

**COMMON NAME:** Amyl Nitrite Inhalant  
**DATE:** January 25, 2002  
**Page:** 2 of 8

## MATERIAL SAFETY DATA SHEET

**Keystone Pharmaceuticals, Inc.**  
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Laguna Hills, CA 92653

**COMMON NAME:** Amyl Nitrite Inhalant

**DATE:** January 25, 2002

**EMERGENCY TELEPHONE:** 949-348-7770

As of the date of issuance, we are providing available information relevant to the handling of this material in the workplace. All information contained herein is offered with a good faith belief that it is accurate. However, this safety data sheet does not constitute a warranty of any kind, express or implied. In the event of an adverse incident associated with this material, this safety data sheet is not intended to be a substitute for consultation with appropriately trained personnel. Nor is this safety data intended to be a substitute for consultation with appropriately trained personnel. Nor is this safety data sheet intended to be a substitute for product literature which may accompany the finished product.

See attached glossary for abbreviations.

**THIS MATERIAL IS A COMPONENT OF THE CYANIDE ANTIDOTE PACKAGE.**

### SECTION I – Material Identification

**Common Name:** Amyl Nitrite Inhalant

**Chemical Name:** Nitrous acid, 3-methylbutyl ester; Benzenamine, N-phenyl

**Synonyms/Trade Names:** Cyanide Antidote Kit; Amyl Nitrite

#### **Mixture Ingredients Listed Below:**

<u>Common or Chemical Name</u>	<u>Synonyms/ Trade Names</u>	<u>CAS Number</u>	<u>Percent in Mixture</u>
Amyl Nitrite	Isoamyl nitrite	110-46-3	98
Diphenylamine	N-Phenylaniline	122-39-4	2

**COMMON NAME:** Amyl Nitrite Inhalant

**DATE:** January 25, 2002

**Page:** 3 of 8

Contains no hazardous components (one percent or greater) or carcinogens (one-tenth percent or greater) not listed above.

## SECTION 2 – PHYSICAL DATA

<b>Appearance:</b>	Glass sealed container wrapped by single gray thread Woven spirally over a braided white cotton mesh pad which is impregnated with a clear yellowish liquid.
<b>Odor:</b>	Ethereal fruity
<b>Boiling Point:</b>	97°C (207°F)
<b>Melting Point:</b>	NAIF
<b>Specific Gravity:</b>	0.872
<b>PH:</b>	NAIF
<b>Evaporation Rate:</b>	Highly volatile
<b>Solubility in Water:</b>	Slightly soluble
<b>Vapor Density:</b>	4.0
<b>Vapor Pressure:</b>	NAIF

## SECTION 3 – FIRE AND EXPLOSION INFORMATION

**Extinguishing Media:** Use water, carbon dioxide, dry chemical, foam, or Halon.

**Unusual Fire and Explosion Hazards:** Extremely flammable. Flash point below 22.8°C (73° F)

f). Vapor-air mixtures are explosive. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back.

**Flash Point:** 10°C (50°F)    **Method:** NAIF    **UEL:** NAIF    **LEL:** NAIF

## SECTION 4 – REACTIVITY INFORMATION

**Stability:** Self-relative. Vapors may explode when heated.

**Incompatibility:** Reacts violently with reducing materials.

**COMMON NAME:** Amyl Nitrite Inhalant

**DATE:** January 25, 2002

**Page:** 4 of 8

**Hazardous Polymerization:** May emit toxic fumes when heated to decomposition.

**Hazardous Polymerization:** Not know to occur.

## SECTION 5 – HEALTH HAZARD INFORMATION

### Human – Occupational

**Effects, Including Signs and Symptoms, of Exposure:** The components may produce signs and symptoms as indicated.

Amyl Nitrite	Headaches have been reported from occupational exposure. May cause irritation to the eyes, skin, and mucous membranes. Excessive doses can induce methemoglobinemia (reduction in oxygen available to the body) and can cause death. Symptoms of excessive methemoglobinemia are blue skin and mucous membranes, vomiting, shock, and coma. Other effects following acute exposure may include flushing of face, pulsating headache, tachycardia, vasodilation, and increased intraocular pressure. Amyl nitrite is absorbed through the skin. The amounts found in a single inhalant are not excessive for an adult.
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Diphenylamine	Effects of exposure to diphenylamine may include skin rash, increased blood pressure, increased heart rate, bladder symptoms and methemoglobin formation. Diphenylamine may also cause irritation to the eyes and respiratory tract.
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**Medical Conditions Aggravated by Exposure:** Not known.

**Primary Route(s) of Entry:** Inhalation and skin absorption.

**Exposure Guidelines:** Amyl Nitrite Inhalant – PEL and TLV not established.  
Amyl Nitrite – PEL and TLV not established.  
Diphenylamine – TLV 2 ppm (10 mg/m<sup>3</sup>) TWA  
PEL 2 ppm (10 mg/m<sup>3</sup>) TWA

### Animal Toxicity Data Single Exposure:

No data available for Amyl Nitrite Inhalant. Toxicity data for components are presented.

**Oral:** Amyl Nitrite – rat, median lethal does, 505 mg/kg.  
Diphenylamine – rat, median lethal dose 2000 mg/kg.

**COMMON NAME:** Amyl Nitrite Inhalant

**DATE:** January 25, 2002

**Page:** 5 of 8

**Skin:** Amyl Nitrite – NAIF

Diphenylamine – rabbit, median lethal dose greater than 5 g/kg.

**Inhalation:** Amyl Nitrite – rat, median lethal concentration 1274 pip for 1 hour.

Diphenylamine - NAIF

**Skin Contact:** Amyl Nitrite – NAIF

Diphenylamine – rabbit, nonirritant

**Eye Contact:** Amyl Nitrite – NAIF

Diphenylamine – NAIF

Animal Toxicity Data Repeat Exposure:

No data available for Amyl Nitrite Inhalant. Toxicity data for components are presented.

**Target Organ Effects:** Amyl Nitrite – Blood effects (converts hemoglobin to methemoglobin), circulatory effects (vasodilation).  
Diphenylamine – Liver and spleen effects, kidney effects (systic kidney disease).

**Reproduction:** Amyl Nitrite – NAIF  
Diphenylamine – Reproductive effects (reduced litter size).  
Developmental effects (renal cystic disease).

**Sensitization:** Amyl Nitrite - NAIF  
Diphenylamine - NAIF

**Mutagenicity:** Amyl Nitrite - NAIF  
Diphenylamine - NAIF

**Carcinogenicity:** No carcinogenicity found. Not listed as carcinogenic by IARC, NCI/NTP, ACGIH, or OSHA. Nitrites can be converted to nitrosamines in the intestines of many animals and man. While nitrosamines are potent animal carcinogens, studies with nitrites have not produced a clear carcinogenic response.

**COMMON NAME:** Amyl Nitrite Inhalant

**DATE:** January 25, 2002

**Page:** 6 of 8

## SECTION 6 – EMERGENCY AND FIRST AID PROCEDURES

**Eyes:** Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. See an ophthalmologist (eye doctor) or other physician immediately.

**Skin:** Remove contaminated clothing and clean before reuse. Wash all exposed areas of skin with plenty of soap and water. Get medical attention if irritation develops.

**Inhalation:** Move individual to fresh air. Get medical attention if breathing difficulty occurs. If not breathing, provide artificial respiration assistance (mouth-to-mouth) and call a physician immediately.

**Ingestion:** Do not induce vomiting. Call a physician or poison control center. If available, administer activated charcoal (6-8 heaping teaspoons) with two to three glasses of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility and see a physician.

**Note to Physician:** If excessive exposure occurs and methemoglobinemia is suspected, administer oxygen. A 1% methylene blue solution may be given intravenously for treatment of excessive methemoglobinemia. Transfusion of whole blood may be considered.

## SECTION 7 – HANDLING PRECAUTIONS

Under normal use and handling conditions, no protective equipment is required. The following is recommended for a production setting:

**Respiratory Protection:** Use an approved respirator.

**Eye Protection:** Chemical goggles and/or face shield.

**Ventilation:** Laboratory fume hood or local exhaust ventilation.

**Other Protective Equipment:** Chemical-resistant gloves and body covering to minimize skin contact. If handled in a ventilated enclosure, as in a laboratory setting, respirator and goggles or face shield may not be required. Safety glasses are always required.

**COMMON NAME:** Amyl Nitrite Inhalant

**DATE:** January 25, 2002

**Page:** 7 of 8

**Other Handling Precautions:** In production settings, airline-supplied hood-type respirators are preferred. Shower and change clothing if skin contact occurs.

#### SECTION 8 – SPILL, LEAK AND DISPOSAL PROCEDURES

**Spills:** Prevent further migration into the environment. Use an absorbent/adsorbent material to solidify liquids. Solidification may not suppress vapors. Do not vacuum. Avoid any source of ignition. Wear protective equipment, including eye protection, to avoid exposure (see Section 7 for specific handling precautions).

**Waste Disposal:** Dispose of any cleanup materials and waste residue according to applicable federal, state, and local regulations.

#### SECTION 9 – SHIPPING INFORMATION

**DOT:** Amyl Nitrites / 3 / UN1113

**ICAO:** Amyl Nitrites / 3 / UN1113

**IMO:** Amyl Nitrites / 3.2 / UN1113

**PACKING GROUP:** II

END