

# SAFETY DATA SHEET

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**Version** 1

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

**Product name:** READYMATIC Fixer and Replenisher

**Product code:** 8712879

**Supplier** Carestream Health, Inc., 150 Verona Street, Rochester, New York 14608

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

For other information contact: 800-328-2910

**Product Use:** Restricted to professional users. Photographic chemical.

## 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 2
Serious eye damage/eye Irritation	Category 2B

**Label elements**

	<b>Emergency Overview</b>
<b>Signal word</b>	<b>Warning</b>
<b>hazard statements</b>	
Causes skin irritation	
Causes eye irritation	



**Appearance** aqueous solution

**Physical state** liquid

**Odor** Ammonia

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary Statement - Response**

IF exposed or concerned: Get medical advice/attention.

**Eyes**

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.

**Skin**

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

**Hazards not otherwise classified (HNOC)**

- Not applicable

**Other Information**

No information available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
Water 7732-18-5	7732-18-5	80-90	*
Ammonium thiosulfate 7783-18-8	7783-18-8	10-15	*
Acetic acid 64-19-7	64-19-7	1-5	*
Ammonium sulfite 10196-04-0	10196-04-0	0.1-1	*
Sodium sulfite 7757-83-7	7757-83-7	0.1-1	*
Sodium borate 1330-43-4	1330-43-4	0.1-1	*

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

### 4. FIRST AID MEASURES

**First Aid Measures**

<b>General advice</b>	If symptoms persist, call a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Get medical attention immediately if symptoms occur.
<b>Inhalation</b>	Move to fresh air. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

**Most important symptoms and effects, both acute and delayed**

**Main Symptoms** Irritation.

**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<sub>2</sub>). 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 (NO<sub>x</sub>), 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.

### Environmental precautions

#### **Environmental precautions**

Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. Try to prevent the material from entering drains or water courses.

### Methods and material for containment and cleaning up

#### **Methods for Containment**

Prevent further leakage or spillage if safe to do so.

#### **Methods for cleaning up**

Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

## 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.

### Conditions for safe storage, including any incompatibilities

#### **Technical measures/Storage conditions**

Keep container tightly closed in a dry and well-ventilated place.

#### **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
Acetic acid 64-19-7	STEL 15 ppm TWA: 10 ppm		TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>	
Sodium borate 1330-43-4	STEL 6 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>		-	

**Appropriate engineering controls**

**Engineering Measures** Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles.

**Skin and body protection** Wear protective gloves/clothing. 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.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state</b>	liquid	<b>Odor</b>	Ammonia
<b>Appearance</b>	aqueous solution	<b>Odor Threshold</b>	No information available
<b>Color</b>	light yellow		
<b>Property</b>	<b>Values</b>	<b>Remarks/ • Method</b>	
<b>ph</b>	4.4	No information available	
<b>Melting point/range:</b>		No information available	
<b>Boiling point/boiling range</b>	> 100 °C	No information available	
<b>Flash Point</b>	> 93.600 °C	No information available.	
<b>Evaporation rate</b>		No information available	
<b>Flammability (solid, gas)</b>			
<b>upper flammability limit</b>			
<b>lower flammability limit</b>			
<b>Vapor pressure</b>	24 mbar @ 20 °C	No information available	
<b>Vapor density</b>	0.6	No information available	
<b>Specific Gravity</b>		No information available	
<b>Water Solubility</b>	completely soluble	No information available	
<b>Solubility in other solvents</b>		No information available	
<b>Partition coefficient: n-octanol/water</b>		No information available	
<b>Autoignition temperature</b>		No information available	
<b>Decomposition temperature</b>		No information available	
<b>Viscosity, kinematic</b>		No information available	
<b>Viscosity, dynamic</b>		No information available	
<b>Explosive properties</b>	No information available		

**Oxidizing Properties** No information available

**Other information**

**Softening point** No information available

**Density VALUE** No information available

**Bulk Density VALUE** No information available

## 10. STABILITY AND REACTIVITY

**Reactivity**

None under normal use conditions.

**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**

<b>Inhalation</b>	Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea. May cause irritation of respiratory tract. May be harmful by inhalation.
<b>Eye contact</b>	May cause eye irritation.
<b>Skin contact</b>	May cause irritation.
<b>Ingestion</b>	May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

**Toxicology data for the components**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	90,000 mg/kg ( Rat )	-	-
Ammonium thiosulfate 7783-18-8	> 2000 mg/kg ( Rat )	-	-
Acetic acid 64-19-7	3310 mg/kg ( Rat )	1060 mg/kg ( Rabbit )	11.4 mg/L ( Rat ) 4 h Inhalation LC50 Rat 11.4 mg/L 4 h (Source: NLM_CIP)
Ammonium sulfite 10196-04-0	2500 mg/kg (Rat)	-	-

Sodium sulfite 7757-83-7	820 mg/kg ( Rat ) Oral LD50 Rat 820 mg/kg (Source: IUCLID)	-	22 mg/L ( Rat ) 1 h Inhalation LC50 Rat >22 mg/L 1 h (Source: IUCLID)
Sodium borate 1330-43-4	2660 mg/kg ( Rat ) Oral LD50 Rat 2660 mg/kg (Source: IUCLID)	2000 mg/kg ( Rabbit ) Dermal LD50 Rabbit >2000 mg/kg (Source: IUCLID)	-

Chemical Name	Other applicable information
Acetic acid	Severe eye irritation Severe skin irritation Acute overexposure to extremely high airborne concentrations of respiratory irritants has been associated with development of an asthma-like reactive airways syndrome (RADS) in susceptible individuals. Extremely high airborne concentrations are not generated during normal conditions of use but may occur following a spill. The potential to generate extremely high airborne concentrations in a spill situation depends upon physical factors such as the concentration of the solution, the volume of the spill, the surface area of the spill, the size of the room where the spill occurred, and the ventilation rate in the room.
Sodium sulfite	No skin irritation Mild eye irritation
Sodium borate	Based on repeated-dose ingestion studies in animals, may cause adverse reproductive and developmental effects. However, the doses administered were many times those to which humans would normally be exposed.

### Information on toxicological effects

**Symptoms** No information available.

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

**Sensitization** No information available.  
**mutagenic effects** No information available.  
**Carcinogenicity** Contains no ingredient 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** No information available  
**STOT - repeated exposure** No information available  
**Chronic toxicity** Prolonged exposure may cause chronic effects.  
**Target Organ Effects** Eyes, Skin, Respiratory system, Teeth.  
**Aspiration Hazard** No information available.

### Numerical measures of toxicity - Product Information

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

**ATEmix (oral)** 16260 mg/kg (ATE)  
**ATEmix (dermal)** 49717 mg/kg (ATE)  
**ATEmix (inhalation-dust/mist)** 534 mg/L (ATE)

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates

Acetic acid 64-19-7		75: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Pimephales promelas mg/L LC50 static	65: 48 h Daphnia magna mg/L EC50 Static
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**

Expected to be readily biodegradable.

**Bioaccumulation:**

No information available.

Chemical Name	log Pow
Acetic acid 64-19-7	-0.31
Sodium sulfite 7757-83-7	-4

**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.

Chemical Name	California Hazardous Waste Status
Acetic acid 64-19-7	Toxic Corrosive Ignitable

**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**ICAO/IATA** Not regulated**IMDG/IMO** Not regulatedFor transportation information, go to: <http://ship.carestreamhealth.com>.**15. REGULATORY INFORMATION**

**International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies
<b>NZIoC</b>	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 sulfite - 10196-04-0	1.0

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	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
Acetic acid	5000 lb			X
Ammonium sulfite	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
Acetic acid	5000 lb		
Ammonium sulfite	5000 lb		

**TSCA**

This product does not contain any chemicals regulated under TSCA Section 4, Section 5(a), Section 8(a) or Section 8(d).

**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		
Acetic acid	X	X	X		X
Ammonium sulfite	X	X	X		
Sodium borate	X		X		

**International Regulations****Mexico - Grade** Moderate risk, Grade 2

Chemical Name	Carcinogen Status	Exposure Limits
Acetic acid		Mexico: TWA 10 ppm Mexico: TWA 25 mg/m <sup>3</sup> Mexico: STEL 15 ppm Mexico: STEL 37 mg/m <sup>3</sup>
Sodium borate		Mexico: TWA 1 mg/m <sup>3</sup>

**16. OTHER INFORMATION****NFPA**

Health Hazard 3

Flammability 1

Instability 0

**HMIS**

Health Hazard 1\*

Flammability 1

Physical Hazard 0

Issuing date

2014-02-05

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2014-04-01

Revision Note

Update to OSHA GHS SDS format

**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**