SAFETY DATA SHEET

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

Product identifier

Product Name: BM-Endo Fixer

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

Recommended Use(s): Ready to use x-ray fixer solution

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
Tel: (514) 932-8057; Fax: (514) 932-8057
email: paul@nakpfoto.com
Url: www.nakpfoto.com

Distributor: B.M. Group Inc.
5890 Monkland Avenue, Suite 16
Montreal Quebec H4A 1G2 Canada
Tel: (514) 738-5200; Fax: (514) 738-2290
Toll free: 1-800-561-9818
email: info@bmcanada.ca
http://www.bmcanada.ca

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, long-term (Chronic) - Category 3
- Hazardous to the aquatic environment, short-term (Acute) - Category 3
- Serious eye damage - Category 1
- Acute Toxicity Oral - Category 4

Label elements

Pictograms:

Signal Words:
Danger

Hazard Statements:
Harmful if swallowed.
Causes serious eye damage.
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

Precautionary Statements:

Prevention
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves, eye protection.

Response
Immediately call a doctor.
IF SWALLOWED: Call a POISON CENTER, doctor if you feel unwell.
Rinse mouth.
IF IN EYES: Remove contact lenses, if present and easy to do. Continue rinsing.
IF IN EYES: Rinse cautiously with water for several minutes.

Disposal
Dispose of contents as per local regulations. Dispose of container as per local regulations.

Section 3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Identifiers</th>
<th>Ingredients</th>
<th>Percentage</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1762-95-4</td>
<td>Ammonium Thiocyanate</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>7783-18-8</td>
<td>Ammonium Thiosulfate</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>7361-90-5</td>
<td>Sodium Bisulfite</td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>

Section 4. First-Aid Measures

Description of First Aid Measures

In the event of splashes or contact with eyes
Hold eyelids open to ensure adequate flushing. Immediately flush with clean, low-pressure water for several minutes. Immediately seek medical attention. Remove the contact lenses if worn and easy to do that.

In the event of splashes or contact with skin
Wash contaminated areas thoroughly with water.

In the event of ingestion
In case of ingestion of large quantities immediately take the exposed person to hospital. Rinse the mouth with water. Show safety data sheet to the doctor in attendance. Call a poison center, a doctor, or medical service. DO NOT INDUCE VOMITING.

In the event of inhalation
If after inhalation you feel unwell, seek medical advice. Remove person to fresh air and keep at rest in a position comfortable for breathing.

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: Evacuate the area. Vapors or dust are corrosive to skin and eye. Very toxic gases.

Combustion Products


Advice for firefighters

Protective Measures for Fire-Fighting

Wear protective goggles to prevent contact with eyes. Wear self-contained breathing apparatus.

Special Protective Actions for Fire-Fighters

No available data for this section.

Other Information for Fire Fighters

No available data for this section.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Ventilate spill area. Wear appropriate chemical resistant gloves. Wear protective goggles to prevent contact with eyes.

Environmental precautions

Prevent contamination of soil and surface water.

Methods and material for containment and cleaning up

Collect and transfer to a closable container without splash or generating dust / mist 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

Protect against physical damage. 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. Keep container tightly closed.

Conditions for safe storage, including any incompatibilities

Conditions for Safe Storage

Keep away from: Direct sunlight.

Keep container tightly closed. Store in a cool and dry area. Eye wash stations should be easily accessible to areas where product is stored, handled, or used.

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

<table>
<thead>
<tr>
<th>Chemical</th>
<th>OSHA PEL</th>
<th>ACGIH (TLV)</th>
<th>NIOSH</th>
<th>OSHA PEL</th>
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<tbody>
<tr>
<td>Ammonium Thiosulfate</td>
<td>15 mg/m³</td>
<td>Not established.</td>
<td></td>
<td>10 ppm 8h</td>
</tr>
<tr>
<td></td>
<td>Mist.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 mg/m³,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>respirable particulate.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonium Thiocyanate</td>
<td></td>
<td></td>
<td>4.7 ppm</td>
<td>5 ppm</td>
</tr>
<tr>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td></td>
<td></td>
<td>4.7 ppm</td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td></td>
<td>4.7 ppm</td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEL</td>
<td></td>
<td></td>
<td>10 ppm 8h</td>
<td></td>
</tr>
</tbody>
</table>

**Sodium Bisulfite**

<table>
<thead>
<tr>
<th>OSHA</th>
<th>TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 mg/m³ 8 hour, TWA</td>
</tr>
</tbody>
</table>

**Exposure controls**

#### Engineering Measures
Eye wash stations 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.

#### Respiratory Protection
Certified self-contained breathing apparatus must be available in case of emergency. Respiratory protection is required if the concentrations exceed the TLV.

#### 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

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4 / 9
Wear appropriate chemical resistant clothing.

**Hand Protection**
Wear impermeable gloves. Ensure gloves are certified.

**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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>100°C / 212°F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
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<tr>
<td>Flammability</td>
<td>Non-flammable</td>
</tr>
<tr>
<td>Flammability limit</td>
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</tr>
<tr>
<td>Vapor pressure</td>
<td>18 mmHg</td>
</tr>
<tr>
<td>Conditions of Measurement:</td>
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</tr>
<tr>
<td>Temperature: 25°C / 77°F</td>
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</tr>
<tr>
<td>Pressure: 101.3kPa</td>
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</tr>
<tr>
<td>Vapor density</td>
<td>0.6 g/cm³</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.127 multiplier w/r/t water</td>
</tr>
<tr>
<td>Solubility</td>
<td>0.6 g/l</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
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</tr>
<tr>
<td>Partition coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
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</tr>
<tr>
<td>Decomposition temperature</td>
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</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**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**
Possibility of Hazardous Reactions
The product decomposes in high temperatures and produces toxic gas or vapor.

Conditions to Avoid

Incompatible Materials
Avoid contact or storage with: Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products
Decomposition will Result in Production of: Carbon dioxide (CO₂). Carbon monoxide (CO). Cyanides (CNs). Oxides of nitrogen (NOₓ).

Section 11. Toxicological Information

Information on toxicological effects
Toxicological Information for Product
No available data for this section.

Toxicological Information for Component
Ammonium Thiosulfate

| LC50 Inhalation - Not Specified | Greater than 2.26 g/m³ (4h), Rat. |
| LD50 Oral | 2890 mg/kg Rat. |
| | 21000 mg/kg Mouse. |
| | 1098 mg/kg Guinea Pig. |

Ammonium Thiocyanate

| LD50 Oral | 750 mg/kg Rat. |

Sodium Bisulfite

| LD50 Oral | 2000 mg/kg Rat. |

Irritation/Corrosion Information for Product
No available data for this section.

Irritation/Corrosion Information for Component
Sodium Bisulfite

Mucous membrane: Irritant.
Respiratory: Acute Exposure - Mild Effect.
Skin: Irritant.

Section 12. Ecological Information

Toxicity
Ecotoxicity Values for Product
No available data for this section.

Ecotoxicity Values for Component
No available data for this section.
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
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

<table>
<thead>
<tr>
<th></th>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>DOT</th>
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<td>UN proper shipping name</td>
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<tr>
<td>Transport hazard class(es)</td>
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<td>No available data for this section.</td>
<td>No available data for this section.</td>
<td>No available data for this section.</td>
</tr>
<tr>
<td>Packing group</td>
<td>No available data for this section.</td>
<td>No available data for this section.</td>
<td>No available data for this section.</td>
<td>No available data for this section.</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No available data for this section.</td>
<td>No available data for this section.</td>
<td>No available data for this section.</td>
<td>No available data for this section.</td>
</tr>
</tbody>
</table>

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
No available data for this section.
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

Sodium Bisulfite

- RCRA Hazardous Waste: Not present.
- TSCA: Present.
- SARA Extremely hazardous substance: Acute (immediate) Health Hazard.
  - SARA 311/312 Category: Not present.
  - CERCLA Hazardous substance: 5000 lbs 100% dry basis 1180 gallons liquid sodium bisulfite (38% basis).
  - CERCLA reportable quantity: Not present.

Ammonium Thiocyanate

- Section 302 Extremely Hazardous Substances: Not applicable.
- TSCA: Present.
- SARA 313 Toxic Chemicals: Not applicable.
- SARA 311/312 Category: No.

Ammonium Thiosulfate

- DSL (Canada): Present.
- TSCA: Record# 8479.
- OSHA: 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.

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.

Prepared by: CompleteSDS

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