

SAFETY DATA SHEET

Issuing date 2014-04-03

Revision Date 2014-04-03

Version 1

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

Product name: GBX Fixer and Replenisher

Product code: 1901875

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

Serious eye damage/eye Irritation	Category 2A
-----------------------------------	-------------

Label elements

	Emergency Overview
Signal word	Warning
hazard statements Causes serious eye irritation	



Appearance Colorless Liquid

Physical state liquid

Odor Ammonia

Precautionary Statements - Prevention

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

Precautionary Statement - Response

IF exposed or concerned.

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.

Hazards not otherwise classified (HNOC)

•

Other Information

May be harmful if swallowed.

4.15% 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	40-50	*
Ammonium thiosulfate 7783-18-8	7783-18-8	30-40	*
Sodium bisulfite 7631-90-5	7631-90-5	1-5	*
Ammonium bisulfite 10192-30-0	10192-30-0	1-5	*
Potassium acetate 127-08-2	127-08-2	1-5	*
Ammonium acetate 631-61-8	631-61-8	1-5	*
Sodium borate 1330-43-4	1330-43-4	1-2	*
Aluminum sulfate 10043-01-3	10043-01-3	1-5	*

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

4. FIRST AID MEASURES**First Aid Measures****General advice**

If symptoms persist, call a physician.

Eye contact

In case of contact, immediately flush eyes with plenty of water. Get medical attention immediately if symptoms occur.

Skin contact

Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Get medical attention immediately if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Inhalation

Move to fresh air. Get medical attention immediately if symptoms occur.

Ingestion

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

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

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

Unsuitable Extinguishing Media

None.

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_x), 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

Avoid contact with eyes. For personal protection see section 8. Ensure adequate ventilation.

Environmental precautions

Environmental precautions

Do not allow material to contaminate ground water system. Try to prevent the material from entering drains or water courses. 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.

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).

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. Contact with strong acids liberates sulfur dioxide.

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

Appropriate engineering controls

Engineering Measures Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection	Safety glasses with side-shields.
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	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid	Odor	Ammonia
Appearance	Colorless Liquid	Odor Threshold	No information available
Color	colorless		
Property	Values	Remarks/ • Method	
ph	4.9	No information available	
Melting point/range:		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)			
upper flammability limit			
lower flammability limit			
Vapor pressure	24 mbar @ 20 °C	No information available	
Vapor density	0.6	No information available	
Specific Gravity		No information available	
Water Solubility	completely soluble	No information available	
Solubility in other solvents		No information available	
Partition coefficient: n-octanol/water		No information available	
Autoignition temperature		No information available	
Decomposition temperature		No information available	

Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	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

Contact with strong acids liberates sulfur dioxide. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with bases liberates flammable material and ammonia.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Do not freeze.

Incompatible Materials

Acids. Strong bases. Oxidizing agents. Halogenated compounds. Contact with strong acids liberates sulfur dioxide.

Hazardous Decomposition Products

Ammonia. Chloramine. Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

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

Inhalation	Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea. Contact with strong acids liberates sulfur dioxide. May cause irritation of respiratory tract.
Eye contact	Expected to be an irritant based on components.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Ingestion	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
Ammonium thiosulfate 7783-18-8	> 2000 mg/kg (Rat)	-	-
Sodium bisulfite 7631-90-5	1420 mg/kg (Rat)	-	-

Potassium acetate 127-08-2	3250 mg/kg (Rat) Oral LD50 Rat 3250 mg/kg (Source: NLM_CIP)	-	-
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)	-
Aluminum sulfate 10043-01-3	> 5000 mg/kg (Rat)	-	-

Chemical Name	Other applicable information
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.
Aluminum sulfate	Severe eye irritation No skin irritation Cell transformation assay: negative Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea
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.

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.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 4.15% 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) 4427 mg/kg
ATEmix (dermal) 59,282.35

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Sodium bisulfite 7631-90-5				119: 48 h Daphnia magna mg/L EC50
Potassium acetate 127-08-2		6800: 96 h Oncorhynchus mykiss mg/L LC50 semi-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
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

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.

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

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 bisulfite - 10192-30-0	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
Sodium bisulfite	5000 lb			X
Ammonium bisulfite	5000 lb			X
Ammonium acetate	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
Sodium bisulfite	5000 lb		
Ammonium bisulfite	5000 lb		
Ammonium acetate	5000 lb		
Aluminum sulfate	5000 lb		

TSCA

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping	
Sodium bisulfite	PAIR: 01/26/1994	
Component	U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances	
Sodium bisulfite 7631-90-5 (1-5)	01/26/1994	

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		
Sodium bisulfite	X	X	X		X
Ammonium bisulfite	X	X	X		
Ammonium acetate	X	X	X		
Sodium borate	X		X		
Aluminum sulfate	X	X	X		

International Regulations**Mexico - Grade**

Moderate risk, Grade 2

Chemical Name	Carcinogen Status	Exposure Limits
Sodium borate		Mexico: TWA 1 mg/m ³
Aluminum sulfate		Mexico: TWA 2 mg/m ³

16. OTHER INFORMATION**NFPA**

Health Hazard 2

Flammability 1

Instability 0

HMIS

Health Hazard 2

Flammability 1

Physical Hazard 0

Issuing date

2014-02-06

Revision Date

2014-04-03

Revision Note

Name change, 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