

SAFETY DATA SHEET

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name: BM-2100 Dental Developer

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use(s): X-ray image processing

Details of the supplier of the safety data sheet

Manufacturer: N.A.K.P Foto Inc.
2575 De Miniac
Ville Saint Laurent, Quebec H4S 1E5
Canada

Distributor: B.M. Group Inc.
5890 Monkland Avenue, Suite 16
Montreal Quebec H4A 1G2
Canada

Website: www.nakpfoto.com

Website : <http://www.bmcanada.ca>

Email: paul@nakpfoto.com

Email: info@bmcanada.ca

Tel (514) 932-8057

Tel: (514) 738-5200 Toll Free 1-800-561-9818

Fax (514) 932-8057

Fax: (514) 738-2290

Emergency telephone number

Emergency Contact: Emergency: 1-800-463-5060 Poison Control Center in Quebec, Canada

Notes:

While this photographic grade solution is generally safe and high-performing during normal use as per directions on label and as per guidelines in this SDS, this SDS also contains valuable information critical to the safe handling and proper use of the product for large production plants, industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product.

Section 2. Hazards identification

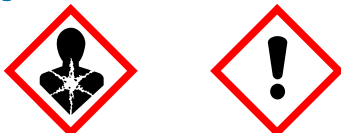
Classification of the substance or mixture

GHS Classification for mixture:

Hazardous to the aquatic environment, short-term (Acute) - Category 2
Carcinogenicity - Category 2
Germ cell mutagenicity - Category 2
Skin sensitization - Category 1
Serious eye irritation - Category 2
Skin irritation - Category 2

Label elements

Pictograms:



Signal Words:

Warning

Hazard Statements:

Causes skin irritation.
 May cause an allergic skin reaction.
 Causes serious eye irritation.
 Suspected of causing cancer.
 Suspected of damaging fertility or the unborn child.
 Toxic to aquatic life.

Precautionary Statements:**Prevention**

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Avoid breathing fume, vapors, spray.
 Wash exposed skin thoroughly after handling.
 Contaminated work clothing should not be allowed out of the workplace.
 Avoid release to the environment.
 Wear protective gloves.

Response

If exposed or concerned: Get medical advice.
 If skin irritation or rash occurs: Get medical advice.
 If eye irritation persists: Get medical advice.
 IF IN EYES: Remove contact lenses, if present and easy to do. Continue rinsing.
 IF IN EYES: Rinse cautiously with water for several minutes.
 IF ON SKIN: Wash with plenty of water.
 Take off contaminated clothing. And wash it before reuse.

Storage

Store locked up.

Disposal

Dispose of contents in accordance with all local, regional, national and international regulations. Dispose of container in accordance with all local, regional, national and international regulations.

Section 3. Composition/information on ingredients

Substances

No available data for this section.

Mixtures

Identifiers	Ingredients	Percentage	Classification
7757-83-7	Sodium Sulfite	8%	
1310-58-3	Potassium Hydroxide	0.8%	
123-31-9	Hydroquinone	<3%	

Section 4. First-Aid Measures

Description of First Aid Measures**In the event of splashes or contact with eyes**

Immediately flush with clean, low-pressure water for several minutes. Hold eyelids open to ensure adequate flushing. Remove the contact lenses if worn and easy to do that. If redness or other symptoms persist, seek medical advice / attention.

In the event of splashes or contact with skin

Take off all contaminated clothing and wash it before reuse. Wash contaminated areas thoroughly with water. If redness or other symptoms persist, seek medical advice / attention.

In the event of ingestion

DO NOT INDUCE VOMITING. If swallowed, call a physician immediately. Only induce vomiting at the instructions of a physician. Never give anything by mouth to an unconscious person. Immediately seek medical attention. If spontaneous vomiting occurs, lean the exposed person forward to reduce the risk of aspiration. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated. Monitor for breathing difficulties. In case of ingestion of large quantities immediately take the exposed person to hospital. If the exposed person is conscious, give lots of water to drink.

In the event of inhalation

Remove person to fresh air and keep at rest in a position comfortable for breathing. Loosen tight clothing such as a collar, tie, belt, or waistband. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately. It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious, or corrosive. If person is not breathing, provide artificial respiration.

Most important symptoms and effects, both acute and delayed

No available data for this section.

Indication of any immediate medical attention and special treatment needed

No available data for this section.

Section 5. Firefighting Measures

Extinguishing media

Suitable Extinguishing Media

The suggested appropriate media: Alcohol-type or universal-type foams. Carbon dioxide. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

The product is not flammable or combustible.

Unsuitable Extinguishing Media

No available data for this section.

Special hazards arising from the substance or mixture

Specific Hazards Arising from Combustion of Products

Fire / decomposition hazards: Toxic gases.

Combustion Products

Carbon dioxide (CO₂).

Advice for firefighters

Protective Measures for Fire-Fighting

Wear self-contained breathing apparatus. Wear full protective clothing.

Special Protective Actions for Fire-Fighters

Avoid being exposed to gas / mist / dust / fume / vapor / spray / particles.

Other Information for Fire Fighters

Potassium Hydroxide and hydroquinone dust are corrosive. Carbon dioxide is produced by decomposition of the hydroquinone.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For large spills inside: Evacuate the room of anyone not wearing a self-contained breathing apparatus and who is not wearing approved protective equipment. Mark out the contaminated area with signs. Prevent access to unauthorized personnel. Ventilate area of leak or spill.

For minor spills: Make sure room is well ventilated. Wear self-contained breathing apparatus.

Environmental precautions

Do not discharge into drains or any body of water (rivers, streams, ponds, lakes, etc). If the product has entered a water course or sewer or contaminated soil or vegetation, advise the local emergency services and environmental authorities.

Methods and material for containment and cleaning up

Large spills: Ventilate area of leak or spill. Absorb with earth, sand, or other non-combustible material. If possible, the spilled liquid should be transferred to a waste container. Residual liquid should be absorbed and placed in separate container. Dispose of the material in accordance with government regulations.

Small spill: Dilute with water and absorb into dry earth or sand. Transfer to a closable, labeled salvage container for disposal by an appropriate method.

Reference to other sections

No available data for this section.

Section 7. Handling and Storage

Precautions for safe handling

Avoid direct contact with the substance (solid / liquid / vapor). Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid breathing gas / mist / dust / fume / vapor / spray / particles. Check container for defect or leakage before handling. Protect against physical damage. Keep container tightly closed. Wash Hands thoroughly after handling. Report immediately if physical damage, leakage, or spillage occurs. Eye wash stations and showers are recommended in areas where product is stored in large quantities. For small volume use, ensure there is a sink nearby which employees can use to flush their eyes and skin appropriately in the event of accidental exposure.

Conditions for safe storage, including any incompatibilities

Conditions for Safe Storage

Storage Temperature: >5 degrees C.

Keep away from: Direct sunlight.

Keep container closed when not in use. Store only in well-ventilated areas.

Suitable Packaging

Store in original container / packaging.

Incompatible Materials

Oxidizing materials. Acidic materials.

Specific end use(s)

No available data for this section.

Section 8. Exposure Controls / Personal Protection

Control parameters

Control Parameters / Limits for Product

No available data for this section.

Control Parameters / Limits for Component

Hydroquinone	
Ontario, Canada OEL (TWAEV)	2.000000 mg/m3.
British Columbia, Canada OEL (TWA)	1.000000 mg/m3.
ACGIH USA (TLV)	1.000000 mg/m3.
Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants (TWAEV)	2 mg/m3.
Sodium Sulfite	
OSHA PEL	Not established.
ACGIH TLV	Not established.
Potassium Hydroxide	
OSHA PEL (Vacated)	2 mg/m3, Ceiling.
ACGIH	2 mg/m3, Ceiling.

Exposure controls

Engineering Measures

Provide adequate general and local exhaust ventilation.

Respiratory Protection

No special respiratory protection specified for the product.

Eye/Face Protection

Wear safety goggles. In industrial plants or large production areas, ensure eye-wash stations are available. For use in small settings or offices, a procedure and training for washing eyes in a sink is recommended.

Skin and Body Protection

Wear appropriate chemical resistant clothing.

Hand Protection

Ensure gloves are certified. Wear impermeable gloves.

Hygiene Measures

No available data for this section.

Environmental exposure controls

No available data for this section.

Section 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Slight yellowish tint
Odor	Odorless
Odor threshold	Not available
pH	10 to 10.4

Melting point	Lesser than 0°C / 32°F
Boiling point	Greater than 100°C / 212°F
Flash Point	Not applicable
Evaporation rate	1 multiplier w/r/t butyl acetate
Flammability	Non-flammable
Flammability limit	Not available
Vapor pressure	15 to 17 mmHg
Vapor density	0.5 to 0.7 g/cm ³
Relative density	1.06 to 1.08 multiplier w/r/t water @20C
Solubility	Soluble Completely in water
Solubility in other solvents	Not available
Partition coefficient	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Freezing point	Not available
Percent volatiles	95 %vol
Evaporation rate w/r/t butyl acetate	1
Relative density w/r/t water	1.06 to 1.08 Conditions of Measurement: Temperature: 20°C / 68°F Pressure: 101.3kPa
Relative density w/r/t air	Not available

Other Information

No available data for this section.

Section 10. Chemical Stability & Reactivity Information

Reactivity

Chemical stability: This product is stable under ambient condition.

Chemical Stability

No available data for this section.

Possibility of Hazardous Reactions

The product decomposes in high temperatures and produces toxic gas or vapor.

Conditions to Avoid

Keep away from: Direct sunlight. Fire. Heat.

Incompatible Materials

Avoid contact or storage with: Acidic materials. Metal surfaces. Strong oxidizers.

Hazardous Decomposition Products

Decomposition will Result in Production of: Carbon dioxide (CO₂).

Section 11. Toxicological Information

Information on toxicological effects

Toxicological Information for Product

No available data for this section.

Toxicological Information for Component

Sodium Sulfite

LC 50 Inhalation >5.5 mg/l(4h), Rat.

LD 50 Oral 2610 mg/kg, Rat.

Hydroquinone

IARC Group 3: Not classifiable as to its carcinogenicity to humans.

Carcinogenicity This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification. Limited evidence of carcinogenicity in animal studies.

Germ Cell Mutagenicity Laboratory experiments have shown mutagenic effects. In vitro tests showed mutagenic effects.

LD 50 Dermal >2000 mg/kg, Rabbit.

LD 50 Oral 367.3 mg/kg, Rat.
302-320 mg/kg, Rat.
245 - 350 mg/kg, Mouse.
200 mg/kg, Rabbit.

Potassium Hydroxide

LD 50 Oral 333 mg/kg, Rat.
2967 mg/kg, Rat.

Irritation/Corrosion Information for Product

No available data for this section.

Irritation/Corrosion Information for Component

No available data for this section.

Section 12. Ecological Information

Toxicity

Ecotoxicity Values for Product

No available data for this section.

Ecotoxicity Values for Component

Potassium Hydroxide

LC 50 Fish: 80 mg/l(6hr), *Gambusia affinis* (mosquito fish). 165 mg/l(24hr), *Poecilia reticulata*.

LD 50 Fish: 50 mg/l(24h), *Salvelinus fontinalis* (brook trout).

Hydroquinone

LC 50 Fish: 259.7 u/l, Rainbow Trout, Donaldson Trout. 0.04 - 0.1 mg/l(96hr), *Oncorhynchus mykiss* (rainbow trout). 0.097 mg/L(96hr), Rainbow Trout. 0.1 - 0.18 mg/L(96hr), Fathead Minnow.

EC 50 Crustaceans: 0.13 mg/l(48hr), *Daphnia magna* (water flea).

Crustaceans: Acute Aquatic Toxicity - Category 2.

Sodium Sulfite

LC 50 Fish: 12500 - 13000 mg/l(96hr), *Lepomis macrochirus*, Fresh Water.

Persistence and degradability

No available data for this section.

Bioaccumulative potential

Bioaccumulative Potential for Product

No available data for this section.

Bioaccumulative Potential for Component

No available data for this section.

Mobility in soil

No available data for this section.

Results of PBT and vPvB assessment

No available data for this section.

Other adverse effects

No available data for this section.

Section 13. Disposal Considerations

Waste treatment methods

Waste Disposal Regulation(s) / Operation

Do not dispose in drain. Transfer to a suitable container and arrange for collection by specialized disposal company. May be discharged to wastewater treatment installation. Users need to pay attention to the possible existence of regional or national regulations regarding disposal. Disposal, treatment, or recycling of industrial waste must comply with applicable regulations to preserve the environment.

Waste Treatment Methods

No available data for this section.

Section 14. Transportation Information

	ADR	IMDG	IATA	DOT
UN number	No available data for this section.	No available data for this section.	No available data for this section.	No available data for this section.
UN proper shipping name	Not regulated for transport.	Not regulated for transport.	Not regulated for transport.	Not regulated for transport.
Transport hazard class(es)	Not regulated for transport.	Not regulated for transport.	Not regulated for transport.	Not regulated for transport.
Packing group	No available data for this section.	No available data for this section.	No available data for this section.	No available data for this section.
Environmental hazards	No available data for this section.	No available data for this section.	No available data for this section.	No available data for this section.
Special precautions for user	No available data for this section.			
Transport in bulk according to Annex II of Marpol and the IBC Code	No available data for this section.			
Other	This product is not regulated for transport			

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, Health and Environmental Regulations for Product

No available data for this section.

Safety, Health and Environmental Regulations for Component

Hydroquinone

DSCL (EEC):	Causes eye irritation. Moderate Skin Irritant.
WHMIS (Canada):	D-1B: Toxic material. D-2A: Toxic material.
Federal and State Regulations:	PA, MA. TSCA 8(b) inventory. 302/304/311/312 extremely hazardous substances. SARA 313 toxic chemical notification and release reporting. CERCLA: Hazardous substances.

Potassium Hydroxide

Section 12b:	Not present.
DSL (Canada):	Present.
TSCA:	Present.
TSCA Significant New Use Rule:	Not present.
SARA:	Section 302 (RQ): 1000 pounds (454 kg). Section 302 (TPQ): None. Section 313: None. SARA Codes: acute, reactive.
IDL (Canada):	Present.
Chemical Test Rules:	Not present.
WHMIS (Canada):	D-1B: Toxic material.

Sodium Sulfite

Canada:	Listed on Canada's DSL List.
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Chemical safety assessment

No available data for this section.

Section 16. Other Information

Disclaimer

The above information is accurate to the best of our knowledge, however since data, safety standards and government regulations change, and the conditions of handling and use or misuse are beyond our control, manufacturer and distributor above mentioned make no warranty either expressed or implied with respect to the completeness or continuing accuracy of information herein and disclaims all liability for reliance thereon. Do not use ingredient information and / or ingredient percentages in this SDS as a product specification.

Glossary

ACGIH: American Conference of Governmental Industrial Hygienists.

DOT: Department of Transportation, USA.

LC 50: Lethal Concentration which is lethal to 50% of the population.

LD 50: Lethal Dose which is lethal to 50% of the population.

N/A: Not applicable.

N/AV: Not available.

N/D: Not determined.

OSHA: US Occupational Safety and Health Administration, US Department of Labor.

PEL: Permissible Exposure Limit.

TLV: Threshold Limit Value.

TWA: Time Weighted Average.

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Approved by: N.A.K.P. Foto Inc.