Section 1 - Product and Company Information

<table>
<thead>
<tr>
<th>Product Name</th>
<th>1-AMINOANTHRAQUINONE, 97%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number</td>
<td>A39009</td>
</tr>
<tr>
<td>Brand</td>
<td>SIAL</td>
</tr>
<tr>
<td>Company</td>
<td>Sigma-Aldrich Canada, Ltd</td>
</tr>
<tr>
<td>Address</td>
<td>2149 Winston Park Drive</td>
</tr>
<tr>
<td></td>
<td>Oakville ON L6H 6J8 CA</td>
</tr>
<tr>
<td>Technical Phone:</td>
<td>9058299500</td>
</tr>
<tr>
<td>Fax:</td>
<td>9058299292</td>
</tr>
<tr>
<td>Emergency Phone:</td>
<td>800-424-9300</td>
</tr>
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</table>

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
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<tbody>
<tr>
<td>1-AMINOANTHRAQUINONE</td>
<td>82-45-1</td>
<td>No</td>
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<table>
<thead>
<tr>
<th>Formula</th>
<th>C14H9NO2</th>
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</table>
| Synonyms            | 1-Amino-9,10-anthracenedione *  
                      1-Amioanthrachinon (Czech) *  
                      alpha-Aminoanthraquinone * 1-Aminoanthraquinone *  
                      1-Amino-9,10-anthraquinone *  
                      9,10-Anthracenedione, 1-amino- *  
                      alpha-Anthraquinonylamine * C.I. 37275 * Diazo  
                      Fast Red AL |
| RTECS Number:       | CB5075000 |

Section 3 - Hazards Identification

HMIS RATING

| HEALTH: 0 | FLAMMABILITY: 0 | REACTIVITY: 0 |

NFPA RATING

| HEALTH: 0 | FLAMMABILITY: 0 | REACTIVITY: 0 |

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

**ORAL EXPOSURE**

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**INHALATION EXPOSURE**

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
DERMAL EXPOSURE
In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT
N/A

AUTOIGNITION TEMP
N/A

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.
Hand: Protective gloves.
Eye: Chemical safety goggles.
GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Physical State: Solid</td>
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</tr>
<tr>
<td></td>
<td>Color: Deep brown</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form: Fine crystals</td>
<td></td>
</tr>
<tr>
<td>Molecular Weight</td>
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<tr>
<td>pH</td>
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<tr>
<td>BP/BP Range</td>
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<tr>
<td>MP/MP Range</td>
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<td>Freezing Point</td>
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<tr>
<td>Vapor Pressure</td>
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<tr>
<td>Vapor Density</td>
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<tr>
<td>Saturated Vapor Conc.</td>
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<tr>
<td>SG/Density</td>
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<tr>
<td>Bulk Density</td>
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<tr>
<td>Odor Threshold</td>
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</tr>
<tr>
<td>Volatile%</td>
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</tr>
<tr>
<td>VOC Content</td>
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<td></td>
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<tr>
<td>Water Content</td>
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<tr>
<td>Solvent Content</td>
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<tr>
<td>Evaporation Rate</td>
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<td>Viscosity</td>
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<td>Surface Tension</td>
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<tr>
<td>Partition Coefficient</td>
<td>Log Kow: 2.507</td>
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<tr>
<td>Decomposition Temp.</td>
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<tr>
<td>Flash Point</td>
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<td>Explosion Limits</td>
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<td>Flammability</td>
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<tr>
<td>Autoignition Temp</td>
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<td>Refractive Index</td>
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<td>Optical Rotation</td>
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<td>Miscellaneous Data</td>
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<tr>
<td>Solubility</td>
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</tbody>
</table>

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
Stable: Stable.
Materials to Avoid: Acids, Acid chlorides, Acid anhydrides, Chloroformates, Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation. Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract. Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Intraperitoneal
Rat
1500 MG/KG
LD50

Intraperitoneal
Mouse
6026 MG/KG
LD50

IRRITATION DATA

Eyes
Rabbit
500 mg
24H
Remarks: Mild irritation effect

CHRONIC EXPOSURE - CARCINOGEN

Species: Rat
Route of Application: Oral
Dose: 2400 MG/KG
Exposure Time: 60W
Frequency: I

Species: Rat
Route of Application: Oral
Dose: 3000 MG/KG
Exposure Time: 60W
Frequency: I
Result: Skin and Appendages: Other: Tumors. Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.

CHRONIC EXPOSURE - MUTAGEN

Species: Mouse
Route: Intraperitoneal
Dose: 250 MG/KG
Mutation test: DNA damage

Section 12 - Ecological Information
N/A

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.