SAFETY DATA SHEET

Issuing Date 09/08/2017 **Revision Date** 09/08/2017 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name: READYMATIC Developer and Replenisher

Product Code(s) 8606873DEV

Supplier Carestream Health, Inc., 150 Verona Street, Rochester, NY, USA 14608

Emergency telephone number
CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

For other information contact: 800-328-2910

2. HAZARDS IDENTIFICATION

Classification

Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 2

Label elements

Emergency Overview

Signal word **Warning**

Hazard statements
Causes serious eye irritation
May cause an allergic skin reaction
Suspected of causing genetic defects
Suspected of causing cancer

Contains Hydroquinone
Appearance No information available **Physical state** liquid **Odor** Odorless

Precautionary Statements - Prevention
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash face, hands and any exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statement - Response

IF exposed or concerned: Get medical advice/attention. IF ON SKIN: Wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

Precautionary Statement - Storage
Store locked up.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)
• Not applicable

Other hazards which do not result in classification
Toxic to aquatic life.

1.003% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%	Trade Secret
Water 7732-18-5	7732-18-5	>80	*
Potassium sulfite 10117-38-1	10117-38-1	5-10	*
Hydroquinone 123-31-9	123-31-9	<2	*
Potassium carbonate 584-08-7	584-08-7	1-<3	*
Sodium carbonate 497-19-8	497-19-8	1-<3	*
Sodium borate 1330-43-4	1330-43-4	<1	*

*The exact percentages (concentrations) have been withheld as trade secrets.

4. FIRST AID MEASURES

First Aid Measures

General advice Show this material safety data sheet to the doctor in attendance.

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention immediately if irritation persists.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. If not breathing, give artificial respiration. Immediate medical attention is required.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms and effects, both acute and delayed

Main Symptoms Causes serious eye irritation. May cause an allergic skin reaction. Irritation. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
No information available.

Hazardous combustion products
Carbon oxides.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection see section 8.

Other information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment. Wear personal protective equipment.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible products None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines . The following constituents are the only constituents of the product present above the cutoff value which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Chemical name	ACGIH TLV	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs	OSHA PEL	Advisory OEL
Hydroquinone 123-31-9	TWA: 1 mg/m³		TWA: 2 mg/m³	
Sodium borate 1330-43-4	STEL 6 mg/m³ TWA: 2 mg/m³		-	

Appropriate engineering controls

Engineering Measures Ensure adequate ventilation, especially in confined areas. Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Ensure that eyewash stations and safety showers are close to the workstation location.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with top and side-shields.

Skin and body protection Long sleeved clothing. Protective gloves. Skin contact should be prevented through use of suitable protective clothing, gloves, and footwear, selected with regard of use conditions and exposure potential.

Respiratory protection None required under normal usage. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures Remove and wash contaminated clothing before re-use. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid		
Appearance	No information available	**Odor**	Odorless
Color	colorless	**Odor threshold**	No information available

Property	Values	Remarks • Method
pH	10.1	
Melting point / freezing point		No information available
Boiling point / boiling range	> 100 °C	
Flash point		No information available.
Evaporation rate		No information available
Flammability (solid, gas)	no data available	
Upper flammability limit:	Unknown	
Lower flammability limit:	Not flammable	
Vapor pressure	24 mbar @ 20 °C	
Vapor density	0.6	
Specific Gravity	1.08	

Water solubility	completely soluble	
Solubility(ies)		No information available
Partition coefficient		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Oxidizing Properties	No information available	
Explosive properties	No information available	

Other information

Softening point	No information available
Molecular weight	No information available
Liquid Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
Not applicable.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Hazardous polymerization
Hazardous polymerization does not occur.

Conditions to Avoid
None known.

Incompatible Materials
None known based on information supplied.

Hazardous decomposition products
Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Expected to be a low hazard for recommended handling. May cause irritation of respiratory tract.
Eye contact	Severely irritating to eyes.
Skin contact	May cause sensitization by skin contact. May cause skin irritation and/or dermatitis.
Ingestion	Not expected to be harmful by ingestion. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Toxicology data for the components

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	90,000 mg/kg (Rat)	-	-
Potassium sulfite 10117-38-1	>3200 mg/kg (rat)	-	-
Hydroquinone 123-31-9	375 mg/kg (Rat) Oral LD50 Rat 375 mg/kg (Source: ECHA)	> 4800 mg/kg (Rat)	-
Potassium carbonate 584-08-7	> 2000 mg/kg (Rat) Oral LD50 Rat 2000 mg/kg (Source: ECHA)	>2000 mg/kg (Rabbit)	-
Sodium carbonate 497-19-8	4090 mg/kg (Rat) Oral LD50 Rat 4090 mg/kg (Source: NLM_CIP)	Dermal LD50 Mouse 2210 mg/kg (Source: NLM_CIP)	2300 mg/m³ (Rat) 2 h Inhalation LC50 Rat 2300 mg/m³ 2 h (dust, Source: NLM_CIP)
Sodium borate 1330-43-4	2660 mg/kg (Rat) Oral LD50 Rat 2660 mg/kg (Source: JAPAN_GHS)	2000 mg/kg (Rabbit) Dermal LD50 Rabbit >2000 mg/kg (Source: IUCLID)	-

Information on toxicological effects

Symptoms Severe eye irritation or burning. Allergic skin reactions including rash, dermatitis, irritation, and itching.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause sensitization by skin contact.
Mutagenic effects Contains a known or suspected mutagen.
Carcinogenicity No information available.

Chemical name	ACGIH	IARC	NTP	OSHA
Hydroquinone 123-31-9	A3			

Reproductive toxicity No information available.
STOT - single exposure The substance or mixture is not classified as specific target organ toxicant, single exposure
STOT - repeated exposure The substance or mixture is not classified as specific target organ toxicant, repeat exposure
Target Organ Effects Skin, Eyes.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 1.003% of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 11348 mg/kg
ATEmix (dermal) 24132 mg/kg
ATEmix (inhalation-dust/mist) 104.6 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

1.503% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Potassium sulfite 10117-38-1		220 - 460: 96 h Leuciscus idus mg/L LC50 static		
Hydroquinone 123-31-9	0.335: 72 h Pseudokirchneriella subcapitata mg/L EC50 13.5: 120 h Desmodesmus subspicatus mg/L EC50	0.1 - 0.18: 96 h Pimephales promelas mg/L LC50 static 0.044: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.044: 96 h Pimephales promelas mg/L		0.29: 48 h Daphnia magna mg/L EC50

		LC50 flow-through 0.17: 96 h Brachydanio rerio mg/L LC50		
Potassium carbonate 584-08-7				440 - 880: <24 h Daphnia magna mg/L LC50
Sodium carbonate 497-19-8	242: 120 h Nitzschia mg/L EC50	310 - 1220: 96 h Pimephales promelas mg/L LC50 static 300: 96 h Lepomis macrochirus mg/L LC50 static		265: 48 h Daphnia magna mg/L EC50
Sodium borate 1330-43-4	2.6 - 21.8: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 158: 96 h Desmodesmus subspicatus mg/L EC50	340: 96 h Limanda limanda mg/L LC50		1085 - 1402: 48 h Daphnia magna mg/L LC50

Persistence and degradability
No information available.

Bioaccumulation:
No information available.

Chemical name	log Pow
Hydroquinone 123-31-9	0.5

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods Dispose of in accordance with local regulations.

Contaminated packaging Do not re-use empty containers. Dispose of in accordance with local regulations.

Chemical name	California Hazardous Waste Status
Sodium carbonate 497-19-8	Corrosive

14. TRANSPORT INFORMATION

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG Not regulated

For transportation information, go to: http://ship.carestream.com

15. REGULATORY INFORMATION

"Does not comply" indicates a component is either not on the public inventory or is subject to exemption requirements. If additional information is needed contact Carestream Health.

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
NZIoC	Complies

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	SARA 313 - Threshold Values %
Hydroquinone - 123-31-9	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical name	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Hydroquinone - 123-31-9		Group I		

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Product RQ
Hydroquinone	100 lb	100 lb	

TSCA

Component	U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances
Hydroquinone 123-31-9 (<2)	10/04/1984

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Hydroquinone	X	X	X	X	X
Sodium borate	X		X		

International Regulations

Mexico - Grade Moderate risk, Grade 2

Chemical name	Carcinogen Status	Exposure Limits
Sodium borate		Mexico: TWA 1 mg/m^3

16. OTHER INFORMATION

NFPA	**Health Hazard** 2	**Flammability** 0	**Instability** 0
HMIS	**Health Hazard** 2*	**Flammability** 0	**Physical Hazard** 0

Issuing Date 02/05/2014
Revision Date 09/08/2017
Revision Note (M)SDS sections updated

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

Issuing Date 09/15/2017 **Revision Date** 09/15/2017 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name: READYMATIC Fixer and Replenisher

Product Code(s) 8606873FIX

Supplier Carestream Health, Inc., 150 Verona Street, Rochester, NY, USA 14608

Emergency telephone number
CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

For other information contact: 800-328-2910

Recommended Use Restricted to professional users, Photographic chemical.

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

Appearance aqueous solution **Physical state** liquid **Odor** Ammonia

Hazards not otherwise classified (HNOC)
• Not applicable

Other hazards which do not result in classification
Harmful to aquatic life.

1.05% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

*The exact percentages (concentrations) have been withheld as trade secrets.

4. FIRST AID MEASURES

First Aid Measures

General advice Show this material safety data sheet to the doctor in attendance.

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention immediately if irritation persists.

Skin contact Wash contaminated clothing before reuse. Get medical attention if irritation develops and persists. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. If not breathing, give artificial respiration. Immediate medical attention is required.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms and effects, both acute and delayed

Main Symptoms None known.

Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Carbon dioxide (CO_2). Dry chemical. Foam.

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
Dried product residue can act as a reducing agent. Reacts violently with oxidizing materials. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

Hazardous combustion products
Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection see section 8. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Other information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice. In case of insufficient ventilation, wear suitable respiratory equipment. Wear personal protective equipment.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible products Acids. Strong bases. Oxidizing agents. Halogenated compounds. Sodium hypochlorite.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical name	ACGIH TLV	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs	OSHA PEL	Advisory OEL
Sodium bisulfite 7631-90-5	TWA: 5 mg/m³		-	
Sodium borate 1330-43-4	STEL 6 mg/m³ TWA: 2 mg/m³		-	
Acetic acid 64-19-7	STEL 15 ppm TWA: 10 ppm		TWA: 10 ppm TWA: 25 mg/m³	

Appropriate engineering controls

Engineering Measures Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Ensure that eyewash stations and safety showers are close to the workstation location.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with top and side-shields.

Skin and body protection Long sleeved clothing. Protective gloves. Skin contact should be prevented through use of suitable protective clothing, gloves, and footwear, selected with regard of use conditions and exposure potential.

Respiratory protection None required under normal conditions. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. None required under normal usage.

Hygiene measures Remove and wash contaminated clothing before re-use. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Provide

regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid		
Appearance	aqueous solution	**Odor**	Ammonia
Color	light yellow	**Odor threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	4.4	
Melting point / freezing point		No information available
Boiling point / boiling range	> 100 °C	No information available
Flash point	> 93.600 °C	No information available.
Evaporation rate		No information available
Flammability (solid, gas)	no data available	
Upper flammability limit:	Unknown	
Lower flammability limit:	Not flammable	
Vapor pressure	24 mbar @ 20 °C	No information available
Vapor density	0.6	No information available
Specific Gravity	1.09	No information available
Water solubility	completely soluble	No information available
Solubility(ies)		No information available
Partition coefficient		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Oxidizing Properties	No information available	
Explosive properties	No information available	

Other information

Softening point	No information available
Molecular weight	No information available
Liquid Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No dangerous reaction known under conditions of normal use.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing. Contact with strong acids liberates sulfur dioxide. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with strong bases liberates ammonia.

Conditions to Avoid
Do not freeze. Extreme pH's.

Incompatible Materials
Acids. Strong bases. Oxidizing agents. Halogenated compounds. Sodium hypochlorite.

Hazardous decomposition products
Ammonia. Chloramine. Sulfur oxides. Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Expected to be a low hazard for recommended handling. May cause irritation of respiratory tract.
Eye contact	Expected to be a low hazard for recommended handling.
Skin contact	Expected to be a low hazard for recommended handling. May cause skin irritation and/or dermatitis.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Not expected to be harmful by ingestion.

Toxicology data for the components

Information on toxicological effects

Symptoms	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Substance may cause slight skin irritation.
Serious eye damage/eye irritation	May cause slight irritation.
Sensitization	May cause sensitization of susceptible persons.
Mutagenic effects	No information available.
Carcinogenicity	Contains no ingredients above reportable quantities listed as a carcinogen.
Reproductive toxicity	Contains a known or suspected reproductive toxin. However, based on available data the product should not be classified for reproductive effects.
STOT - single exposure	The substance or mixture is not classified as specific target organ toxicant, single exposure
STOT - repeated exposure	The substance or mixture is not classified as specific target organ toxicant, repeat exposure
Target Organ Effects	Eyes, Skin, Respiratory system.
Aspiration Hazard	No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity	1.05% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	16142 mg/kg
ATEmix (dermal)	63095 mg/kg
ATEmix (inhalation-dust/mist)	678.6

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants

Persistence and degradability
Expected to be readily biodegradable.

Bioaccumulation:
No information available.

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods Dispose of in accordance with local regulations.

Contaminated packaging Do not re-use empty containers. Dispose of in accordance with local regulations.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG Not regulated

For transportation information, go to: http://ship.carestream.com

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
NZIoC	Complies

Legend
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	SARA 313 - Threshold Values %
Ammonium thiosulfate - 7783-18-8	1.0
Ammonium acetate - 631-61-8	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium acetate	5000 lb			X
Sodium bisulfite	5000 lb			X
Aluminum sulfate	5000 lb			X
Acetic acid	5000 lb			X

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical name	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Acetic acid - 64-19-7		Group II		

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Product RQ
Ammonium acetate	5000 lb		
Sodium bisulfite	5000 lb		
Aluminum sulfate	5000 lb		
Acetic acid	5000 lb		

TSCA

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ammonium thiosulfate	X		X		
Ammonium acetate	X	X	X		
Sodium bisulfite	X	X	X		X
Aluminum sulfate	X	X	X		
Sodium borate	X		X		

Acetic acid	X	X	X		X

International Regulations

Mexico - Grade Moderate risk, Grade 2

Chemical name	Carcinogen Status	Exposure Limits
Sodium borate		Mexico: TWA 1 mg/m³
Acetic acid		Mexico: TWA 10 ppm Mexico: TWA 25 mg/m³ Mexico: STEL 15 ppm Mexico: STEL 37 mg/m³

16. OTHER INFORMATION

NFPA	**Health Hazard** 1	**Flammability** 1	**Instability** 0
HMIS	**Health Hazard** 1	**Flammability** 1	**Physical Hazard** 0

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet