SCAQMD Rule 443.1

Photochemically Reactive: No

Maximum Grams of VOC per Liter: 0 g/L

Vapor Pressure: 18 mm Hg@ 20 Degrees C

16. OTHER INFORMATION**Full text of H-statements referred to under sections 2 and 3.**

Acute toxicity, Oral (Category 4), H302

Causes severe skin burns and eye damage (Skin Corr. 1B) H314

Serious eye damage (Category 1), H314

Skin sensitization (Category 2), H317

Harmful to aquatic life (Category 3), H402

Chronic aquatic toxicity (Category 1), H410

HMIS RATING

Health: 2

Chronic: *

Flammability: 0

Reactivity: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

RA-4 RT DEVELOPER & RELENISHER PART A

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Photo Systems, Inc.

7200 Huron River Drive, Dexter, MI 48130

Product Name: **RA-4 RT DEVELOPER PART A**

Product Number: **10820, 10821**

Product Use: Photographic developer

Customer Information Phone Number:

1-734-424-9625

CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300

Date Reviewed: 08/24/2015

Version 3.0

2. HAZARDOUS IDENTIFICATION

2.1 Classification of the substance or mixture

Health hazard

Acute toxicity, (Category 4), Inhalation

Acute toxicity, (Category 4), Dermal

Causes eye irritation (Category 2B), H320

Causes skin irritation (Category 2), H314

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: WARNING

Hazard statement(s)

H312 + H332 Harmful in contact with skin or if inhaled.

H335 May cause respiratory irritation

Precautionary statement(s)

P261 Avoid breathing mist

P280 Wear protective gloves, eye protection

P303 + P361 + P353 IF ON SKIN: Wash with plenty of soap

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor if you feel unwell.

P363 Wash contaminated clothing before reuse

P501 Dispose of contents to an approved waste disposal plant.



3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
TRIETHANOLAMINE	102-71-6	0.2 mg/m ³	5mg/m ³	25-35
DIETHYLHYDROXYLAMINE	371084-7	N.E.	2 ppm	5-15
GLACIAL ACETIC ACID	69-19-7	25 mg/m ³	25 mg/m ³	< 1

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart. DO NOT remove contact lenses, if worn. Get immediate medical attention if irritation persists.

Inhalation: If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Seek medical attention or contact a poison control center. If individual is drowsy or unconscious, do not give anything by mouth. Place individual on left side with head down.

Skin Contact: Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

Aggravated Medical Conditions: Skin contact may aggravate an existing dermatitis.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Nonflammable -Use agent appropriate for surrounding fire.

5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Combustion Products: Carbon dioxide, carbon monoxide, oxides of nitrogen.

5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned

using water.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Do not breathe vapor. Avoid contact with skin and eyes. Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

7.2 Conditions for safe storage, including any incompatibles

All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

See Section 3.

8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal protective equipment

Eye Protection: Safety glasses with side shields (or goggles).

Respiratory Protection: When this product is used in the intended way, no respiratory protection is anticipated to be necessary.

Skin protection: Latex, rubber, or neoprene waterproof gloves are recommended.

Body protection: Rubber or plastic apron.

Ventilation protection: Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits. Good ventilation of 10 room volumes per hour. Ventilation rates should match conditions of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance And Odor: Light yellow liquid, slight odor.

Solubility In Water: Complete

Boiling Point: > 100°C

Vapor Pressure: Not established

Specific Gravity: 1.054

Melting Point: Not applicable

Freezing Point: Not established

Evaporation Rate: Not established

Vapor Density: Not established

Percent Volatile: 72.14

Ph: 10.4

Molecular Weight: Not applicable

Pounds Per Gallon: 8.80

V.O.C. = 3.5 g/L or 0.33%, or 1.23 lb. /gal.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Strong acids and oxidizing agents.

10.5 Incompatible Materials

Strong acids and oxidizing agents.

10.6 Decomposition Products

May produce oxides of nitrogen and carbon.

11. TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

Component information

Triethanolamine 102-71-6

Acute toxicity:

Oral: LD50 (Mouse): 5,846 mg/kg

Oral: LD50 (Rat): 5,530 mg/kg

Oral: LD50 (Rabbit): 2,200 mg/kg

Dermal: LD50 (Rabbit) : >22.5 g/kg

Inhalation: No data available

Skin irritation: Rabbit
Non irritant

Eye irritation: Rabbit
No eye irritation

Respiratory or skin sensitization: No data available

Carcinogenicity/mutagenicity: none



DEHA (N, N-Diethylhydroxylamine), 99% 3710-84-7

Acute toxicity:

Oral LD-50 (rat) 2,190 mg/kg
 Inhalation LC-50 (rat) 19 mg/l - 4 h
 Dermal: LD-50 (rabbit) 1,300 mg/l

Skin irritation:

May cause skin irritation and/or dermatitis

Eye irritation:

No irritation

Vapors may cause irritation to the eyes, respiratory system and the skin.

Respiratory or Skin Sensitization Did not cause sensitization on laboratory animals.

Reproductive toxicity: No data available

Carcinogenicity/mutagenicity: none

12. ECOLOGICAL INFORMATION

Component information

Triethanolamine 102-71-6

12.1 Toxicity

Toxicity to fish LC0-Lepomis macrochirus (bluegill) – 450-1,000 mg/l – 96h
 Toxicity to daphnia and LC50 – Daphnia magna (Water flea) – 609.98 mg/l – 48 h
 other aquatic invertebrates

12.2 Persistence and degradability

Biodegradability Result: 96% - Readily biodegradable

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

DEHA (N, N-Diethylhydroxylamine), 99% 3710-84-7

12.1 Toxicity

Toxicity to fish LC50: Pimephales promelas (fathead minnow) – 134 mg/l – 96h
 Toxicity to daphnia and EC50 – Daphnia magna (Water flea) – 8.2 mg/l – 48 h

other aquatic invertebrates

Toxicity to algae ErC50: Green algae > 101 mg/l – 72 h

12.2 Persistence and degradability

Not readily biodegradable 11%

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Ecotoxicology Assessment

Acute and Chronic aquatic toxicity

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

14. TRANSPORT INFORMATION**DOT (US)**

Not regulated

15. REGULATORY INFORMATION**SARA 302 Components**

The following components are subject to reporting levels established by SARA Title III, Section 302:
None

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:
None

SARA 311/312 Hazards

Chronic Health Hazard

California Prop 65 Components

This product contains N,N-Diethanolamine 111-42-2 as a component of the Triethanolamine. The following information is required by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986, or Proposition 65. This regulation does not address di minimus levels; therefore, even trace amounts of the chemicals included on Proposition 65's list of chemicals known to the State of California to cause cancer or reproductive toxicity must be noted with the "Safe Harbor" wording. **WARNING:** This product contains N,N-Diethanolamine known to the state of California to cause cancer.

TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

SCAQMD Rule 443.1

Photochemically Reactive: No

Maximum Grams of VOC per Liter: 3.5 g/L

Vapor Pressure: N.E. mm Hg@ 20 Degrees C

16. OTHER INFORMATION**Full text of H-statements referred to under sections 2 and 3.**

Acute toxicity, (Category 4), Inhalation

Acute toxicity, (Category 4), Dermal

Causes eye irritation (Category 2B), H320

Causes skin irritation (Category 2), H314

HMIS RATING

Health: 1

Chronic: *

Flammability: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

RA-4 RT DEVELOPER & RELENISHER PART B

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Photo Systems, Inc.

7200 Huron River Drive, Dexter, MI 48130

Product Name: **RA-4 RT DEVELOPER PART A B**

Product Number: **10820, 10821**

Product Use: Photographic developer

Customer Information Phone Number:

1-734-424-9625

CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300

Date Reviewed: 08/24/2015

Version 3.0

2. HAZARDOUS IDENTIFICATION

2.1 Classification of the substance or mixture

Health hazard

Acute toxicity, Oral (Category 4), H302

Causes severe skin burns and eye damage (Skin Corr. 1B) H314

Serious eye damage (Category 1), H314

Skin sensitization (Category 2), H317

Harmful to aquatic life (Category 3), H402

Chronic aquatic toxicity (Category 1), H410

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: DANGER

Hazard statement(s)

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause allergic skin reaction
H318	Causes severe eye damage
H335	May cause respiratory irritation
H402	Harmful to aquatic life.
H410	Very toxic to aquatic life

Precautionary statement(s)

- P201 Obtain special instructions before use
 P260 Do not breathe dust or mist
 P264 Wash skin thoroughly after handling
 P270 Do not eat, drink, or smoke when using this product
 P273 Avoid release into the environment
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician Do NOT induce vomiting
 P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 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 supplemental first aid instructions on this label).
 P330 Rinse mouth.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
 P363 Wash contaminated clothing before reuse
 P391 Collect spillage
 P501 Dispose of contents to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
CD3	25646-71-3	N.E. (dust)	N.E.	20-30
POTASSIUM METABISULFITE	16731-55-8	N.E.	5 mg/m ³	5-10

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

Inhalation: If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Do not induce vomiting. Only induce vomiting at the instruction of medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Skin Contact: Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

Aggravated Medical Conditions: Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Nonflammable. Water spray, carbon dioxide, dry chemical, alcohol foam.

5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide, oxides of sulfur, oxides of nitrogen.

5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes. Fire or excessive heat may produce hazardous decomposition products. Use water to keep containers cool.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Prevent liquid from entering sewers, waterways or low areas. May require neutralization if pH < 2.0. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material.

6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

7.2 Conditions for safe storage, including any incompatibles

Do not store with incompatible materials. Do not store with strong acids. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

See Section 3.

8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal protective equipment

Eye Protection: Safety glasses with side shields (or goggles).

Respiratory Protection: If use conditions generate decomposition vapors or fumes; use a NIOSH approved respirator with acid gas cartridges.

Skin protection: Latex, rubber, or neoprene waterproof gloves are recommended.

Body protection: Rubber or plastic apron.

Respiratory protection: Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits, typically 10 air changes per hour.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Appearance And Odor: amber yellow liquid, sharp sulfur dioxide odor.

Solubility In Water: Complete

Boiling Point: > 100 °C

Flash Point: Nonflammable

Vapor Pressure: 18m Hg @ 20° C

Specific Gravity: 1.12

Melting Point: Not applicable

Freezing Point: Not established

Evaporation Rate: Not established

Vapor Density: 0.6 (Air=1)

Percent Volatile: 75.78

Ph: 1.1

Molecular Weight: Not applicable

Pounds Per Gallon: 9.31

V.O.C. = 0

10. STABILITY AND REACTIVITY**10.1 Reactivity**

None

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

May produce oxides of sulfur, carbon, and nitrogen.

10.4 Conditions to avoid

None

10.5 Incompatible Materials

Bases and strong oxidizing agents.

10.6 Decomposition Products

May produce oxides of sulfur, carbon, and nitrogen.

11. TOXICOLOGICAL INFORMATION**11.1 Information of toxicological effects****Component information*****CD-3 25646-71-3***

Product is harmful by ingestion.

Acute toxicity:

LD50 Oral – rat – 248 (female)/ 400 (male) mg/kg

Dermal:

No data available

Inhalation:

No data available

Skin irritation:

No data available

Eye irritation:

No data available

Respiratory or Skin Sensitization

No data available

Carcinogenicity

No data available

Germ cell mutagenicity

No data available

Potassium Metabisulfite 16731-55-8**Acute toxicity:**

Oral LD-50 (rat) > 2,000 mg/kg

Inhalation LD-50 (rat) No data available

Dermal: No data available

Skin irritation: No data available

Eye irritation:

Eye – rabbit

Result: Risk of serious damage to eyes

Respiratory or Skin Sensitization No data available

Carcinogenicity/mutagenicity: none

Reproductive toxicity;

Rat (Oral): Effects on Newborn: Growth statistics – reduced weight gain

MATERIAL SAFETY DATA SHEET



Limited Quantity Exception may apply to this product, for “inner packagings not over 1.0L (0.3 gal) for liquids and 1.0 kg (2.2 lb) for solids”. 173.154 (b) (1). Each package must conform to the packaging requirements of Subpart B of Part 173 and may not exceed 30 kg (66 lb) gross weight. For further information consult the 49 CFR.

DOT Class: CONSUMER COMMODITY, ORM-D
Hazard Class: NOT APPLICABLE
UN No.: NOT APPLICABLE
Packing Group: NOT APPLICABLE
Ship Name: PHOTOGRAPHIC DEVELOPER

15. REGULATORY INFORMATION

SARA 302 Components

The following components are subject to reporting: None

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313: None

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

SCAQMD Rule 443.1

Photochemically Reactive: No
Maximum Grams of VOC per Liter: 0 g/L
Vapor Pressure: 18 mm Hg@ 20 Degrees C

16. OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3.

Acute toxicity, Oral (Category 4), H302
Causes severe skin burns and eye damage (Skin Corr. 1B) H314
Serious eye damage (Category 1), H314
Skin sensitization (Category 2), H317
Harmful to aquatic life (Category 3), H402
Chronic aquatic toxicity (Category 1), H410

MATERIAL SAFETY DATA SHEET



HMIS RATING

Health: 2

Chronic: *

Flammability: 0

Reactivity: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

RA-4 RT DEVELOPER & RELENISHER PART C

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Photo Systems, Inc.

7200 Huron River Drive, Dexter, MI 48130

Product Name: **RA-4 RT DEVELOPER PART AC**

Product Number: **10820, 10821**

Product Use: Photographic developer

Customer Information Phone Number:

1-734-424-9625

CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300

Date Reviewed: 08/25/2015

Version 3.0

2. HAZARDOUS IDENTIFICATION

2.1 Classification of the substance or mixture

Health hazard

Acute toxicity, Oral (Category 4), H302

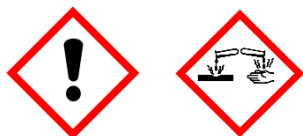
Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific organ toxicity Oral (Category 3), Respiratory H335

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: DANGER

Hazard statement(s)

H290	Metal Corrosivity (Category 1)
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H402	Acute aquatic toxicity

Precautionary statement(s)

P261	Avoid breathing mist
P264	Wash skin thoroughly after handling
P270	Do not eat, drink, or smoke when using this product

MATERIAL SAFETY DATA SHEET



- P273 Avoid release into the environment
P280 Wear protective gloves, eye protection
P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician if you feel unwell
P302 + P352 IF ON SKIN: Wash with plenty of soap
P304 +P340 IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330 Rinse mouth.
P333 +P313 If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P363 Wash contaminated clothing before reuse
P391 Collect spillage
P501 Dispose of contents to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS</u>	<u>OHSA PEL</u>	<u>ACGIH TLV</u>	<u>Weight %</u>
POTASSIUM CARBONATE	584-08-7	N.E.	N.E.	30-35
POTASSIUM HYDROXIDE	1310-58-3	N.E.	2mg/m ³ CEILING	1-5
DEQUEST 2010	MIXTURE	N.E.	N.E.	1-5

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

Inhalation: If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Do not induce vomiting. Only induce vomiting at the instruction of medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Skin Contact: Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

Aggravated Medical Conditions: Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Nonflammable. Use agent appropriate for surrounding fire.

5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide, and sulfur.

5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes. Fire or excessive heat may produce hazardous decomposition

6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

7.2 Conditions for safe storage, including any incompatibles

Do not store with incompatible materials. Do not store with strong acids. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

8. EXPOSURE CONTROL / PERSONAL PROTECTION**8.1 Control parameters**

See Section 3.

8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal protective equipment

Eye Protection: Safety glasses with side shields (or goggles).

Respiratory Protection: When this product is used in the intended way, no respiratory protection is anticipated to be necessary. However, if use conditions generate decomposition vapors or fumes; use a NIOSH approved respirator with acid gas cartridges.

Skin protection: Latex, rubber, or neoprene waterproof gloves are recommended.

Body protection: Rubber or plastic apron.

Respiratory protection: Local exhaust ventilation is recommended. Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Good ventilation (typically 10 air changes per hour) should be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance And Odor: Clear liquid, no odor

Solubility In Water: Complete

Boiling Point: >100° C

Flash Point: Nonflammable

Vapor Pressure: 18 mm Hg @ 20° C

Ph: 12.65

Specific Gravity: 1.36 g /ml

Melting Point: Not applicable

Freezing Point: Not established

Evaporation Rate: Not established

Vapor Density: Not established

Percent Volatile: 62.26

Molecular Weight: Not applicable

Pounds Per Gallon: 11.3

V.O.C. = 0

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

High temperatures

10.5 Incompatible Materials

Strong acids, strong oxidizing agents

10.6 Decomposition Products

May produce oxides of sulfur and carbon and some bromine products

11. TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

Component information

Potassium Carbonate 584-08-7

Acute toxicity:

LD50 Oral – rate – 1970 mg/kg

Dermal:

No data available

Inhalation:

No data available

Skin irritation:

No data available

Eye irritation:

No data available

Respiratory or Skin Sensitization

No data available

Carcinogenicity/mutagenicity: none

Potassium Hydroxide 1310-58-3

Acute toxicity:

No data available

Dermal

No data available

Inhalation: no data

No data available

Skin irritation: no data**Eye irritation:** no data**Respiratory or Skin Sensitization:**

No data available

Carcinogenicity/mutagenicity:

None

DEQUEST® 2010 Mixture

Acute toxicity:

Oral LD-50 (rat) 2.400 mg/kg

Inhalation: No data available

Dermal: LD-50 (rabbit) 7.940 mg/kg

Skin irritation:

Skin – rabbit

Result: No skin irritation

Eye irritation:

Skin – rabbit

Result: Causes serious eye damage

Respiratory or Skin Sensitization

Conclusive but not sufficient for classification.

Carcinogenicity/mutagenicity: No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

Component information

Potassium Carbonate 584-08-7

12.1 Toxicity

Toxicity to fish LC50- Pimephales promelas (fathead minnow) -510 mg/l – 96h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

12.5 Other adverse effects

None

Potassium Hydroxide 45% 1310-58-3

12.1 Toxicity

Toxicity to fish LC50-Cyprinodon variegatus (sheephead minnow)
– 540 mg/l – 96h
LC0-Fathead minnow – 1,460 mg/l – 96h
Toxicity to daphnia and LC50 – Daphnia magna (Water flea) – < 4.2 mg/l – 11d
other aquatic invertebrates EC50 – Daphnia magna (Water flea) -55 mg/l – 48 h

12.2 Persistence and degradability

Biodegradability Result: > 90% - Readily biodegradable

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

12.5 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

DEQUEST® 2010 Mixture**12.1 Toxicity**

Toxicity to fish LC50- Rainbow trout -368 mg/l – 96h

12.2 Persistence and degradability

Conclusive but sufficient for classification

12.3 Bioaccumulative potential

Low

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

12.5 Other adverse effects

None

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

14. TRANSPORT INFORMATION**DOT (US)**

Ship Name: CORROSIVE LIQUIDS, BASIC, INORGANIC, N.O.S. (Contains Potassium Hydroxide)

Hazard Class: 8

UN No.: 3266

Packing Group: III

Guide No: 154

Limited Quantity Exception may apply to this product, for “inner packagings not over 4.0L (1 gal) for liquids and 5.0 kg (11 lb) for solids”. 173.154 (b) (2). Each package must conform to the packaging requirements of Subpart B of Part 173 and may not exceed 30 kg (66 lb) gross weight. For further information consult the 49 CFR.

DOT Class: CONSUMER COMMODITY, ORM-D

Hazard Class: NOT APPLICABLE

UN No.: NOT APPLICABLE

MATERIAL SAFETY DATA SHEET



Packing Group: NOT APPLICABLE
Guide No: NOT APPLICABLE
Ship Name: NOT APPLICABLE
ORM-D QUANTITIES OF HAZARDOUS MATERIALS ARE EXEMPT FROM LABELING AND SHIPPING

15. REGULATORY INFORMATION

SARA 302 Components

The following components are subject to reporting: None

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313: None

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

SCAQMD Rule 443.1

Photochemically Reactive: No
Maximum Grams of VOC per Liter: 0 gm/L g/L
Vapor Pressure: N.E. mm Hg@ 20 Degrees C

16. OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3.

Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Specific organ toxicity Oral (Category 3), Respiratory H335

HMIS RATING

Health: 2
Chronic: *
Flammability: 0
Reactivity: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

RA-4 BLEACH-FIX AND REPLENISHER PART B

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Photo Systems, Inc.

7200 Huron River Dr., Dexter, MI 48130

Product Name: **RA-4 BLEACH-FIX AND REPLENISHER PART B**

Product Number: **10825**

Product Use: Photographic fixer component

Customer Information Phone Number:

1-734-424-9625

CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300

Date Reviewed: 8/25/2015

Version: 3.0

2. HAZARDOUS IDENTIFICATION

2.1 Classification of the substance or mixture

Health hazard

H319 May cause serious eye irritation (Category 2A)

H315 May cause skin irritation (Category 2)

H332 Harmful if inhaled (Category 4) mist

H402 Harmful to aquatic life (Category 3)

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: WARNING

Hazard statement(s)

H319 May cause serious eye irritation

H315 May cause skin irritation

H332 Harmful if inhaled

H402 Harmful to aquatic life

Precautionary statement(s)

P264 Wash skin thoroughly after handling

P261 Avoid breathing mist

P270 Do not eat, drink, or smoke when using this product

P273 Avoid release into the environment

P280 Wear protective gloves, eye protection

P302 + P352 IF ON SKIN: Wash with plenty of soap

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove



contact lenses, if present and easy to do. Continue rinsing.
 P333 +P313 If skin irritation or rash occurs: Get medical advice/attention.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
FERRIC AMMONIUM EDTA	68413-60-5	50 ppm	25 ppm	40-50
ACETIC ACID	64-19-7	25mg/m ³	25 mg/m ³	1-5

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

Inhalation: If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: If swallowed, give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Skin Contact: Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Nonflammable. Use agent appropriate for surrounding fire.

5.2 Special Hazards arising from substance or mixture

Not considered a fire hazard. When involved in a fire, does not contribute any unusual hazards. Fire or excessive heat may cause production of hazardous decomposition products. Combustion Products: Oxides of carbon and nitrogen are produced by the combustion of this product.

5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

7.2 Conditions for safe storage, including any incompatibles

Do not store with incompatible materials. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

8. EXPOSURE CONTROL / PERSONAL PROTECTION**8.1 Control parameters**

See Section 3.

8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal protective equipment

Eye Protection: Safety glasses with side shields (or goggles).

Respiratory Protection: When this product is used in the intended way, no respiratory protection is anticipated to be necessary. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator should be worn of organic vapor type.

Skin protection: Latex, rubber, or neoprene waterproof gloves are recommended.

Body protection: Rubber or plastic apron.

Respiratory protection: Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Appearance And Odor: Reddish brown solution; ammonia odor

Solubility In Water: Complete

Flash Point: Nonflammable

Boiling Point: > 100 °C

Freezing Point: Not established

Vapor Pressure: 18m Hg @ 20°C
Specific Gravity: 1.13
Percent Volatile: 76.77
Melting Point: Not applicable
Evaporation Rate: Not established
Pounds Per Gallon: 9.38
Vapor Density: 0.6 (Air =1)
Ph: 5.7
Molecular Weight: Not applicable
V.O.C. is 38.3 g/L or 3.4% or 0.32 lb./gal.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Metals such as aluminum, copper, copper alloys, nickel, and zinc. Aqueous solution in contact with aluminum evolves hydrogen.

10.5 Incompatible Materials

Metals

10.6 Decomposition Products

May produce oxides of nitrogen, carbon dioxide, carbon monoxide, and ammonia.

11. TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

Component information

Ferric Diammonium EDTA 68413-60-5

Acute toxicity:

Oral: LD50 (rats): is expected to be greater than 5,000 mg/kg based on similar products.
Dermal: No data
Inhalation: No data

Skin irritation: Rabbit
Non irritant

Eye irritation: Rabbit
No eye irritation (OECD Test Guideline 405).

Carcinogenicity/mutagenicity: none

Acetic Acid 64-19-7**Acute toxicity:**

Oral: LD50 (rats): 3,310 mg/kg
Dermal: LD50 (Rabbit) – 4h – 11.4 mg/l
Inhalation: LC50 (Mouse) – 1h – 5620 ppm
LC50 (Rat) – 4h -11.4 mg/l

Skin irritation: No data available

Eye irritation: Rabbit
Corrosive to eyes

Respiratory or skin sensitization No data available

Carcinogenicity/mutagenicity: none

Reproductive toxicity: No data available

Specific target organ toxicity – repeated exposure – No data available

Aspiration hazard - No data available

12. ECOLOGICAL INFORMATION**Component information*****Ferric Diammonium EDTA 68413-60-5*****12.1 Toxicity**

No experimental ecological data are available for the mixture as such. From structurally related products, the following may be expected.

Toxicity to fish	LC0-Oncorhynchus mykiss - > 100 mg/l – 96h
Toxicity to daphnia	EC50 – Daphnia magna (Water flea) → 100 mg/l – 48h
Toxicity to algae	EC50 – Pseudokirchneriella subcapitata - > 100 mg/l – 72 h (OECD Test Guideline 201).

12.2 Biodegradation

This product is not readily biodegradable.

12.3 Bioaccumulative potential

Bioaccumulation in fish and other aquatic species is not expected due to the high water solubility.

12.4 Chemical fate

This product is not expected to undergo hydrolysis. The substance is not expected to enter the atmosphere significantly due to its high water solubility.

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

Acetic Acid 64-19-7**12.1 Toxicity**

Toxicity to fish	LC0- Oncorhynchus mykiss (rainbow trout) - > 1,000 mg/l – 96h (OECD Test Guideline 203).
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MATERIAL SAFETY DATA SHEET



Toxicity to daphnia and other aquatic invertebrates

LC50 – Daphnia magna (Water flea) – > 300.82mg/l – 48h (OECD Test Guideline 202).

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Biodegradability

aerobic – exposure time 30d
Result: 99% - Readily biodegradable

Biochemical Oxygen

880 mg/g Demand (BOD)

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

12.5 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT (US)

Not regulated

15. REGULATORY INFORMATION

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:
None

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:
None

SARA 311/312 Hazards

Acute Health Hazard

MATERIAL SAFETY DATA SHEET



California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

SCAQMD Rule 443.1

Photochemically Reactive: No

Maximum Grams of VOC per Liter: 38.3 gm/L

Vapor Pressure: 18 mmHg@ 20 °C

16. OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3.

H319	May cause serious eye irritation (Category 2A)
H315	May cause skin irritation (Category 2)
H332	Harmful if inhaled (Category 4) mist
H402	Harmful to aquatic life (Category 3)

HMIS RATING

Health: 1

Flammability: 0

Reactivity: 0

Protective: C

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

RA-4 BLEACH-FIX AND REPLENISHER PART A

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Photo Systems, Inc.

7200 Huron River Dr., Dexter, MI 48130

Product Name: **RA-4 BLEACH-FIX AND REPLENISHER PART A**

Product Number: **10825**

Product Use: Photographic fixer component

Customer Information Phone Number:

1-734-424-9625

CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300

Date Reviewed: 8/25/2015

Version: 3.0

2. HAZARDOUS IDENTIFICATION

2.1 Classification of the substance or mixture

Health hazard

Causes eye irritation (Category 2B), H320

Causes skin irritation (Category 2), H314

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: WARNING

Hazard statement(s)

H305 May be harmful if swallowed and enters airways/

H314 Causes skin irritation

H317 May cause allergic skin reaction

H320 Causes eye irritation

H335 May cause respiratory irritation

Precautionary statement(s)

P261 Avoid breathing mist

P264 Wash skin thoroughly after handling

P270 Do not eat, drink, or smoke when using this product

P280 Wear protective gloves, eye protection

P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician if you feel unwell

P302 + P352 IF ON SKIN: Wash with plenty of soap

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

MATERIAL SAFETY DATA SHEET



P321 Specific treatment (see supplemental first aid instructions on this label).
P330 Rinse mouth.
P333 +P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse
P391 Collect spillage
P501 Dispose of contents to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Weight %</u>
AMMONIUM THIOSULFATE	7783-18-8	N.E.	N.E.	60-70
SODIUM METABISULFITE	7681-57-4	15mg/m ³ (dust)	5mg/m ³	5-10

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

Inhalation: If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: If swallowed, give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Skin Contact: Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

Aggravated Medical Conditions: Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product. May cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Nonflammable. Use agent appropriate for surrounding fire.

5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide, and oxides of sulfur and nitrogen.

5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage.

Dike the spill. For small amounts less than one gallon flush to the sewer with large amounts of water. For larger spills, prevent liquid from entering sewers, waterways or low areas. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

7.2 Conditions for safe storage, including any incompatibles

Do not store with incompatible materials. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

See Section 3.

8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal protective equipment

Eye Protection: Safety glasses with side shields (or goggles).

Respiratory Protection: When this product is used in the intended way, no respiratory protection is anticipated to be necessary.

Skin protection: Latex, rubber, or neoprene waterproof gloves are recommended.

Body protection: Rubber or plastic apron.

Respiratory protection: Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance And Odor: Clear, light yellow solution; ammonia odor.

Solubility In Water: Complete

Boiling Point: >100° C
Flash Point: Nonflammable
Specific Gravity: 1.25
Vapor Pressure: 18m Hg @ 20° C
Melting Point: Not applicable
Freezing Point: Not established
Evaporation Rate: Not established
Vapor Density: 0.6 (Air = 1)
Percent Volatile: 57.3
Ph: 5.23
Molecular Weight: Not applicable
Pounds Per Gallon: 10.38
V.O.C. = 0

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible Materials

Strong acids, strong oxidizing agents, bases, bleach. Contact with base liberates flammable material.

10.6 Decomposition Products

Strong acids will liberate sulfur dioxide, strong bases of sodium hydroxide will liberate ammonia fumes.

11. TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

Component information

Ammonium thiosulfate 7783-18-8

Acute toxicity:

Oral: LD50 (rats): 2,890 mg/kg
Dermal: No data
Inhalation: No data

Skin irritation: Rabbit
Non irritant

Eye irritation: Rabbit
No eye irritation (OECD Test Guideline 405).

Carcinogenicity/mutagenicity: none

Sodium Metabisulfite 7681-57-4

Acute toxicity: No data available

Oral LD-50 (rat): 1,540 mg/kg

Inhalation: No data available

Dermal: LD-50 (rat): > 2,000 mg/kg

Skin irritation: no data available

Eye irritation: Rabbit

Risk of serious damage to eyes.

Respiratory or Skin Sensitization Prolonged or repeated exposure may cause allergic skin reaction in certain sensitive individuals.

Carcinogenicity/mutagenicity: none

12. ECOLOGICAL INFORMATION

Component information

Ammonium thiosulfate 7783-18-8

12.1 Toxicity

Toxicity to fish LC0-Lepomis macrochirus (bluegill) - 510 mg/l – 96h
Toxicity to daphnia and LC50 – Daphnia magna (Water flea) – 230 mg/l – 21d
other aquatic invertebrates

Toxicity to algae EC50 – Pseudokirchneriella subcapitata - > 100 mg/l – 72 h
(OECD Test Guideline 201).

Toxicity to bacteria Respiration inhibition EC50 – Sludge Treatment - > 1,000 mg/l – 3h (OECD Test Guideline 201).

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

Sodium Metabisulfite 7681-57-4**12.1 Toxicity**

Toxicity to fish: LC50- Oncorhynchus mykiss (rainbow trout) – 150-220 mg/l – 96h
Toxicity to daphnia and LC50 – Daphnia magna (Water flea) – 89 mg/l – 24 h
other aquatic invertebrates
Toxicity to algae IC50 – Desmodesmus subspicatus (green algae) - > 48 mg/l – 72 h
EC50 - Pseudomonas putida - 56 mg/l – 17 h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

12.5 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

14. TRANSPORT INFORMATION**DOT (US)**

Not regulated

15. REGULATORY INFORMATION**SARA 302 Components**

The following components are subject to reporting levels established by SARA Title III, Section 302:
None

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:
None

MATERIAL SAFETY DATA SHEET



SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

SCAQMD Rule 443.1

Photochemically Reactive: No

Maximum Grams of VOC per Liter: 0

Vapor Pressure: 18 mm Hg@ 20 Degrees C

16. OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3.

H305	May be harmful if swallowed and enters airways (Category 2)
H314	Causes skin irritation (Category 2)
H317	May cause allergic skin reaction (Category 1)
H320	Causes eye irritation (Category 2B)
H335	May cause respiratory irritation (Category 3)

HMIS RATING

Health: 1

Chronic: *

Flammability: 0

Reactivity: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.