Safety Data Sheet

Issue Date: 25-Mar-2013 **Revision Date:** 18-Apr-2014 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name X-Ray Rapid Developer-Liquid

Other means of identification

SDS # BDM-016
Product Code 33800
UN/ID No UN1824

Recommended use of the chemical and restrictions on use

Recommended Use X-ray rapid developer (liquid part).

Details of the supplier of the safety data sheet

Supplier Address
Buffalo Dental Manufacturing Co. Inc.
159 Lafayette Drive
Syosset NY 11791

Emergency Telephone Number

Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)
Company Phone Number 516-496-7200
800-828-0203

2. HAZARDS IDENTIFICATION

Physical State Liquid

Classification

Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1

Signal Word
Danger

Hazard Statements
Causes severe skin burns and eye damage

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a poison center or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim 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. Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Sodium hydroxide	1310-73-2	Proprietary
Sodium Sulfite	7757-83-7	Proprietary
Potassium Bromide	7758-02-3	Proprietary

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing. Wash contaminated clothing before reuse. Call a physician.

Inhalation Remove to fresh air. Call a physician immediately.

Ingestion Drink large amounts of water. Do not induce vomiting. Seek medical attention.

Most important symptoms and effects

Symptoms Contact will cause irritation and redness to exposed areas.

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 Water.

Specific Hazards Arising from the Chemical
Not applicable-water solution.

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	Use personal protective equipment as required.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Contain and collect with an inert absorbent and place into an appropriate container for disposal. Dilute remaining residue with water and neutralize with dilute acetic acid (vinegar).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling	Wash thoroughly after handling. Use personal protection recommended in Section 8. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep locked up and out of reach of children.
Incompatible Materials	Acids. Oxidizers. Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m^3	TWA: 2 mg/m^3 (vacated) Ceiling: 2 mg/m^3	IDLH: 10 mg/m^3 Ceiling: 2 mg/m^3

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side shields, goggles and/or a face shield.

Skin and Body Protection Wear suitable gloves. Wear long sleeved lab coat.

Respiratory Protection Use a NIOSH approved respirator where adequate ventilation cannot be provided for toxic dusts.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Not determined	**Odor**	Not determined
Color	Not determined	**Odor Threshold**	Not determined

Property	Values	Remarks • Method
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	Not determined	
Flash Point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	Not determined	
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children.

Incompatible Materials
Acids. Oxidizers. Metals.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes severe eye damage.

Skin Contact Causes severe skin burns.

Inhalation Avoid breathing vapors or mists.

Ingestion Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium hydroxide 1310-73-2	-	= 1350 mg/kg (Rabbit)	-
Sodium Sulfite 7757-83-7	= 820 mg/kg (Rat)	-	> 5.5 mg/L (Rat) 4 h > 22 mg/L (Rat) 1 h
Potassium Bromide 7758-02-3	= 3070 mg/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

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

Carcinogenicity Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium Sulfite 7757-83-7		Group 3		

Legend
IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium hydroxide 1310-73-2		45.4: 96 h Oncorhynchus mykiss mg/L LC50 static		
Sodium Sulfite 7757-83-7		220 - 460: 96 h Leuciscus idus mg/L LC50 static		330: 24 h Psammechinus miliaris mg/L LC50
Potassium Bromide 7758-02-3		30: 96 h Pimephales promelas mg/L LC50 static		

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Sodium Sulfite 7757-83-7	-4

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Sodium hydroxide 1310-73-2	Toxic Corrosive

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No	UN1824
Proper Shipping Name	Sodium hydroxide solution
Hazard Class	8
Packing Group	III

IATA

UN/ID No	UN1824
Proper Shipping Name	Sodium hydroxide solution
Hazard Class	8
Packing Group	III

IMDG

UN/ID No	UN1824
Proper Shipping Name	Sodium hydroxide solution
Hazard Class	8
Packing Group	III

15. REGULATORY INFORMATION

International Inventories

Not determined

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide 1310-73-2	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

SARA 313

Not determined

CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide 1310-73-2 (Proprietary)	1000 lb			X

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sodium hydroxide 1310-73-2	X	X	X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	Not determined	Not determined	Not determined	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	Not determined	Not determined	Not determined	Not determined

Issue Date: 25-Mar-2013
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Revision Note: New 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

Safety Data Sheet

Issue Date: 25-Mar-2013 **Revision Date:** 18-Apr-2014 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name X-Ray Rapid Developer-Powder

Other means of identification

SDS # BDM-015
Product Code 33800
UN/ID No UN2811

Recommended use of the chemical and restrictions on use

Recommended Use X-ray rapid developer (powder part).

Details of the supplier of the safety data sheet

Supplier Address
Buffalo Dental Manufacturing Co. Inc.
159 Lafayette Drive
Syosset NY 11791

Emergency Telephone Number

Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)
Company Phone Number 516-496-7200
800-828-0203

2. HAZARDS IDENTIFICATION

Appearance Off-white powder or white needle-like crystals **Physical State** Liquid **Odor** Essentially odorless

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 3
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2

Signal Word
Danger

Hazard Statements
Harmful if swallowed
Toxic in contact with skin
Causes serious eye damage
May cause an allergic skin reaction
Suspected of causing genetic defects

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Precautionary Statements - Response
If exposed or concerned: 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 a poison center or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
Call a poison center or doctor/physician if you feel unwell
Remove/Take off immediately all contaminated clothing
Wash contaminated clothing before reuse
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Hazards
Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Hydroquinone	123-31-9	Proprietary

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing. Wash contaminated clothing before reuse. Call a physician if you feel unwell.
Inhalation	Remove to fresh air. Call a physician.
Ingestion	Rinse mouth. Induce vomiting, but only if victim is fully conscious. Call a poison center or doctor/physician if you feel unwell.

Most important symptoms and effects

Symptoms	May cause an allergic skin reaction. May cause eye burns and permanent eye damage.

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water spray (fog). Dry chemical. Carbon dioxide (CO2).

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
High concentrations of dust in air may present a fire or dust explosion hazard.

Hazardous Combustion Products Carbon oxides.

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	Use personal protective equipment as required.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Use personal protection recommended in Section 8. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Avoid breathing dust or fume.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Store away from incompatible materials. Do not reuse container.

Incompatible Materials Strong oxidizing agents. Strong bases. Oxygen. Ferric salts.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydroquinone 123-31-9	TWA: 1 mg/m^3	TWA: 2 mg/m^3 (vacated) TWA: 2 mg/m^3	IDLH: 50 mg/m^3 Ceiling: 2 mg/m^3 15 min

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side shields, goggles and/or a face shield.

Skin and Body Protection Wear suitable gloves. Wear long sleeved lab coat.

Respiratory Protection Use a NIOSH approved respirator where adequate ventilation cannot be provided for toxic dusts.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Off-white powder or white needle-like crystals	**Odor**	Essentially odorless
Color	White or off-white	**Odor Threshold**	Not determined

Property	Values	Remarks • Method
pH	Not determined	
Melting Point/Freezing Point	172-175 °C / 342-347 °F	
Boiling Point/Boiling Range	285 °C / 545 °F	
Flash Point	165 °C / 329 °F	Open cup
Evaporation Rate	Not applicable	
Flammability (Solid, Gas)	Possible dust explosion	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	1 mm Hg	@ 329 °C
Vapor Density	3.81	(Air=1)
Specific Gravity	1.33	
Water Solubility	Moderately soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	498 °C / 928 °F	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
Density	1.33 g/cm^3	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to Avoid
Light. Product is air sensitive. Discolors in air.

Incompatible Materials
Strong oxidizing agents. Strong bases. Oxygen. Ferric salts.

Hazardous Decomposition Products
Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes serious eye damage.

Skin Contact Toxic in contact with skin. May cause an allergic skin reaction.

Inhalation Avoid inhalation of dust.

Ingestion Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hydroquinone 123-31-9	= 320 mg/kg (Rat)	> 900 mg/kg (Rat)	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

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

Sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Suspected of causing genetic defects.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested.

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydroquinone 123-31-9	A3	Group 3		

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hydroquinone 123-31-9	13.5: 120 h Desmodesmus subspicatus mg/L EC50 0.335: 72 h Pseudokirchneriella subcapitata 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	EC50 = 0.038 mg/L 15 min EC50 = 0.0382 mg/L 30 min EC50 = 0.042 mg/L 5 min EC50 = 23.75 mg/L 60 min	0.29: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Hydroquinone 123-31-9	0.5

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No	UN2811
Proper Shipping Name	Toxic solid, organic, n.o.s. (Hydroquinone)
Hazard Class	6.1
Packing Group	III

IATA

UN/ID No	UN2811
Proper Shipping Name	Toxic solid, organic, n.o.s. (Hydroquinone)
Hazard Class	6.1
Packing Group	III

IMDG

UN/ID No	UN2811
Proper Shipping Name	Toxic solid, organic, n.o.s. (Hydroquinone)
Hazard Class	6.1
Packing Group	III
Marine Pollutant	This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories

Not determined

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydroquinone 123-31-9	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Hydroquinone - 123-31-9	123-31-9	Proprietary	1.0

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydroquinone 123-31-9	X	X	X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	Not determined	Not determined	Not determined	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	Not determined	Not determined	Not determined	Not determined

Issue Date: 25-Mar-2013
Revision Date: 18-Apr-2014
Revision Note: New format

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End of Safety Data Sheet