# SAFETY DATA SHEET

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

# Product identifier

Product Name: B9, Developer (For rollerless systems)

## 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	<sup>:</sup> N.A.K.P Foto Inc. 2575 De Miniac Ville Saint Laurent, Quebec H4S 1E5 Canada	Distributor:	Sinclair Dental Co. Ltd. 900 Harbourside Drive, North Vancouver, BC V7P 3T8 Canada
Website:	www.nakpfoto.com	Website :	http://www.SinclairDental.com
Email:	paul@nakpfoto.com	Email:	info@SinclairDental.com
Tel (514) 932-8057 Fax (514) 932-8057		Tel: (604) 986 Fax: 1-800-20	

# **Emergency telephone number**

In case of emergency: Please contact your local Poison Control Centre.

### 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. Route(s) of exposure: none. Suspected of damaging fertility or the unborn child. Route(s) of exposure: none. Specific effect(s): none. 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 (CO<sub>2</sub>).

### 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) ACGIH	2 mg/m3, Ceiling. 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

FlammabilityNon-flammableFlammability limitNot availableVapor pressure15 to 17 mmHgVapor density0.5 to 0.7 g/cm³Relative density1.06 to 1.08 multiplier w/r/t water @20CSolubilitySoluble Completely in waterSolubility in other solventsNot availablePartition coefficientNot availableAuto-ignition temperatureNot availableDecomposition temperatureNot availableViscosityNot availablePercent volatiles95 %volEvaporation rate w/r/t butyl acetate1Relative density w/r/t water1.06 to 1.08 Conditions of Measurement: Temperature: 20°C / 68°F Pressure: 101.3kPaRelative density w/r/t airNot available	Melting point Boiling point Flash Point Evaporation rate	Lesser than 0°C / 32°F Greater than 100°C / 212°F Not applicable 1 multiplier w/r/t butyl acetate
Flammability limitNot availableVapor pressure15 to 17 mmHgVapor density0.5 to 0.7 g/cm³Relative density1.06 to 1.08 multiplier w/r/t water @20CSolubilitySoluble Completely in waterSolubility in other solventsNot availablePartition coefficientNot availableAuto-ignition temperatureNot availableDecomposition temperatureNot availableViscosityNot availableFreezing pointNot availablePercent volatiles95 %volEvaporation rate w/r/t butyl acetate1Relative density w/r/t water1.06 to 1.08 Conditions of Measurement: Temperature: 20°C / 68°F Pressure: 101.3kPa		
Vapor density0.5 to 0.7 g/cm³Relative density1.06 to 1.08 multiplier w/r/t water @20CSolubilitySoluble Completely in waterSolubility in other solventsNot availablePartition coefficientNot availableAuto-ignition temperatureNot availableDecomposition temperatureNot availableViscosityNot availableFreezing pointNot availablePercent volatiles95 %volEvaporation rate w/r/t butyl acetate1Relative density w/r/t water1.06 to 1.08 Conditions of Measurement: 	-	
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Image: SolubilityImage: OCSolubilitySoluble Completely in waterSolubility in other solventsNot availablePartition coefficientNot availableAuto-ignition temperatureNot availableDecomposition temperatureNot availableViscosityNot availableFreezing pointNot availablePercent volatiles95 %volEvaporation rate w/r/t butyl acetate1Relative density w/r/t water1.06 to 1.08 Conditions of Measurement: Temperature: 20°C / 68°F Pressure: 101.3kPa	Vapor density	0.5 to 0.7 g/cm³
Completely in waterSolubility in other solventsNot availablePartition coefficientNot availableAuto-ignition temperatureNot availableDecomposition temperatureNot availableViscosityNot availableFreezing pointNot availablePercent volatiles95 %volEvaporation rate w/r/t butyl acetate1Relative density w/r/t water1.06 to 1.08 Conditions of Measurement: Temperature: 20°C / 68°F Pressure: 101.3kPa	Relative density	•
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Decomposition temperatureNot availableViscosityNot availableFreezing pointNot availablePercent volatiles95 %volEvaporation rate w/r/t butyl acetate1Relative density w/r/t water1.06 to 1.08 Conditions of Measurement: Temperature: 20°C / 68°F Pressure: 101.3kPa	Partition coefficient	Not available
ViscosityNot availableFreezing pointNot availablePercent volatiles95 %volEvaporation rate w/r/t butyl acetate1Relative density w/r/t water1.06 to 1.08 Conditions of Measurement: Temperature: 20°C / 68°F Pressure: 101.3kPa	Auto-ignition temperature	Not available
Freezing pointNot availablePercent volatiles95 %volEvaporation rate w/r/t butyl acetate1Relative density w/r/t water1.06 to 1.08 Conditions of Measurement: Temperature: 20°C / 68°F Pressure: 101.3kPa	Decomposition temperature	Not available
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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	Freezing point	Not available
Relative density w/r/t water1.06 to 1.08Conditions of Measurement: Temperature: 20°C / 68°F Pressure: 101.3kPa	Percent volatiles	95 %vol
Conditions of Measurement: Temperature: 20°C / 68°F Pressure: 101.3kPa	Evaporation rate w/r/t butyl acetate	1
Relative density w/r/t air Not available	Relative density w/r/t water	Conditions of Measurement: Temperature: 20°C / 68°F
	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 (CO<sub>2</sub>).

# Section 11. Toxicological Information

Information on toxicological effects			
Toxicological Information for	r Product		
No available data for this secti	on.		
Toxicological Information for	r 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 reticulate.

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 machrochirus, 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	ΙΑΤΑ	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	No available data for this section.	No available data for this section.	No available data for this section.	No available data for this section.
Transport hazard class(es)	No available data for this section.	No available data for this section.	No available data for this section.	No available data for this section.
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

-	regulations/legislation specific for the substance
or mixture	
Safety, Health and Environmental Regulation	ns for Product
No available data for this section.	
Safety, Health and Environmental Regulation	ns 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:	Llsted on Canada's DSL List.
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 enumerated, 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.

**ADR:** American depositary receipt.

**DOT:** Department of Transportation, USA.

**DSCL (EEC):** Dangerous Substances Classification and Labeling

**DSL:** Department Safety Liaison.

**EPA:** Environmental Protection Agency.

**GHS:** Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer.

IATA: International Air Transport Association.

**IDL:** Ingredients Disclosure List.

IMDG: International Maritime Dangerous Goods.

**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.

**NTP:** Programme national de toxicologie

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

**PEL:** Permissible exposure limit. An exposure limit that is published and enforced by OSHA as a legal standard.

**PBT:** Persistent, Bioaccumulative and Toxic.

SARA: Superfund Amendments and Reauthorization Act

TLV: Threshold Limit Value.

**TSCA:** Toxic Substances Control Act.

TWAEV: Time Weighted Average Exposure Values

**TWA:** Time Weighted Average.

**vPvB:** Very Persistent and Very Bioaccumulative.

WHMIS: Workplace Hazardous Materials Information System.

Prepared by: CompleteSDS

Approved by: Steve Bishyk, N.A.K.P. Foto Inc.

# SAFETY DATA SHEET

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

# **Product identifier**

Product Name:

B10, Fixer (For rollerless systems)

# 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	<ul> <li>N.A.K.P Foto Inc.</li> <li>2575 De Miniac</li> <li>Ville Saint Laurent, Quebec H4S 1E5</li> <li>Canada</li> </ul>	Distributor:	Sinclair Dental Co. Ltd. 900 Harbourside Drive, North Vancouver, BC V7P 3T8 Canada
Website:	www.nakpfoto.com	Website :	www.SinclairDental.com
Email:	paul@nakpfoto.com	Email:	info@SinclairDental.com
Tel (514) 932-8057		Tel: (604) 986-1544 Toll Free 1-800-663-7393	
Fax (514) 932-8057		Fax: 1-800-20	6-2999

# **Emergency telephone number**

In case of emergency: Please contact your local Poison Control Centre.

# Section 2. Hazards identification

# Classification of the substance or mixture

### GHS Classification for mixture:

This product has no hazards

# Label elements

Pictograms: No available data for this section. Signal Words: No available data for this section. Hazard Statements: No available data for this section. Precautionary Statements: No available data for this section.

# **Other hazards**

No available data for this section.

# Section 3. Composition/information on ingredients

### **Substances**

No available data for this section.

### Mixtures

Identifiers	Ingredients	Percentage	Classification
7783-18-8	Ammonium Thiosulfate	15%	
64-19-7	Acetic Acid	3%	
7757-83-7	Sodium Sulfite	2%	

# Section 4. First-Aid Measures

### Description of First Aid Measures

### In the event of splashes or contact with eyes

Wash eyes with plenty of water. Hold eyelids open to ensure adequate flushing. Remove the contact lenses if worn and easy to do that. Seek medical attention if irritation, redness, or any other symptom develops.

### In the event of splashes or contact with skin

Wash contaminated areas thoroughly with water.

In the event of ingestion

Seek medical advice.

In the event of inhalation

If after inhalation you feel unwell, seek medical advice.

# 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. 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**

Sulfur oxides. Sodium oxides. Ammonium thiosulfate gas.

### Advice for firefighters

### **Protective Measures for Fire-Fighting**

Wear self-contained breathing apparatus.

### **Special Protective Actions for Fire-Fighters**

No available data for this section.

**Other Information for Fire Fighters** 

# Section 6. Accidental Release Measures

# Personal precautions, protective equipment and emergency procedures

Ventilate area of leak or spill. Wear protective gloves, clothing, and protective goggles to prevent contact with skin and eyes.

### **Environmental precautions**

Dispose of the material in accordance with government regulations.

### Methods and material for containment and cleaning up

Pick up and place in a suitable container for reclamation or disposal.

### Reference to other sections

No available data for this section.

# Section 7. Handling and Storage

### Precautions for safe handling

Protect against physical damage.

# Conditions for safe storage, including any incompatibilities

### Conditions for Safe Storage

### Storage Temperature: >5°C.

Keep away from: Direct sunlight. Oxidizing materials.

Keep container tightly closed. Store in a cool, dry, well-ventilated area away from incompatible substances (See section 10). Store in the dark. Containers of this material may be hazardous when empty since they retain product residues (dust, solids).

### Suitable Packaging

Store in original container / packaging.

### **Incompatible Materials**

No available data for this section.

### 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**

Ammonium Thiosulfate	
OSHA PEL	15 mg/m3, Mist.
	5 mg/m3, respirable particulate.
ACGIH (TLV)	Not established.
Sodium Sulfite	

OSHA PEL	Not established.
ACGIH (TLV)	Not established.
Acetic Acid OSHA PEL (TWA)	10 ppm. 25 mg/m3.
ACGIH TLV (TWA)	10 ppm. 25 mg/m3.
ACGIH STEL (TWA)	15 ppm. 37 mg/m3.

# **Exposure controls**

### **Engineering Measures**

Provide adequate general and local exhaust ventilation.

### **Respiratory Protection**

Not obliged if below the occupational health thresholds.

### **Eye/Face Protection**

Not obliged.

### **Skin and Body Protection**

No special skin or body protection specified for the product.

### **Hand Protection**

Not obliged.

#### **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	Clear		
Odor	Characteristic vinegar like odor		
Odor threshold	Not available		
рН	4.25 to 4.4		
Melting point	Not available		
Boiling point	Greater than 100°C / 212°F		
Flash Point	Not applicable		
Evaporation rate	Not available		
Flammability	Liquid Non flammable		
Flammability limit	Not available		
Vapor pressure	15 to 17 mmHg		
Vapor density	0.5 to 0.7 g/cm <sup>3</sup>		

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water

Relative density	1.08 to 1.1 multiplier w/r/t wa @20C	
Solubility	Very soluble	
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	90 %vol	
Evaporation rate w/r/t ether	Not available	
Evaporation rate w/r/t butyl acetate	Not available	
Relative density w/r/t water	1.08 to 1.1 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**

Hazardous reactions may occur in contact with incompatible materials.

# **Conditions to Avoid**

Keep away from: Direct sunlight. Fire. Heat.

### **Incompatible Materials**

Avoid contact or storage with: Strong bases.

Oxidizing agents.

# **Hazardous Decomposition Products**

Decomposition will Result in Production of: Oxides of sulfur (SOx). Ammonium gases. Sodium oxides.

# Section 11. Toxicological Information

# Information on toxicological effects

**Toxicological Information for Product** 

No available data for this section.

### **Toxicological Information for Component**

Greater than 2.26 g/m <sup>3</sup> (4h), Rat. Greater than 1.8 g/m <sup>3</sup> (4h), Mouse.
2890 mg/kg Rat. 21000 mg/kg Mouse. 1098 mg/kg Guinea Pig.
5620 mg/m³(1h) Mouse.
1060 mg/kg Rabbit.
3310 mg/kg Rat.
5.5 mg/l (4h) Rat.
2610 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**

Acetic Acid

LC50 Environmental

103.889 mg/l Fish, Fathead minnow. 251 mg/l Fish, Western mosquitofish.

# 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

Discharge to sewer may require approval of permitting authority and may require pretreatment. Avoid release to soil. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority.

### Waste Treatment Methods

No available data for this section.

Section 14. Transportation Information					
	ADR	IMDG	ΙΑΤΑ	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	No available data for this section.	No available data for this section.	No available data for this section.	No available data for this section.	
Transport hazard class(es)	No available data for this section.	No available data for this section.	No available data for this section.	No available data for this section.	
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

Ammonium Thiosulfate

DSL (Canada):	Present.		
	Record# 8479.		
TSCA:	Present.		
OSHA:	This product meets the definition of a hazardous material under criteria of the Federal OSHA Hazard Communication Standard (29CFR 1910.1200).		
Sodium Sulfite			
DSL (Canada):	Present.		

Acetic Acid

EINECS:

Present.

# 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.

ADR: American depositary receipt.

**DOT:** Department of Transportation, USA.

**DSL:** Department Safety Liaison.

**EINECS:** European Inventory of Existing Commercial chemical Substances.

**IATA:** International Air Transport Association.

IMDG: International Maritime Dangerous Goods.

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. An exposure limit that is published and enforced by OSHA as a legal standard.

**PBT:** Persistent, Bioaccumulative and Toxic.

TLV: Threshold Limit Value.

**TSCA:** Toxic Substances Control Act.

**TWA:** Time Weighted Average.

**vPvB:** Very Persistent and Very Bioaccumulative.

Prepared by: CompleteSDS

Approved by: Steve Bishyk, N.A.K.P. Foto Inc.