

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product name: GBX Developer and Replenisher

Other means of identification

Product code: 8969735
UN/ID No UN3082
Synonyms PCD 4861

Recommended use of the chemical and restrictions on use

Product Use: Photographic chemical. Restricted to professional users.
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier:

CARESTREAM DO BRASIL COMÉRCIO E SERVIÇOS DE PRODUTOS MÉDICOS LTDA
 Rua Dr. Pedro Luiz de Oliveira Costa, 60 - Limoeiro
 São José dos Campos - SP - Brasil
 CEP: 12241-420

Emergency telephone number

CHEMTREC: CHEMTREC Brazil: +(55)-2139581449

Section 2: HAZARDS IDENTIFICATION

Most Important Hazards

Acute toxicity - Oral	Category 5
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 2
Acute aquatic toxicity	Category 1

Label elements



Signal word

Danger

hazard statements

H303 - May be harmful if swallowed
 H317 - May cause an allergic skin reaction
 H318 - Causes serious eye damage
 H341 - Suspected of causing genetic defects
 H351 - Suspected of causing cancer
 H400 - Very toxic to aquatic life

Precautionary Statements

- P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P272 - Contaminated work clothing should not be allowed out of the workplace
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P312 - Call a POISON CENTER or doctor if you feel unwell
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant

Other Information

Other hazards May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
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
Hydroquinone 123-31-9	123-31-9	5-10
Sodium sulfite 7757-83-7	7757-83-7	5-10
Potassium carbonate 584-08-7	584-08-7	1-5
Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt 140-01-2	140-01-2	1-5
Sodium borate 1330-43-4	1330-43-4	0.1-1

Section 4: FIRST AID MEASURES

First Aid Measures

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

Skin contact

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.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.

Ingestion If swallowed, call a poison control center or doctor immediately. Do not induce vomiting without medical advice. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person.

Protection of First-aiders 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 May cause an allergic skin reaction. Irritation. Rashes. Coughing and/ or wheezing. Central nervous system depression.

Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, CO₂, water spray or regular foam.

Unsuitable Extinguishing Media Do not scatter spilled material with high pressure water streams.

Specific extinguishing methods

Evacuate area and fight fire from a safe distance.

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

Specific hazards arising from the chemical

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

Hazardous Combustion Products Carbon oxides. Sulfur oxides.

Explosive properties

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid contact with the skin and the eyes. For personal protection see section 8.

Environmental precautions

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

Section 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.

Hygiene measures When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs. Remove and wash contaminated clothing before re-use.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep container tightly closed in a dry and well-ventilated place. Incompatible with oxidizing agents.

Incompatible products Strong oxidizing agents. Acids.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	Brazil	Chile	Argentina	Venezuela
Hydroquinone		TWA: 1.6 mg/m ³	TWA: 2 mg/m ³	TWA: 2 mg/m ³
Sodium borate			TWA: 1 mg/m ³	TWA: 1 mg/m ³

Appropriate engineering controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.

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 suitable protective clothing.

Hand Protection Impervious gloves.

Respiratory protection None under normal use conditions. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. Wear a positive-pressure supplied-air respirator with full facepiece.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid	Odor	Odorless
Appearance	Liquid, light yellow	Odor Threshold	No information available
Color	light yellow		
Property	Values	Remarks/ • Method	
ph	10.2	No information available	
Melting point/range:		No information available	
Boiling point/boiling range	> 100 °C	No information available	
Flash Point	> 93.3 °C > 201.200 °F	No information available	
Evaporation rate		No information available	
Flammability (solid, gas)		No information available	
Flammability Limits in Air			
upper flammability limit			
lower flammability limit			

Vapor pressure	24	No information available
Vapor density	0.6	No information available
Specific Gravity		No information available
Water Solubility VALUE	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	
Softening point	No information available	
VOC Content	No information available	
Density VALUE	No information available	
Bulk Density VALUE	No information available	

Section 10: STABILITY AND REACTIVITY

Reactivity

None under normal use conditions.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

Contact with strong acids liberates sulfur dioxide.

Conditions to Avoid

Heat, flames and sparks.

Incompatible Materials

Strong oxidizing agents. Acids.

Hazardous Decomposition Products

Carbon oxides, Sulfur oxides.

Section 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	No hazard from product as supplied. 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	Irritating to eyes.
Skin contact	May cause skin irritation and/or dermatitis. Prolonged or repeated contact may dry skin and cause irritation. 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. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Diethylene glycol	12565 mg/kg (Rat)	11890 mg/kg (Rabbit)	-

Hydroquinone	320 mg/kg (Rat) Oral LD50 Rat 320 mg/kg (Source: IUCLID)	> 4800 mg/kg (Rat)	-
Sodium sulfite	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)
Potassium carbonate	1870 mg/kg (Rat) Oral LD50 Rat 1870 mg/kg (Source: IUCLID)	>2000 mg/kg (Rabbit)	-
Sodium borate	2660 mg/kg (Rat) Oral LD50 Rat 2660 mg/kg (Source: IUCLID)	2000 mg/kg (Rabbit) Dermal LD50 Rabbit >2000 mg/kg (Source: IUCLID)	-

Information on toxicological effects

Symptoms Allergic skin reactions including rash, dermatitis, irritation, and itching.

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

Irritation Severe eye irritant.
Corrosivity No information available.
Sensitization May cause sensitization by skin contact.
mutagenic effects No specific testing was done on this product. Mutagenic testing of the hazardous ingredient in this product has resulted in some positive mutagenic results.
Carcinogenicity Contains a known or suspected carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydroquinone	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.
Developmental Toxicity No information available.
Chronic toxicity Effects expected to be similar to those seen acutely.
Target Organ Effects Skin, Eyes, Respiratory system, Central nervous system, Kidney, Liver.
Neurological effects No information available.

Numerical measures of toxicity - Product Information

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

9.7% of the mixture consists of ingredient(s) of unknown toxicity

Oral LD50 2079 mg/kg (ATE)
Dermal LD50 30560 mg/kg (ATE)
Inhalation
Mist 59.9 mg/l (ATE)

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Diethylene glycol		75200: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through	84000: 48 h <i>Daphnia magna</i> mg/L EC50

Hydroquinone	0.335: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50	0.1 - 0.18: 96 h <i>Pimephales promelas</i> mg/L LC50 static 0.044: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 0.044: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 0.17: 96 h <i>Brachydanio rerio</i> mg/L LC50	0.29: 48 h <i>Daphnia magna</i> mg/L EC50
Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt	2.6: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	1005 - 1250: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 300: 96 h <i>Pimephales promelas</i> mg/L LC50 static	500: 48 h <i>Daphnia magna</i> mg/L EC50
Sodium borate	2.6 - 21.8: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static 158: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50	340: 96 h <i>Limanda limanda</i> mg/L LC50	1085 - 1402: 48 h <i>Daphnia magna</i> mg/L LC50

Persistence and degradability

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

Bioaccumulation:

No information available.

Mobility

No information available.

Chemical Name	log Pow
Diethylene glycol	-1.98
Hydroquinone	0.5
Sodium sulfite	-4
Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt	-3.05

Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from Residues / Unused Products

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

Contaminated packaging

Dispose of in accordance with local regulations.

Section 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.

IMDG/IMO

Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Hazard class	9
UN/ID No	UN3082
Packing Group	III
EmS No.	F-A, S-F
Special Provisions	179, 274, 335, 909
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s (Hydroquinone), 9, PG III, Marine Pollutant, Limited Quantity

ICAO

UN/ID No UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Hazard class 9
Packing Group III
Special Provisions A97, A158
Description UN3082, Environmentally hazardous substance, liquid, n.o.s, 9, PG III

ICAO/IATA

UN/ID No UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Hazard class 9
Packing Group III
Special Provisions A97, A158
Description UN3082, Environmentally hazardous substance, liquid, n.o.s (Hydroquinone), 9, PG III

DOT

Proper Shipping Name Environmentally hazardous substances, liquid, n.o.s.
Hazard class 9
UN/ID No UN3082
Packing Group III
Special Provisions 8, 146, 335, IB3, T4, TP1, TP29
Description UN3082 Environmentally hazardous substance, liquid, n.o.s (Hydroquinone), 9, PG III, Marine Pollutant, Limited Quantity

TDG

Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Hazard class 9
UN/ID No UN3082
Packing Group III
Description UN3082, Environmentally hazardous substance, liquid, n.o.s (Hydroquinone), 9, PG III, Marine Pollutant, Limited Quantity

MEX

Proper Shipping Name Environmentally hazardous substances, liquid, n.o.s.
Hazard class 9
UN/ID No UN3082
Packing Group III
Description UN3082, Environmentally hazardous substance, liquid, n.o.s, 9, PG III, Limited Quantity

RID

Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Hazard class 9
UN/ID No UN3082
Packing Group III
Classification Code M6
Description UN3082, Environmentally hazardous substance, liquid, n.o.s (Hydroquinone), 9, PG III, Limited Quantity

ADR/RID

Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Hazard class 9
UN/ID No UN3082
Packing Group III
Classification Code M6

Special Provisions	274, 335, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s (Hydroquinone), 9, PG III, (E), Limited Quantity
ADR/RID-Labels	9

ADN

Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Hazard class	9
UN/ID No	UN3082
Packing Group	III
Classification Code	M6
Special Provisions	274, 335, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s (Hydroquinone), 9, PG III, Limited Quantity
Limited quantity DFDA	LQ7

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.carestreamhealth.com>.

Section 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:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
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

Section 16: OTHER INFORMATION

Issuing date	2014-02-05
Revision Date	2014-04-02
Revision Note	Update of SDS.

This material safety data sheet has been prepared according to Brazilian legislation and ABNT NBR 14725:2009

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