

## MATERIAL SAFETY DATA SHEET

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### Section I - IDENTITY

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**Trade Name:** RESPIRAM™

**Common:** Doxapram Hydrochloride 20 mg/mL; 20 mL multiple doses

**Chemical Names:** 2-Pyrrolidinone, 1-ethyl-4-[2-(4-morpholinyl)ethyl]3,3-dephenyl-, monhydrochloride, monohydrate

**Synonyms:** AHR-619, Doxapram Hydrochloride Hydrate, Doxapram Hydrochloride Monohydrate, Stimulexin

**Emergency Telephone Number:** Chemtrec: 1(800)424-9300

**Telephone Number for Info.:** (440)232-3320 -or- (800)562-4797

**Medical Emergency:** Professional Services 1(800)521-5169

**Date Prepared:** August 07, 2007

**Date Revised:**

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### Section II - HAZARDOUS INGREDIENTS/COMPOSITION INFORMATION

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Component	%	CAS#	OSHA PEL	ACGIH TLV	Other Limits Recommended
Doxapram Hydrochloride	2	7081-53-0	NONE	NONE	NONE
Benzyl Alcohol	0.9	100-51-6	NONE	NONE	NONE
Water for Injection	97.1	7732-18-5	NONE	NONE	NONE

Doxapram Hydrochloride is a sterile injectable liquid drug provided in a vial.

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### Section III - HEALTH HAZARD DATA

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**Routes of Entry:** Under normal use under the care of a physician, Doxapram Hydrochloride presents little hazard. It may be absorbed into the skin, inhaled or accidentally ingested.

**Health Hazard (Acute & Chronic):** Doxapram Hydrochloride is a drug used for respiratory system stimulation especially for post anesthesia recovery. It affects the respiratory and central nervous systems.

**Carcinogenicity:** NTP? NO IARC Monographs? NONE OSHA Regulated? NO

**Signs & Symptoms of Exposure:** Accidental ingestion may result in nausea, vomiting, and diarrhea. Short-term contact may cause eye and dermal and respiratory system irritation. More serious effects may be rapid breathing, irregular heartbeat, increased blood pressure and trembling. May cause an allergic reaction in sensitive individuals.

**Medical Conditions Generally Aggravated by Exposure:** Persons who have heart conditions, severe high blood pressure, head injury or cerebral palsy, respiratory or pulmonary diseased, hyperthyroidism, pheochromocytoma and impaired liver or kidney function.

**Hazard Category: 2**

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#### **Section IV - FIRST AID MEASURES**

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**Eye Exposure:** Flush eyes with large volumes of water for 15 or more minutes.

**Skin Exposure:** Wash skin with cool, soapy water for 15 minutes.

**Ingestion:** If ingestion occurs, flush mouth with water and seek medical attention immediately. If person is conscious, induce vomiting. Never induce vomiting on an unconscious person.

**Inhalation:** Remove from exposure. If difficulty breathing, administer oxygen. Seek attention of a physician immediately. When appropriate and trained in CPR, provide artificial respiration.

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#### **Section V - FIRE AND EXPLOSION HAZARD DATA**

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**Flash Point (Method Used):** Not Applicable **LEL:** Not Applicable **UEL:** Not Applicable

**Flammable Limits:** Not Applicable

**Extinguishing Media:** Use water or an ABC multi-purpose extinguisher.

**Special Fire Fighting Procedures:** As with all fires, evacuate personnel to a safe area. Fire fighters should wear self-contained breathing apparatus to avoid inhalation of smoke. Product is aqueous based and is not expected to present a fire hazard concern.

**Unusual Fire/Explosion Hazards:** Heat of the fire could cause vials to burst.

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#### **Section VI - ACCIDENTAL RELEASE INFORMATION**

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**Release to Land:** Absorb Doxapram Hydrochloride with absorbent materials and dispose according to local, state, and federal guidelines.

**Release to Air:** If aerosolized, reduce exposures by ventilating area; clean up spill immediately to prevent evaporation

**Release to Water:** Refer to local water authority. Drain disposal is not recommended; however, refer to local, state, and federal disposal guidelines.

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#### **Section VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

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**Steps to be taken in case material is released or spilled:** See Section VI above.

Wear latex or nitrile gloves and safety glasses when cleaning spills. A dust/mist respirator (N95) may be necessary if excessive aerosols are generated.

**Waste Disposal Method:** Incineration in an approved incinerator is recommended. Refer to local, state, and federal rules.

**Precautions to be taken in handling and storing:** Store below 30°C. Follow instructions provided in packaging.

**Other Precautions:** NONE

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## Section VIII - CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

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**Respiratory Protection:** Under normal use, respirators are not required. If aerosols are generated, a disposable dust/mist respirator (N95) may be used. Personnel wearing respirators should be fit tested and approved for respirator use under the OSHA Respiratory Protection Standard 29 CFR 1910.134.

**Ventilation:** Handle product in a well-ventilated area.

**Protective Gloves:** Latex or nitrile

**Eye Protection:** Safety glasses

**Other Protective Clothing or Equipment:** Lab Coat

**Work/Hygienic Practices:** Wash hands following use. No eating, drinking, or smoking while handling this product.

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## Section IX - PHYSICAL/CHEMICAL CHARACTERISTICS

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**Physical State:** Liquid **Specific Gravity:** Approx. to water

**Appearance and Odor:** Clear colorless solution **Melting Point:** Approx. 0°C

**Boiling Point:** Approx. 100°C **Evaporation Rate:** Approx. to water

**Vapor Pressure:** Not available **Solubility in Water:** Soluble

**Vapor Density:** Not available **pH:** 3.5-5.0

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## Section X - STABILITY AND REACTIVITY DATA

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**Stability:** Stable

**Incompatibility (Materials to Avoid):** Store away from base/alkaline and water reactive materials.

**Hazardous Decomposition or Byproducts:** Decomposition products of this compound may include potentially hazardous byproducts of nitrogen oxides, and hydrogen chloride. Emits toxic fumes under fire conditions.

**Hazardous Polymerization:** Will not occur

**Conditions to Avoid:** Storage near alkaline and water reactive materials

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## Section XI - TOXICOLOGICAL INFORMATION

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For Doxapram Hydrochloride (active ingredient) RTECS Number UY5770000

LD<sub>50</sub> rat, intravenous = 72 mg/kg

LD<sub>50</sub> rat, oral = 261 mg/kg

LD<sub>50</sub> rat, intraperitoneal = 174 mg/kg

LD<sub>50</sub> rat, subcutaneous = 312 mg/kg

LD<sub>50</sub> mouse, oral = 270 mg/kg

LD<sub>50</sub> dog, oral = 150 mg/kg

LD<sub>50</sub> dog, intravenous = 40 mg/kg

Additional reproductive health data is available from the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS).

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**Section XII - ENVIRONMENTAL IMPACT INFORMATION**

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Information is currently not available on the environmental impact of Doxapram Hydrochloride.  
Handle in a manner to prevent spills or releases to the environment.

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**Section XIII - DISPOSAL INFORMATION**

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Dispose of by incineration at an approved/permitted incinerator.  
Review local, state, and federal regulations for your regulatory area.

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**Section XIV - TRANSPORTATION INFORMATION**

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Doxapram Hydrochloride solution is not a DOT hazardous material.  
Doxapram Hydrochloride is not a DOT Marine Pollutant.

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**Section XV - REGULATORY INFORMATION**

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SARA 313 listed: NO  
CERCLA listed: NO  
RCRA listed: NO

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**Section XVI - OTHER DATA**

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1. Use of this product should be through or under the direction of a veterinarian.
2. This MSDS does not address therapeutic use of this material.

The information provided is believed to be complete and accurate. It is the user's responsibility to use the information according to their application. Modern Veterinary Therapeutics, LLC assumes no additional liability or responsibility resulting from the use of or reliance on this information.