

## SECTION 1: IDENTIFICATION

### 1.1. Product Identifier

**Product Form:** Solution

**Product Name:** Papaverine Hydrochloride Injection, USP

**Product Code:** 14789-121-05 (10 pack carton); 14789-121-07 (2 mL Single-dose Vial)

### 1.2. Intended Use of the Product

**Use of the substance/mixture:** Various conditions accompanied by spasm of smooth muscle, such as vascular spasm associated with acute myocardial infarction (coronary occlusion), angina pectoris, peripheral and pulmonary embolism, peripheral vascular disease in which there is a vasospastic element, or certain cerebral angiospastic states; and visceral spasm, as in ureteral, biliary, or gastrointestinal colic.

### 1.3. Name, Address, and Telephone of the Responsible Party

#### Company

Nexus Pharmaceuticals, Inc.

400 Knightsbridge Parkway

Lincolnshire, IL 60069

USA

1-847-996-3790

[www.nexuspharma.net](http://www.nexuspharma.net)

### 1.4. Emergency Telephone Number

**Emergency Number** : CHEMTREC 1-800-424-9300

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

**Classification (GHS-US)**

Not classified

### 2.2. Label Elements

**GHS-US Labeling**

No labeling applicable

**2.3. Other Hazards** Exposure to this product may result in excessive sedation, central nervous system depression, headache, malaise, skin rash, vomiting, weakness, anorexia, constipation or diarrhea. Increases in heart rate, blood pressure and depth of respiration may be noted. Refer to patient insert for more information.

**2.4. Unknown Acute Toxicity (GHS-US)** No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product Identifier	%	Classification (GHS-US)
Water for injection	(CAS No) 7732-18-5	96.5 - 97	Not classified
Papaverine Hydrochloride	(CAS No) 61-25-6	3	Acute Tox. 4 (Oral), H302
Disodium EDTA, dihydrate	(CAS No) 6381-92-6	0.1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation: dust, mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Aquatic Chronic 3, H412
Sodium citrate, dihydrate	(CAS No) 6132-04-3	Used to adjust pH	Comb. Dust
Citric acid	(CAS No) 77-92-9	Used to adjust pH	Comb. Dust Eye Irrit. 2A, H319

Full text of H-phrases: see section 16

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## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First Aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). In the event of accidental injection, immediately call a poison center or seek medical advice.

**First-aid Measures After Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Seek medical attention.

**First-aid Measures After Skin Contact:** Remove contaminated clothing. Flush with copious quantities of water for 15 minutes. Seek medical advice.

**First-aid Measures After Eye Contact:** Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.

**First-aid Measures After Ingestion:** Rinse mouth. Do NOT induce vomiting.

### 4.2. Most important symptoms and effects, both acute and delayed

**Symptoms/Injuries:** Not expected to present a significant hazard under anticipated conditions of normal use. Please refer to the package insert for more detailed information.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Water spray, dry chemical, foam, carbon dioxide.

**Unsuitable Extinguishing Media:** A heavy water stream may spread burning liquid. CAUTION: Carbon dioxide is an asphyxiant. Lack of oxygen can be fatal.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Reactivity:** Hazardous reactions will not occur under normal conditions.

### 5.3. Advice for Firefighters

**Firefighting Instructions:** Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Firefighters must use full bunker gear including NIOSH-approved positive-pressure self-contained breathing apparatus to protect against potential hazardous combustion and decomposition products.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid all unnecessary exposure. Do not breathe vapour or mist.

#### 6.1.1. For Non-emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE). Refer to section 8.2.

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

**Emergency Procedures:** Ventilate area.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and Material for Containment and Cleaning Up

**Methods for Cleaning Up:** Vacuum spillage with a vacuum cleaner having a high efficiency particulate (HEPA) filter, or absorb liquid with clay absorbent, absorbent pads or paper towels. Use plastic tools to scoop up, sweep or containerize spilled material. Use plastic drums to contain spilled materials. Wipe working surfaces to dryness, and then wash with soap and water.

### 6.4. Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store at 20 - 25 °C (68 - 77 °F) Excursions permitted to 15 - 30 °C (59 - 86 °F) (See USP Controlled Room Temperature)

**Incompatible Products:** Strong bases. Strong oxidizers.

### 7.3. Specific End Use(s)

Pharmaceutical.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

### 8.2. Exposure Controls

**Appropriate Engineering Controls** : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

**Personal Protective Equipment** : Gloves. Safety glasses.



**Hand Protection** : Wear chemically resistant protective gloves.

**Eye Protection** : Chemical goggles or safety glasses.

**Skin and Body Protection** : Wear suitable protective clothing. Wash contaminated clothing before reuse.

**Respiratory Protection** : In case of inadequate ventilation wear respiratory protection.

**Other Information** : When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear, colorless to pale yellow
Odor	: May possess an alcohol odor
Odor Threshold	: No data available
pH	: 3.0 - 4.5
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: $\approx 100^{\circ}\text{C}$ (212 $^{\circ}\text{F}$ )
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor Pressure	: No data available
Relative Vapor Density at 20 $^{\circ}\text{C}$	: No data available
Specific Gravity	: $\approx 1.0$
Solubility	: Soluble in water
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

**9.2. Other Information** No additional information available

## SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures.
- 10.5. Incompatible Materials:** Strong oxidizers. Strong bases.
- 10.6. Hazardous Decomposition Products:** Thermal decomposition generates: Carbon oxides ( $\text{CO}$ ,  $\text{CO}_2$ ), Halogenated compounds, Nitrogen oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information On Toxicological Effects

**Acute Toxicity:** Not classified

<b>Water (7732-18-5)</b>	
LD50 Oral Rat	> 90000 mg/kg
<b>Papaverine Hydrochloride (61-25-6)</b>	
LD50 Oral Rat	360 mg/kg

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<b>Citric acid (77-92-9)</b>	
<b>LD50 Oral Rat</b>	5400 mg/kg
<b>LD50 Dermal Rat</b>	> 2000 mg/kg
<b>Disodium EDTA, dihydrate (6381-92-6)</b>	
<b>ATE (Oral)</b>	500.00 mg/kg body weight
<b>ATE (Dermal)</b>	1,100.00 mg/kg body weight
<b>ATE (Dust/Mist)</b>	1.50 mg/l/4h

**Skin Corrosion/Irritation:** Not classified (pH: 3 - 4.5)

**Serious Eye Damage/Irritation:** Not classified (pH: 3 - 4.5)

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Aspiration Hazard:** Not classified

## SECTION 12: ECOLOGICAL INFORMATION

**12.1. Toxicity** Not classified

<b>Citric acid (77-92-9)</b>	
<b>LC50 Fish 1</b>	1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

**12.2. Persistence and Degradability** Not established

<b>Citric acid (77-92-9)</b>	
<b>Persistence and Degradability</b>	Readily biodegradable in water.

**12.3. Bioaccumulative Potential** Not established

<b>Citric acid (77-92-9)</b>	
<b>Log Pow</b>	-1.72 (at 20 °C)

**12.4. Mobility in Soil** No additional information available

**12.5. Other Adverse Effects**

**Other Information** : Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

**Sewage Disposal Recommendations:** Do not empty into drains; dispose of this material and its container in a safe way.

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, and international regulations.

## SECTION 14: TRANSPORT INFORMATION

**14.1. In Accordance with DOT** Not regulated for transport

**14.2. In Accordance with IMDG** Not regulated for transport

**14.3. In Accordance with IATA** Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

**15.1 US Federal Regulations**

<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Papaverine Hydrochloride (61-25-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Citric acid (77-92-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

**15.2 US State Regulations**

Neither this product nor its chemical components appear on any US state lists.

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## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### GHS Full Text Phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation: dust, mist)	Acute toxicity (inhalation: dust, mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Comb. Dust	Combustible Dust
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
Comb. Dust	May form combustible dust concentrations in air
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H412	Harmful to aquatic life with long lasting effects

Refer to Nexus Pharmaceuticals, Inc prescribing information for further information at:

<https://www.nexuspharma.net/products/>

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