

# SAFETY DATA SHEET

Revision Date 10/29/2018

Revision Number 2.07

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

**Product name:** GBX Developer and Replenisher

**Product Code(s)** 5158597

**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

**Synonyms** PCD 4861

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

## 2. HAZARDS IDENTIFICATION

### Classification

Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

### Label elements

#### Emergency Overview

**Signal word**

**Danger**

#### Hazard statements

Causes serious eye damage  
May cause an allergic skin reaction  
Suspected of causing genetic defects  
Suspected of causing cancer  
May cause damage to organs through prolonged or repeated exposure



**Appearance** Liquid light yellow

**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. Do not breath

mist/vapours/spray. Use personal protective equipment as required. Contaminated work clothing should not be allowed out of the workplace.

#### 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 for at least 15 minutes. Immediately call a POISON CENTER or doctor/physician.

#### Skin

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

#### Precautionary Statement - Storage

Store locked up.

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

#### Hazards not otherwise classified (HNOC)

- May be harmful if swallowed
- Very toxic to aquatic life

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

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Synonyms

PCD 4861.

Chemical name	CAS No.	Weight-%	Trade Secret
Water 7732-18-5	7732-18-5	60-70	*
Potassium sulfite 10117-38-1	10117-38-1	5-10	*
Diethylene glycol 111-46-6	111-46-6	5-10	*
Sodium sulfite 7757-83-7	7757-83-7	5-10	*
Hydroquinone 123-31-9	123-31-9	5-8	*
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

Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.

##### Eye contact

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

##### 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. May cause an allergic skin reaction.

##### Inhalation

Administer oxygen if breathing is difficult. Move victim to fresh air. Apply artificial respiration if victim is not breathing.

<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention.
<b>Protection of First-aiders</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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

**Main Symptoms** 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** Treat symptomatically. May cause sensitization of susceptible persons.

## **5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**

Dry chemical, CO<sub>2</sub>, water spray or regular foam. Water spray, fog or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal.

**Unsuitable Extinguishing Media**

Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical**

Some may burn but none ignite readily. Those substances designated with a "P" may polymerize explosively when heated or involved in a fire. Some may be transported hot.

**Hazardous combustion products**

Carbon oxides. 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** Do not touch or walk through spilled material. Stop leak if you can do it without risk. Avoid inhalation of asbestos dust.

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

**Environmental precautions**

**Environmental precautions** 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**

None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****Exposure Guidelines**

Chemical name	ACGIH TLV	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs	OSHA PEL	Advisory OEL
Diethylene glycol 111-46-6	-	TWA: 10 mg/m <sup>3</sup>	-	
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>		-	

**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**

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**

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL AND CHEMICAL PROPERTIES****Physical state  
Appearance  
Color**

Liquid  
Liquid light yellow  
light yellow

**Odor  
Odor threshold**

Odorless  
No information available

**Property****Values****Remarks • Method****pH**

10.2

No information available

**Melting point / freezing point****Boiling point / boiling range**

> 100 °C / 212 °F

Flash point	> 94 °C	/	> 201 °F	.
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	1.230			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			
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**

Contact with strong acids liberates sulfur dioxide.

**Conditions to Avoid**

None known.

**Incompatible Materials**

None known based on information supplied.

**Hazardous decomposition products**

Carbon oxides, Sulfur oxides.

## 11. TOXICOLOGICAL INFORMATION

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

Inhalation	May cause irritation of respiratory tract. Contact with strong acids liberates sulfur dioxide. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.
Eye contact	Causes serious eye damage.

**Skin contact**

May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

**Ingestion**

May be harmful if swallowed. May cause adverse kidney effects. May cause central nervous system effects. 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 )	-	-
Potassium sulfite 10117-38-1	>3200 mg/kg (rat)	-	-
Diethylene glycol 111-46-6	12565 mg/kg ( Rat )	11890 mg/kg ( Rabbit )	4600 mg/m <sup>3</sup> ( Rat ) 4 h Inhalation LC50 Rat >4600 mg/m <sup>3</sup> 4 h (aerosol, Source: NICNAS)
Sodium sulfite 7757-83-7	5680 mg/kg ( Rat ) Oral LD50 Rat 5680 mg/kg (Source: OECD SIDS)	-	22 mg/L ( Rat ) 1 h Inhalation LC50 Rat >22 mg/L 1 h (Source: IUCLID)
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)	2 mg/m <sup>3</sup> ( Rat ) 4 h Inhalation LC50 Rat >2 mg/m <sup>3</sup> 4 h (Source: HSDB)

**Component Information****Information on toxicological effects****Symptoms**

Causes severe eye damage. Allergic skin reactions including rash, dermatitis, irritation, and itching.

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

Risk of serious damage to eyes.

**Sensitization**

This mixture contains hydroquinone which is classified as a dermal sensitizer in some jurisdictions. A very similar mixture was negative in dermal sensitization studies with and without prior sensitization to hydroquinone. Based on the results of these studies, this mixture is not expected to present a dermal sensitization hazard to humans. May cause sensitization by skin contact.

**Mutagenic effects**

Contains a known or suspected mutagen.

**Carcinogenicity**

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

**Reproductive toxicity**

Contains ingredients that are suspected reproductive hazards. However, based on available data the product should not be classified for reproductive effects.

**STOT - single exposure**

May cause damage to organs, See target organs listed below

**STOT - repeated exposure**

May cause damage to organs through prolonged or repeated exposure, See listed target organs below

**Chronic toxicity**

Effects expected to be similar to those seen acutely. Avoid repeated exposure. Possible risks of irreversible effects.

**Target Organ Effects**

Central nervous system, Respiratory system, Kidney, Liver, Eyes, Skin.

**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)	2345 mg/kg
ATEmix (dermal)	12505 mg/kg
ATEmix (inhalation-dust/mist)	32.8 mg/L

Oral LD50

Similar formulation: > 2000 mg/kg (rat)

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Very toxic to aquatic life.

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		
Diethylene glycol 111-46-6		75200: 96 h Pimephales promelas mg/L LC50 flow-through		84000: 48 h Daphnia magna mg/L EC50
Sodium sulfite 7757-83-7		220 - 460: 96 h Leuciscus idus mg/L LC50 static		330: 24 h Psammechinus miliaris mg/L LC50
Hydroquinone 123-31-9	0.335: 72 h Pseudokirchneriella subcapitata mg/L EC50 13.5: 120 h Desmodesmus subspicatus mg/L EC50	0.044: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.044: 96 h Pimephales promelas mg/L LC50 flow-through 0.1 - 0.18: 96 h Pimephales promelas mg/L LC50 static 0.17: 96 h Brachydanio rerio mg/L LC50		0.29: 48 h Daphnia magna mg/L EC50
Sodium borate 1330-43-4	158: 96 h Desmodesmus subspicatus mg/L EC50 2.6 - 21.8: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	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:

### Mobility in soil

Chemical name	log Pow
Diethylene glycol 111-46-6	-1.98
Sodium sulfite 7757-83-7	-4
Hydroquinone 123-31-9	0.5

## 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.

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

Environmentally hazardous substances (UN3082 and UN3077) shipped in net quantities of 5 L (or 5 kg) or less are deemed "Not Restricted" (not regulated) for DGR.

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

"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.

##### 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
Diethylene glycol - 111-46-6		Group I		
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 ( 5-8 )	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
Diethylene glycol			X		X
Hydroquinone	X	X	X	X	X
Sodium borate	X		X		

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

Serious risk, Grade 3

Chemical name	Carcinogen Status	Exposure Limits
Sodium borate		Mexico: TWA 1 mg/m³

**16. OTHER INFORMATION**

**NFPA**  
**HMIS**

Health Hazard 3  
Health Hazard 3\*

Flammability 1  
Flammability 1

Instability 0  
Physical Hazard 0

Revision Date

10/29/2018

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

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materials or in any process, unless specified in the text.

**End of Safety Data Sheet**