

SAFETY DATA SHEET

Preparation Date: 12/21/2017

Revision Date: 8/24/2018

Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: PA126
Product Name: PAPAVERINE HYDROCHLORIDE, USP

Other means of identification

Synonyms: Chlorhydrate de papaverine (French)
 6,7-Dimethoxy-1-veratrylisoquinoline hydrochloride
 Isoquinoline, 6,7-dimethoxy-1-veratryl-, hydrochloride
 Papanerin-HCl (German)
 Papavarine chlorhydrate
 Papaverine chlorhydrate
 Papaverine monohydrochloride
 6,7,3',4'-Tetramethoxy-1-benzylisoquinoline hydrochloride
 1-((3,4-Dimethoxyphenyl)methyl)-6,7-dimethoxyisoquinoline Hydrochloride

CAS #: 61-25-6
RTECS # NW8575000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
 Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

| | |
|-----------------------|------------|
| Acute toxicity - Oral | Category 3 |
|-----------------------|------------|

Label elements

| |
|-------------------|
| Danger |
| Hazard statements |

Toxic if swallowed



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Precautionary Statements - Response

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % |
|--------------------------|---------|----------|
| Papaverine Hydrochloride | 61-25-6 | 100 |

4. FIRST AID MEASURES

First aid measures

General Advice:

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

Eye Contact:

Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Toxic if swallowed.

Most important symptoms and effects, both acute and delayed

Symptoms

- May cause eye/skin/respiratory tract irritation
- Upset stomach
- May cause abdominal discomfort
- May cause nausea
- May cause constipation or diarrhea
- May cause headache
- May cause drowsiness or dizziness
- vertigo
- tiredness
- Weakness
- Skin rash
- May cause decreased appetite
- May cause loss of appetite
- Sweating and flushing of skin
- Weak, rapid pulse or rapid heart rate (Tachycardia)
- Hypotension
- Cardiac arrhythmias
- May cause metabolic acidosis
- May cause hypokalemia
- May cause involuntary eye movements
- Diplopia
- Shallow respiration

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Dry chemical. Carbon dioxide (CO₂). Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon Monoxide, Carbon Dioxide. Nitrogen Oxides. Hydrogen chloride.

Specific hazards: No information available.

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Avoid breathing dust.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe dust. Do not ingest. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed. Keep in a well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Protect from light. Sensitive to light. Store in light-resistant containers. Store in a segregated and approved area.

Incompatible Materials:

Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Components | CAS-No. | OSHA | NIOSH | ACGIH | AIHA WEEL |
|--------------------------|---------|------|-------|-------|-----------|
| Papaverine Hydrochloride | 61-25-6 | None | None | None | None |

Canada

| Components | CAS-No. | Canada - Alberta | Canada - British Columbia | Canada - Ontario | Canada - Quebec |
|------------|---------|------------------|---------------------------|------------------|-----------------|
| Papaverine | 61-25-6 | None | None | None | None |

| | | | | | |
|---------------|--|--|--|--|--|
| Hydrochloride | | | | | |
|---------------|--|--|--|--|--|

Australia and Mexico

| Components | CAS-No. | Australia | Mexico |
|--------------------------|---------|-----------|--------|
| Papaverine Hydrochloride | 61-25-6 | None | None |

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles or Safety glasses with side-shields.
- Skin and body protection:** Gloves
Chemical resistant apron
Long sleeved clothing
- Respiratory protection:** Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|--|--|--|
| Physical state: Solid | Appearance: Crystalline powder. Crystals. | Color: White. |
| Odor: Odorless. | Taste No information available. | Formula: C20H21NO4.HCl |
| Molecular/Formula weight (g/mole): 375.85 g/mole | Flammability: No information available | Flashpoint (°C/°F): No information available. |
| Flash Point Tested according to: Not available | Autoignition Temperature (°C/°F): No information available | Lower Explosion Limit (%): No information available |
| Upper Explosion Limit (%): No information available | Melting point/range(°C/°F): 220-226°C (428-438.8°F) | Decomposition temperature(°C/°F): No information available |
| Boiling point/range(°C/°F): No information available | Bulk density: No information available | Density (g/cm3): No information available |
| Specific gravity: No information available | pH: No information available | Vapor pressure @ 20°C (kPa): No information available |

Evaporation rate:
No information available

Vapor density:
No information available

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

**Partition coefficient
(n-octanol/water):**
No information available

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Soluble in Water
Soluble in Chloroform
Practically insoluble in Ether

10. STABILITY AND REACTIVITY

Reactivity

May react with strong oxidizers

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Excess Heat. Incompatible materials. Exposure to light. Avoid dust formation.

Incompatible Materials: Strong oxidizing agents

Hazardous decomposition products: No information available.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Inhalation. Ingestion.

Acute Toxicity

Component Information

Papaverine Hydrochloride

CAS-No. 61-25-6

LD50/oral/rat = 68.8 mg/kg Oral LD50 Rat

LD50/oral/mouse = 130 mg/kg

LD50/dermal/rabbit = No information available

LD50/dermal/rat = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = No information available

Product Information

Product code: PA126

Product name: PAPAVERINE
HYDROCHLORIDE, USP

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LD50/oral/rat =
VALUE- Acute Tox Oral = 68.8 mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = 130 mg/kg

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation.

Eye Contact: May cause eye irritation.

Inhalation May cause irritation of respiratory tract.

Ingestion Toxic if swallowed. May cause upset stomach. May cause loss of appetite. May cause nausea. May cause constipation. May cause diarrhea. May cause flushing and sweating. May affect behavior/central nervous system (dizziness, headache). It may affect behavior/central nervous system (drowsiness). May affect behavior/central nervous system (tiredness). May affect behavior/central nervous system (somnolence, sedation, sleepiness). May cause weakness. May affect the cardiovascular system (tachycardia). May affect the cardiovascular system (hypotension). May affect the cardiovascular system (cardiac arrhythmias). May cause metabolic acidosis. May cause hypokalemia. May cause hyperglycemia. May cause nystagmus (involuntary eye movements). May affect respiration (shallow respiration).

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity No information available.

Sensitization: No information available.

Mutagenic Effects: Mutations in microorganisms
Experiments with bacteria and/or yeast have shown mutagenic effects
Cytogenetic analysis (Hamster fibroblast)
Cytogenic analysis (hamster lung)

Carcinogenic effects: Not considered carcinogenic.

| Components | CAS-No. | IARC | ACGIH - Carcinogens | NTP | OSHA HCS - Carcinogens | Australia - Notifiable Carcinogenic Substances | Australia - Prohibited Carcinogenic Substances |
|--------------------------|---------|------------|---------------------|------------|------------------------|--|--|
| Papaverine Hydrochloride | 61-25-6 | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

| Components | CAS-No. | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|--------------------------|---------|------------------------|------------------------|------------------------|------------------------|
| Papaverine Hydrochloride | 61-25-6 | None | None | None | None |

14. TRANSPORT INFORMATION

DOT

UN-No: UN1544
Proper Shipping Name: Alkaloids, solid, n.o.s.(papaverine hydrochloride)

Product code: PA126

Product name: PAPAVERINE
HYDROCHLORIDE, USP

Hazard Class: 6.1
Subsidiary Class No information available
Packing group: III
Emergency Response Guide Number 151
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions IB8, IP3, T1, TP33
Symbol(s): [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.
Description: UN1544, Alkaloids, solid, n.o.s., 6.1, III

TDG (Canada)

UN-No: UN1544
Proper Shipping Name: Alkaloids, solid, n.o.s.(papaverine hydrochloride)
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant No Information available
Description: UN1544, Alkaloids, solid, n.o.s., 6.1, III

ADR

UN-No: UN1544
Proper Shipping Name: Alkaloids, solid, n.o.s.(papaverine hydrochloride)
Hazard Class: 6.1
Packing Group: III
Subsidiary Risk: No information available
Special Provisions 43, 274
Description: UN1544, Alkaloids, solid, n.o.s., 6.1, III

IMO / IMDG

UN-No: UN1544
Proper Shipping Name: Alkaloids, solid, n.o.s.(papaverine hydrochloride)
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant No information available
EMS: F-A
Special Provisions 43, 223, 274
Description UN1544, Alkaloids, solid, n.o.s. (PAPAVERINE HYDROCHLORIDE), 6.1, III

RID

UN-No: UN1544
Proper Shipping Name: Alkaloids, solid, n.o.s.(papaverine hydrochloride)
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
Special Provisions 43, 274
Description: UN1544, Alkaloids, solid, n.o.s., 6.1, III

ICAO

UN-No: UN1544
Proper Shipping Name: Alkaloids, solid, n.o.s.(papaverine hydrochloride)
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
Description: UN1544, Alkaloids, solid, n.o.s., 6.1, III
Special Provisions A3, A5, A6

Product code: PA126

Product name: PAPAVERINE
HYDROCHLORIDE, USP

IATA

UN-No: UN1544
Proper Shipping Name: Alkaloids, solid, n.o.s.(papaverine hydrochloride)
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 6L
Special Provisions No information available
Description: UN1544, Alkaloids, solid, n.o.s., 6.1, III

| |
|-----------------------------------|
| 15. REGULATORY INFORMATION |
|-----------------------------------|

International Inventories

| Components | CAS-No. | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | CHINA | Australia (AICS) | EINECS-No. |
|---------------------------------|---------|---------------|-------------|---------------------|-------------|-------------|------------------|----------------------|
| <i>Papaverine Hydrochloride</i> | 61-25-6 | PresentACTIVE | Not present | Not present | Not present | Not present | Present | Present 200-502-1 |

U.S. Regulations**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.****Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

| Components | CAS-No. | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|--------------------------|---------|------------|------------------------|----------------------------|-------------------------------|
| Papaverine Hydrochloride | 61-25-6 | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Components | CAS-No. | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting de minimis |
|---------------------------------|---------|---|---|--|---------------------------------|------------------------------------|
| <i>Papaverine Hydrochloride</i> | 61-25-6 | None | None | None | None | None |

U.S. TSCA

| Components | CAS-No. | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|--------------------------|---------|---|--|
| Papaverine Hydrochloride | 61-25-6 | Not Applicable | Not Applicable |

Canada**WHMIS 2015 - GHS Classifications**

WHMIS 2015 Hazard Classification Information:

The WHMIS 2015 classification of this product has not been validated or reviewed yet.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

D1B Toxic materials

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

| Components | CAS-No. | Canada (DSL) | Canada (NDSL) |
|--------------------------|---------|--------------|---------------|
| Papaverine Hydrochloride | 61-25-6 | Present | Not Listed |

| Components | CAS-No. | CEPA Schedule I - Toxic Substances |
|--------------------------|---------|---|
| Papaverine Hydrochloride | 61-25-6 | Not listed |
| Components | CAS-No. | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
| Papaverine Hydrochloride | 61-25-6 | Not listed |

EU Classification

EU GHS - SV - CLP 1272/2008

| Components | CAS-No. | EU GHS - SV - CLP (1272/2008) |
|--------------------------|---------|-------------------------------|
| Papaverine Hydrochloride | 61-25-6 | No information |

EU - CLP (1272/2008)

R-phrase(s)

R25 - Toxic if swallowed.

S -phrase(s)

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

| Components | CAS-No. | Classification | Concentration Limits: | Safety Phrases |
|--------------------------|---------|----------------|-----------------------|----------------|
| Papaverine Hydrochloride | 61-25-6 | | No information | |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

T - Toxic

T



16. OTHER INFORMATION

Preparation Date: 12/21/2017
 Revision Date: 8/24/2018
 Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet