

# SAFETY DATA SHEET

Issuing Date 09/12/2017

Revision Date 09/12/2017

Revision Number 1

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

**Product name:** Rapid Access Developer

**Product Code(s)** 8606899DEV

**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** Photographic chemical. Restricted to professional users.

## 2. HAZARDS IDENTIFICATION

### Classification

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 2
Corrosive to metals	Category 1

### Label elements

#### Emergency Overview

**Signal word**

**Danger**

#### Hazard statements

Causes severe skin burns and eye damage  
May cause an allergic skin reaction  
Suspected of causing genetic defects  
Suspected of causing cancer  
May be corrosive to metals



Contains Hydroquinone

**Appearance** Liquid

**Physical state** liquid

**Odor** Slight

**Precautionary Statements - Prevention**

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

#### Precautionary Statement - Response

Absorb spillage to prevent material damage. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before reuse. 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. Immediately call POISON CENTER or physician. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Rinse mouth.

#### Precautionary Statement - Storage

Store in corrosive resistant container with a resistant inliner. 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

Very toxic to aquatic life.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%	Trade Secret
Hydroquinone 123-31-9	123-31-9	5-10	*
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

##### General advice

Immediate medical attention is required. Show this material safety data sheet to the doctor in attendance.

##### Eye contact

Immediate medical attention is required. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.

##### Skin contact

Immediate medical attention is required. Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Wash contaminated clothing before reuse.

##### Inhalation

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

##### Ingestion

Immediate medical attention is required. Rinse mouth. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.

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

##### Main Symptoms

CORROSIVE. Burning. Coughing and/ or wheezing. Difficulty breathing. respiratory distress. Causes eye burns. May cause an allergic skin reaction. Irritation. Rashes. Hives.

**Indication of any immediate medical attention and special treatment needed****Notes to physician**

May cause sensitization of susceptible persons. Probable mucosal damage may contraindicate the use of gastric lavage. 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**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**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**

Evacuate personnel to safe areas. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. 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**

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear personal protective equipment. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Keep container tightly closed.

**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**

Strong acids. Oxidizing agents.

**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/m <sup>3</sup>		TWA: 2 mg/m <sup>3</sup>	
Sodium borate 1330-43-4	STEL: 6 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>		-	
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>		-	
Benzyl alcohol 100-51-6	-	TWA: 10 ppm	-	
Polyethylene glycol 25322-68-3	-	TWA: 10 mg/m <sup>3</sup>	-	

**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**

Tightly fitting safety goggles. Face-shield.

**Skin and body protection**

Impervious clothing. Impervious 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**

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  
Appearance  
Color

liquid  
Liquid  
Clear light yellow

Odor  
Odor threshold

Slight  
No information available

**Property**

**Values**  
12.2

**Remarks • Method**

pH

Melting point / freezing point

Boiling point / boiling range

Flash point

> 100 °C

No information available

Evaporation rate		No information available
Flammability (solid, gas)	no data available	No information available
Upper flammability limit:	Unknown	
Lower flammability limit:	Not flammable	
Vapor pressure	24 mbar @ 20 °C	
Vapor density	0.6	
Specific Gravity		No information available
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	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**

None under normal use conditions.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

Contact with strong acids liberates sulfur dioxide.

**Conditions to Avoid**

Heat, flames and sparks.

**Incompatible Materials**

Strong acids. Oxidizing agents.

**Hazardous decomposition products**

Carbon oxides, Sulfur oxides.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure****Product Information****Inhalation**

Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate.

**Eye contact**

Corrosive to the eyes and may cause severe damage including blindness.

<b>Skin contact</b>	Causes burns. May cause sensitization by skin contact.
<b>Ingestion</b>	Ingestion causes burns of the upper digestive and respiratory tracts. Can burn mouth, throat, and stomach.

**Toxicology data for the components**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Hydroquinone 123-31-9	375 mg/kg ( Rat ) Oral LD50 Rat 375 mg/kg (Source: ECHA)	> 4800 mg/kg (Rat)	-
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**

<b>Symptoms</b>	Causes burns. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Causes severe eye damage. Allergic skin reactions including rash, dermatitis, irritation, and itching.
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**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Corrosivity</b>	Risk of serious damage to eyes. Causes burns.
<b>Sensitization</b>	May cause sensitization by skin contact.
<b>Mutagenic effects</b>	Contains a known or suspected mutagen.
<b>Carcinogenicity</b>	Contains a known or suspected carcinogen.

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

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

<b>Reproductive toxicity</b>	Contains ingredients that are suspected reproductive hazards. Based on available data, the classification criteria are not met.
<b>STOT - single exposure</b>	The substance or mixture is not classified as specific target organ toxicant, single exposure
<b>STOT - repeated exposure</b>	The substance or mixture is not classified as specific target organ toxicant, repeat exposure
<b>Chronic toxicity</b>	Effects expected to be similar to those seen acutely.
<b>Target Organ Effects</b>	Skin, Eyes, Respiratory system, Gastrointestinal tract (GI).
<b>Aspiration Hazard</b>	No information available.

**Numerical measures of toxicity - Product Information****Unknown acute toxicity**

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

ATEmix (oral)	7283 mg/kg
ATEmix (dermal)	20368 mg/kg ppm mg/L

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Very toxic to aquatic life

0.12% of the mixture consists of component(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
Hydroquinone	0.335: 72 h	0.1 - 0.18: 96 h Pimephales		0.29: 48 h Daphnia magna

123-31-9	Pseudokirchneriella subcapitata mg/L EC50 13.5: 120 h Desmodesmus subspicatus mg/L EC50	promelas mg/L LC50 static 0.044: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.044: 96 h Pimephales promelas mg/L LC50 flow-through 0.17: 96 h Brachydanio rerio mg/L LC50		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 data is available on the product itself. Expected to be readily biodegradable.

**Bioaccumulation:**

No information available.

Chemical name	log Pow
Hydroquinone 123-31-9	0.5

**Other adverse effects**

No information available

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods****Waste Disposal Methods**

Should not be released into the environment. Dispose of in accordance with local regulations.

**Contaminated packaging**

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

### 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**

UN Number	UN3266
Proper Shipping Name	Corrosive liquid, basic, inorganic, n.o.s.
Technical Name	POTASSIUM HYDROXIDE
Hazard class	8
Packing Group	III
Special Provisions	IB3, T7, TP1, TP28
Emergency Response Guide Number	154
Description	UN3266, Corrosive liquid, basic, inorganic, n.o.s (POTASSIUM HYDROXIDE), 8, III , Limited Quantity

**TDG**

UN Number	UN3266
Proper Shipping Name	Corrosive liquid, basic, inorganic, n.o.s.
Technical Name	POTASSIUM HYDROXIDE
Hazard class	8
Packing Group	III



<b>Description</b>	UN3266, Corrosive liquid, basic, inorganic, n.o.s (POTASSIUM HYDROXIDE), 8, III, Limited Quantity
<b>IATA</b>	
UN Number	UN3266
Proper Shipping Name	Corrosive liquid, basic, inorganic, n.o.s.
Technical Name	POTASSIUM HYDROXIDE
Hazard class	8
Packing Group	III
ERG Code	8L
Special Provisions	A3, A803
Description	UN3266, Corrosive liquid, basic, inorganic, n.o.s (POTASSIUM HYDROXIDE), 8, III, Limited Quantity

<b>IMDG</b>	
UN Number	UN3266
Proper Shipping Name	Corrosive liquid, basic, inorganic, n.o.s.
Technical Name	POTASSIUM HYDROXIDE
Hazard class	8
Packing Group	III
EmS-No.	F-A, S-B
Special Provisions	223, 274
Description	UN3266, Corrosive liquid, basic, inorganic, n.o.s (POTASSIUM HYDROXIDE), 8, III, Marine Pollutant, Limited Quantity

This product meets the requirements of the limited quantity exemption. The shipping case will be marked as a limited quantity. It does not require other labeling or placarding except if transported by aircraft.

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

## 15. REGULATORY INFORMATION

### International Inventories

TSCA	Complies
DSL/NDL	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/NDL - 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 %
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Hydroquinone - 123-31-9	1.0
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**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**

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium hydroxide	1000 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
Hydroquinone - 123-31-9		Group I		
Benzyl alcohol - 100-51-6		Group III		

**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	
Potassium hydroxide	1000 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 ( 5-10 )	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		
Potassium hydroxide	X	X	X		X
Benzyl alcohol	X		X		

**International Regulations****Mexico - Grade**

Serious risk, Grade 3

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

**16. OTHER INFORMATION**

**NFPA**  
**HMIS**

Health Hazard 3  
Health Hazard 3

Flammability 1  
Flammability 1

Instability -  
Physical Hazard 0

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Issuing Date	02/05/2014
Revision Date	09/12/2017
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 09/12/2017

Revision Date 09/12/2017

Revision Number 1.01

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

Product name: Rapid Access Fixer

Product Code(s) 8606899FIX

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

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

#### Label elements

#### Emergency Overview

Appearance Liquid

Physical state liquid

Odor Odorless

#### Hazards not otherwise classified (HNOC)

- May be harmful if swallowed

#### Other hazards which do not result in classification

No information available

### 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.

<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention immediately if irritation persists.
<b>Skin contact</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	Clean mouth with water and afterwards drink plenty of water. 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**

Cool containers / tanks with water spray. Carbon dioxide (CO<sub>2</sub>). Foam. Dry chemical.

**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** 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. 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**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills.
<b>Methods for cleaning up</b>	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

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear personal protective equipment. Wash thoroughly after handling.
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### Conditions for safe storage, including any incompatibilities

<b>Technical measures/Storage conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.
<b>Incompatible products</b>	None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

<b>Exposure Guidelines</b>	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.
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Chemical name	ACGIH TLV	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs	OSHA PEL	Advisory OEL
Sodium bisulfite 7631-90-5	TWA: 5 mg/m <sup>3</sup>		-	
Acetic acid 64-19-7	STEL 15 ppm TWA: 10 ppm		TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>	

### Appropriate engineering controls

<b>Engineering Measures</b>	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.
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### Individual protection measures, such as personal protective equipment

<b>Eye/Face Protection</b>	If splashes are likely to occur, wear: Safety glasses with top and side-shields.
<b>Skin and body protection</b>	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.
<b>Respiratory protection</b>	None required under normal usage. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
<b>Hygiene measures</b>	When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. 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	Odor	Odorless
Appearance	Liquid	Odor threshold	No information available
Color	colorless to light yellow		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	5.45	+/- 0.1 @ 25 °C	
Melting point / freezing point		No information available	
Boiling point / boiling range	>= 100 °C	No information available	
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		No information available	
Vapor density		No information available	
Specific Gravity	1.18	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		
<u>Other information</u>			
Softening point		No information available	
Molecular weight			
Liquid Density		No information available	
Bulk density		No information available	

## 10. STABILITY AND REACTIVITY

### Reactivity

Not applicable. @ 20 °C

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

None under normal processing. Contact with a strong oxidizer or acid may liberate hydrogen cyanide gas. 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

Excessive heat. Do not freeze. Extreme pH's.

### Incompatible Materials

None known based on information supplied.

### Hazardous decomposition products

Ammonia. Sulfur oxides. Chloramine. Nitrogen oxides (NOx). Hydrogen cyanide.

**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	May cause slight irritation.
Skin contact	Expected to be a low hazard for recommended handling. May cause skin irritation and/or dermatitis.
Ingestion	May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Toxicology data for the components**Information on toxicological effects

Symptoms No information available.

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

Sensitization	Repeated or prolonged contact may cause allergic reactions in very susceptible persons.
Mutagenic effects	No information available.
Carcinogenicity	Contains no ingredients above reportable quantities listed as a carcinogen.
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

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

ATEmix (oral)	2869 mg/kg
ATEmix (dermal)	5789 mg/kg
ATEmix (inhalation-dust/mist)	7.9 mg/L

**12. ECOLOGICAL INFORMATION**Ecotoxicity

None known

Persistence and degradability

No data is available on the product itself. Expected to be readily biodegradable.

Bioaccumulation:

No information available.

**13. DISPOSAL CONSIDERATIONS**



**Waste treatment methods**

<b>Waste Disposal Methods</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Do not re-use empty containers. Dispose of in accordance with local regulations.

**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.

<b>DOT</b>	Not regulated
<b>TDG</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG</b>	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**

<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 thiocyanate - 1762-95-4	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 thiocyanate	5000 lb			X
Sodium bisulfite	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 thiocyanate	5000 lb		
Sodium bisulfite	5000 lb		
Acetic acid	5000 lb		

**TSCA**

This material contains a chemical which is 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		
Ammonium thiocyanate	X	X	X		X
Sodium bisulfite	X	X	X		X
Acetic acid	X	X	X		X

**International Regulations****Mexico - Grade**

No information available

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>

**16. OTHER INFORMATION**

<u>NFPA</u>	Health Hazard 1	Flammability 0	Instability 0
<u>HMIS</u>	Health Hazard 1	Flammability 0	Physical Hazard 0

Revision Date 09/12/2017  
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

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

DENTAL HEALTH PRODUCTS INC COUNTY P NORTH  
2614 N SUGARBUSH RD PO BOX 176  
NEW FRANKEN, WI 54229  
USA

0000139786

01/20/2018

Dear Customer,

### **CARESTREAM HEALTH SAFETY DATA SHEETS**

Please find enclosed the Safety Data sheets (SDS's) listed overleaf for Carestream Health chemical products you have purchased.

The SDS's are provided to assist you in managing your health, safety and environmental responsibilities. In the event of a significant change, revised sheets will be sent to you.

Should you require further health, safety and environmental advice, please contact us. For more information go to <http://www.carestream.com/sds>.

Thank you for purchasing CARESTREAM HEALTH products.