Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure
In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

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

Section 5 - Fire Fighting Measures

Autoignition Temp: 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 to be Followed in Case of Leak or Spill
Evacuate area. Shut off all sources of ignition.

Procedure(s) of Personal Precaution(s)
Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Wear disposable coveralls and discard them after use.

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.

Environmental Precaution(s)
Avoid contaminating water supply. Avoid contaminating sewers and waterways with this material.

Section 7 - Handling and Storage

Handling
User Exposure
Do not breathe dust. Do not get in eyes, on skin, or on clothing. Avoid prolonged or repeated exposure.

Storage
Suitable
Keep tightly closed.

Section 8 - Exposure Controls / PPE

Engineering Controls
Use only in a chemical fume hood. Safety shower and eye bath.

Personal Protective Equipment
Respiratory
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air purifying respirators are appropriate. Use a full face particle respirator type N100 (US) or
Section 9 - Physical/Chemical Properties

Appearance
Physical State
Solid

Molecular Weight 288.43 AMU

pH  N/A
BP/VP Range  N/A
MP/VP Range  152 °C
Freezing Point  N/A
Vapor Pressure  N/A
Vapor Density  N/A
Saturated Vapor Conc.  N/A
SG/Density  N/A
Bath Density  N/A
Odor Threshold  N/A
Volatility  N/A
VOC Content  N/A
Water Content  N/A
Solvent Content  N/A
Evaporation Rate  N/A
Viscosity  N/A
Partition Coefficient  N/A
Decomposition Temp.  N/A
Flash Point °F  N/A
Flash Point °C  N/A

Explosion Limits  N/A

Flammability  N/A
Autoignition Temp.  N/A
Optical Rotation  Degree of Rotation +135° - +112° (x2)

Solubility
Solubility in Water: Insoluble.

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable
Stable

Materials to Avoid
Strong oxidizing agents

Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide

Hazardous Decomposition Products

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.

Target Organ(s) or System(s)
Reproductive system.

RTECS Number: XA0300000

Toxicity Data
Oral - Mammal > 6000 mg/kg (LD50)

Chronic Exposure - Carcinogen
Result: This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, CSHA, AOCS, NTP, or EPA classification.

Mouse - Oral: 0340 MG/KG 52D C

Mouse - Subcutaneous: 30 MG/KG 50 D

Mouse - Implant: 400 MG/KG 50 D C

IARC Carcinogen List
Rating
Group 2A

Chronic Exposure - Teratogen
Species: Rat
Route: Oral
Exposure Time: (7-12W PREG)

Route of Application
Exposure Time

Human: Possible risk of congenital malformation in the fetus.

Sigma Chemical - T1500
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### Chronic Exposure - Mutagen

<table>
<thead>
<tr>
<th>Species</th>
<th>Dose</th>
<th>Cell Type</th>
<th>Mutation Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human</td>
<td>50 UML/L</td>
<td>lymphocyte</td>
<td>DNA inhibition</td>
</tr>
<tr>
<td>Human</td>
<td>100 UGL</td>
<td>kidney</td>
<td>DNA inhibition</td>
</tr>
<tr>
<td>Human</td>
<td>100 UGL</td>
<td>kidney</td>
<td>Cyto genetic analysis</td>
</tr>
<tr>
<td>Rat</td>
<td>10 MG/KG</td>
<td>Parenteral</td>
<td>Unscheduled DNA synthesis</td>
</tr>
<tr>
<td>Rat</td>
<td>10 MG/KG</td>
<td>Liver</td>
<td>DNA inhibition</td>
</tr>
<tr>
<td>Mouse</td>
<td>100 UML/L</td>
<td>Liver</td>
<td>DNA damage</td>
</tr>
<tr>
<td>Hamster</td>
<td>5 MG/L</td>
<td>Embryo</td>
<td>Morphological transformation</td>
</tr>
<tr>
<td>Mammal</td>
<td>10 UML/L</td>
<td>lymphocyte</td>
<td>DNA damage</td>
</tr>
<tr>
<td>Mammal</td>
<td>1 UML/L</td>
<td>Liver</td>
<td>DNA damage</td>
</tr>
</tbody>
</table>

### Chronic Exposure - Reproductive Hazard

<table>
<thead>
<tr>
<th>Species</th>
<th>Route of Application</th>
<th>Exposure Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man</td>
<td>17 MG/KG Implant (28W MALE)</td>
<td></td>
</tr>
<tr>
<td>Rat</td>
<td>2 MG/KG (16D MALE)</td>
<td></td>
</tr>
<tr>
<td>Rat</td>
<td>20 MG/KG Subcutaneous (17D PREG)</td>
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</tr>
<tr>
<td>Rat</td>
<td>7 MG/KG (10-16D PREG)</td>
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<tr>
<td>Rat</td>
<td>20 MG/KG Subcutaneous (6D PREG)</td>
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<tr>
<td>Rat</td>
<td>8400 UG/KG Subcutaneous (21D MALE)</td>
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</tr>
<tr>
<td>Rat</td>
<td>1400 UG/KG Subcutaneous (14D PRE)</td>
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<td>Rat</td>
<td>700 UG/KG Subcutaneous (14D PRE)</td>
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<tr>
<td>Rat</td>
<td>60 MG/KG Intramuscular (5-7D PREG)</td>
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<tr>
<td>Rat</td>
<td>280 UG/KG Intramuscular (14D MALE)</td>
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<tr>
<td>Rat</td>
<td>2500 UG/KG Parenteral (10D PRE)</td>
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<td>Rat</td>
<td>4 MG/KG Parenteral (3W MALE)</td>
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<td>Rat</td>
<td>27 MG/KG Parenteral (90D MALE)</td>
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<td>Rat</td>
<td>10440 UG/KG Parenteral (3D MALE)</td>
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<td>Rat</td>
<td>24 MG/KG Parenteral (30G MALE)</td>
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<td>Mouse</td>
<td>15 GM/KG Oral (6-12D PRES)</td>
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<td>Mouse</td>
<td>40 MG/KG Subcutaneous (10D PRE)</td>
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<td>Mouse</td>
<td>168 MG/KG Subcutaneous (20D PRE)</td>
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<td>Mouse</td>
<td>10 MG/KG Subcutaneous (8D PRE)</td>
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<td>Mouse</td>
<td>4524 MG/KG Parenteral (10D MALE)</td>
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<tr>
<td>Mouse</td>
<td>9539 MG/KG Parenteral (10D PRE)</td>
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<tr>
<td>Monkey</td>
<td>1426 UG/KG Implant (70D MALE)</td>
<td></td>
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<tr>
<td>Rabbit</td>
<td>30 MG/KG Subcutaneous (1-3D PREG)</td>
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<td>Rabbit</td>
<td>6 MG/KG Unreported (1-3D PREG)</td>
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<tr>
<td>Rabbit</td>
<td>80 MG/KG Subcutaneous (3-4D PREG)</td>
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</tr>
<tr>
<td>Rabbit</td>
<td>18 UG/KG Implant (7-14W PREG)</td>
<td></td>
</tr>
</tbody>
</table>

### Section 12 - Ecological Information

No data available.

### Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substances or Preparations: None

Contact the Drug Enforcement Administration concerning the disposal of controlled substances.

Observe all federal, state, and local environmental regulations.

### Section 14 - Transport Information

DOT: None
Non-Hazards for Transport: This substance is considered to be nonhazardous for transport.

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

### Section 15 - Regulatory Information

EU Additional Classification: No additional classification.

Indication of Danger: Toxic

Risk Statements: R: 45 63
May cause cancer. Possible risk of harm to the unborn child.

Safety Statements: S: 35 36/37 45
Avoid exposure - obtain special instructions before use. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (after the label where possible).
feel unwell, seek medical advice immediately (show the label where possible).

US Classification and Label Text
Indication of Danger
Toxic
Risk Statements
May cause cancer. Possible risk of harm to the unborn child.
Safety Statements
Avoid exposure - obtain special instructions before use. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
US Statements
Target organ(s): Reproductive system. Calif. Prop. 65 carcinogen.

United States Regulatory Information
SARA Listed: No

TSCA Inventory Item: Yes

United States - State Regulatory Information
California Prop. 65
This product is or contains chemical(s) known to the state of California to cause cancer. This product is or contains chemical(s) known to the state of California to cause cancer.

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPRI, and the MSDS contains all the information required by the CPRI.
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.