

SAFETY DATA SHEETS

This SDS packet was issued with item:

078917384

N/A

MATERIAL SAFETY DATA SHEET

Product Name: Pentothal (Thiopental Sodium for Injection, USP)

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Manufacturer Name And Address Hospira Inc.
275 North Field Drive
Lake Forest, Illinois USA
60045

Emergency Telephone CHEMTREC: North America: 800-424-9300;
International 1-703-527-3887; Australia (02) 8014 4880

Hospira, Inc., Non-Emergency 224-212-2000

Product Name Pentothal (Thiopental Sodium for Injection, USP)

Synonyms Sodium 5-ethyl-5-(1-methylbutyl)-2-thiobarbiturate; Pentothal Sodium; Sodium thiopentobarbital

2. COMPOSITION/INFORMATION ON INGREDIENTS

Active Ingredient Name Thiopental Sodium

Chemical Formula $C_{11}H_{17}N_2O_2S \bullet Na$

Component	Approximate Percent by Weight	CAS Number	RTECS Number
Sodium Carbonate	4	497-19-8	VZ4050000
Thiopental Sodium	94	71-73-8	CQ6475000

3. HAZARD INFORMATION

Carcinogen List

Substance	IARC	NTP	OSHA
Sodium Carbonate	Not Listed	Not Listed	Not Listed
Thiopental Sodium	Not Listed	Not Listed	Not Listed

Emergency Overview Pentothal (Thiopental Sodium for Injection, USP) is a powder containing thiopental sodium, a short-acting thiobarbiturate that produces depression of the central nervous system, inducing hypnosis and anesthesia, but not analgesia. It produces hypnosis within 30 to 40 seconds of intravenous injection. In the workplace, this material should be considered potentially irritating to the skin, eyes, and respiratory tract. Based on clinical use, possible target organs include the central nervous system, respiratory system, and cardiovascular system.

Occupational Exposure Potential Information on the absorption of this material via inhalation or skin contact is not available. Avoid dust or aerosol generation and skin contact.

Signs and Symptoms None known from workplace exposures. In clinical use, adverse reactions may include respiratory depression, myocardial depression, cardiac arrhythmias, prolonged somnolence and recovery, sneezing, coughing, bronchospasm, laryngospasm and shivering. Anaphylactic and anaphylactoid reactions with symptoms including urticaria, bronchospasm, vasodilation and edema have been reported. Rarely, immune hemolytic anemia with renal failure and radial

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nerve palsy has been reported. Overdosage, or too rapid administration, may produce a dramatic fall in blood pressure, apnea, occasional laryngospasm, coughing and other respiratory difficulties.

Medical Conditions Aggravated by Exposure	Pre-existing sensitivity to thiopental sodium or other barbiturates; pre-existing central nervous system, respiratory system, or cardiovascular system disorders.
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4. FIRST AID MEASURES

Eye contact	Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.
Skin contact	Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.
Inhalation	Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.
Ingestion	Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

5. FIRE FIGHTING MEASURES

Flammability	None anticipated from this product.
Fire & Explosion Hazard	None anticipated from this product. However, generation of airborne dusts should be minimized.
Extinguishing media	As with any fire, use extinguishing media appropriate for primary cause of fire.
Special Fire Fighting Procedures	No special provisions required beyond normal firefighting equipment such as flame and chemical resistant clothing and self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Spill Cleanup and Disposal	Isolate area around spill. Put on suitable protective clothing and equipment as specified by site spill procedures. Collect powder using procedures that minimize the generation of airborne dust. If a spill occurs after reconstitution, absorb the liquid with suitable material and clean affected area with soap and water. Dispose of spill materials according to the applicable federal, state, or local regulations.
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7. HANDLING AND STORAGE

Handling	No special handling required under conditions of normal product use.
Storage	No special storage required for hazard control. For product protection, follow storage recommendations noted on the product case label, the primary container label, or the product insert.
Special Precautions	Protect from freezing, light, oxidizing materials, and extreme heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	Type	Exposure limits			
		mg/m ³	ppm	µg/m ³	Note
Thiopental Sodium	Hospira EEL	N/A	N/A	1000	8hr TWA
Thiopental Sodium	Hospira STEL	N/A	N/A	6000	STEL
Sodium Carbonate	Not Applicable	N/A	N/A	N/A	None Established

Respiratory protection

Respiratory protection is normally not needed during intended product use. However, if the generation of dusts or aerosols is likely, and engineering controls are not considered adequate to control potential airborne exposures, the use of an approved air-purifying respirator with a HEPA cartridge (N95 or equivalent) is recommended under conditions where airborne dust or aerosol concentrations are not expected to be excessive. For uncontrolled release events, or if exposure levels are not known, provide respirators that offer a high protection factor such as a powered air purifying respirator or supplied air. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions require respirator use. Personnel who wear respirators should be fit tested and approved for respirator use as required.

Skin protection

If skin contact with this material is likely, the use of latex or nitrile gloves is recommended.

Eye protection

Eye protection is normally not required during intended use. However, if eye contact is likely to occur, the use of chemical safety goggles (as a minimum) is recommended.

Engineering Controls

Engineering controls are normally not needed during the normal use of this material.

9. PHYSICAL/CHEMICAL PROPERTIES

Appearance/Physical State	Solid
Color	Yellowish-white
Odor	Garlic like
Odor Threshold:	NA
pH:	Reconstituted 4.5 to 7.0 depending on diluent and product
Melting point/Freezing point:	NA
Initial Boiling Point/Boiling Point	NA
Range:	
Evaporation Rate:	NA
Flammability (solid, gas):	NA
Upper/Lower Flammability or	NA
Explosive Limits:	
Vapor Pressure:	NA
Vapor Density:	NA
Specific Gravity:	NA
Solubility:	Soluble in water and alcohol. Insoluble in ether, benzene, or petroleum ether
Partition coefficient: n-octanol/water:	NA
Auto-ignition temperature:	NA
Decomposition temperature:	NA

10. STABILITY AND REACTIVITY

Reactivity	Not determined.
Chemical Stability	Stable under standard use and storage conditions.
Hazardous Reactions	Not determined
Conditions to avoid	Acidic diluents or an acid environment may cause a visible precipitate.
Incompatibilities	Not determined
Hazardous decomposition products	Not determined. During thermal decomposition, it may be possible to generate irritating vapors and/or toxic fumes of carbon oxides (COx), nitrogen oxides (NOx), and sulfur oxides (SOx).
Hazardous Polymerization	Not anticipated to occur with this material.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Not determined for the product formulation. Information for the ingredients is as follows:

Ingredient(s)	Percent	Test Type	Route of Administration	Value	Units	Species
Thiopental Sodium	100	LD50	Oral	117 208	mg/kg mg/kg	Rat Mouse
Thiopental Sodium	100	LD50	Intravenous	43.6 57 31 36	mg/kg mg/kg mg/kg mg/kg	Rat Mouse Rabbit Dog
Thiopental	100	LD50	Oral	600	mg/kg	Mouse
Thiopental	100	LD50	Intravenous	70	mg/kg	Mouse
Sodium Carbonate	100	LD50	Oral	4090 6600	mg/kg mg/kg	Rat Mouse

Aspiration Hazard	None anticipated from normal handling of this material.
Dermal Irritation/Corrosion	Not anticipated from normal use of this product. However, inadvertent contact may produce slight irritation to the skin.
Ocular Irritation/Corrosion	Not anticipated from normal use of this product. However, inadvertent contact of this product with the eyes may produce irritation with redness and pain.
Dermal or Respiratory Sensitization	None anticipated from normal handling of this material. In clinical use, anaphylactic and anaphylactoid reactions with symptoms including urticaria, bronchospasm, vasodilation and edema have been occasionally reported.
Reproductive Effects	No developmental defects were reported in the offspring of female mice receiving dosages up to 100 mg/kg by injection on day 11 of pregnancy. Some reduction in fetal weight was found at dosages ≥ 50 mg/kg. In another study, thiopental was injected at doses of 50 and 100 mg into pregnant rats on the 4th day of gestation and no defective offspring were found.

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Mutagenicity	Studies to assess the genotoxic potential of thiopental sodium have not been conducted.
Carcinogenicity	Studies to assess the carcinogenic potential of thiopental sodium have not been conducted.
Target Organ Effects	Based on clinical use, possible target organs include the central nervous system, respiratory system, and cardiovascular system.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity	Not available for product. Information for sodium carbonate is listed below: LC50 = 320 mg/L; 96 Hr.; static Conditions, for Bluegill/Sunfish.
Persistence/Biodegradability	Not determined
Bioaccumulation	Not determined
Mobility in Soil	Not determined

13. DISPOSAL CONSIDERATIONS

Waste Disposal	All waste materials must be properly characterized by the waste generator. Disposal of all pharmaceuticals should be performed in accordance with the federal, state or local regulatory requirements.
Container Handling and Disposal	Dispose of container and unused contents in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

ADR/ADG/ DOT STATUS:	Regulated
Proper Shipping Name:	Toxic Solids, Organic, N.O.S. (Substituted Dione)
Hazard Class:	6.1
UN number:	UN2811
Packing group:	III
Reportable Quantity:	N/A
IMDG STATUS:	Regulated
Proper Shipping Name:	Toxic Solids, Organic, N.O.S. (Substituted Dione)
Hazard Class:	6.1
UN number:	UN2811
Packing group:	III
Reportable Quantity:	N/A
ICAO/IATA STATUS:	Regulated
Proper Shipping Name:	Toxic Solids, Organic, N.O.S. (Substituted Dione)
Hazard Class:	6.1
UN number:	UN2811
Packing group:	III
Reportable Quantity:	N/A
Transport Comments:	None

15. REGULATORY INFORMATION

USA Regulations

Substance	TSCA Status	CERCLA Status	SARA 302 Status	SARA 313 Status	PROP 65 Status
Sodium Carbonate	Listed	Not Listed	Not Listed	Not Listed	Not Listed
Thiopental Sodium	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

RCRA Status Not Listed

U.S. OSHA Classification Toxic by Ingestion
Target Organ Toxin
Irritant

GHS Classification *In the EU, classification under GHS/CLP does not apply to certain substances and mixtures, such as medicinal products as defined in Directive 2001/83/EC, which are in the finished state, intended for the final user.:

Hazard Class Not Applicable

Hazard Category Not Applicable

Signal Word Not Applicable

Symbol Not Applicable

Prevention P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

Hazard Statement Not Applicable

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention. Wash hands after handling.

Get medical attention if you feel unwell.

EU Classification*

*Medicinal products are exempt from the requirements of the EU Dangerous Preparations Directive. Information provided below is for the pure drug substance Sodium Carbonate
Thiopental Sodium
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Classification(s): Not Applicable

Symbol: Not Applicable

Indication of Danger: Not Applicable

Risk Phrases: Not Applicable

Safety Phrases: S23 - Do not breathe vapor.
S24 - Avoid contact with skin.
S25 - Avoid contact with eyes.
S37/39 - Wear suitable gloves and eye/face protection.

16. OTHER INFORMATION:

Notes:

ACGIH TLV	American Conference of Governmental Industrial Hygienists – Threshold Limit Value
CAS	Chemical Abstracts Service Number
CERCLA	US EPA law, Comprehensive Environmental Response, Compensation, and Liability Act
DOT	US Department of Transportation Regulations
EEL	Employee Exposure Limit
IATA	International Air Transport Association
LD ₅₀	Dosage producing 50% mortality
NA	Not applicable/Not available
NE	Not established
NIOSH	National Institute for Occupational Safety and Health
OSHA PEL	US Occupational Safety and Health Administration – Permissible Exposure Limit
Prop 65	California Proposition 65
RCRA	US EPA, Resource Conservation and Recovery Act
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act
STEL	15-minute Short Term Exposure Limit
TSCA	Toxic Substance Control Act
TWA	8-hour Time Weighted Average

MSDS Coordinator: Hospira GEHS

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Disclaimer:

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Material Safety Data Sheet

Part Numbers A5000.01, A5000.02, A5000.03, A5000.04 Rev 1

Section 1 Product and Company Information

Product Name	Dog Control Levels 1,2,3,4 (Canine Serum)
Company	Bioresource Technology Inc.
Address	1800 North Commerce Parkway Weston, Florida 33326
Technical Phone	800-553-5975
Fax	954-792-0830
Emergency Phone	954-792-5222

Section 2 Composition/Information on Ingredient

Substance Name	CAS#
Canine Serum	None

Chemical Family Canine Source Material

Section 3 Hazards Identification

Product possibly irritating to eyes, respiratory system and skin

Carcinogenic Effects: Not available

Mutagenic Effects: Not available

Teratogenic Effects: Not available

Developmental Toxicity: Not available

Section 4 First Aid Measures

Oral Exposure

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.



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, immediately wash skin with soap and copious amounts of water.

Eye Exposure

In case of contact with eyes, immediately flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers.

Section 5 Fire Fighting Measures

Flash Point

N/A

Autoignition Temp

N/A

Flammability

N/A

Extinguishing Media

Suitable: Use extinguishing media appropriate to surrounding fire conditions.

Firefighting

Protective Equipment: Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazards: Emits toxic fumes under fire conditions.

Section 6 Accidental Release Measures

Methods for Cleaning Up

Absorb on sand or vermiculite and place in a bag and hold for waste disposal

Wash spill site with 10% bleach and ventilate area after material pickup is complete.



Section 7 Handling and Storage

Handling

User Exposure: Avoid inhalation. Avoid contact with eyes, skin and clothing.
Avoid prolonged or repeated exposure.

Storage

Keep tightly closed.
Store frozen at $\leq -60^{\circ}\text{C}$

Section 8 Exposure Controls/ PPE

Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.
Chemical safety goggles. Compatible chemical resistant gloves

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 dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand: Compatible chemical resistant gloves

Eye: Chemical safety goggles

General Hygiene Measures

Wash thoroughly after handling.

Section 9 Physical/ Chemical Properties

Appearance Physical State: Frozen Liquid in Amber Vial

Property	Value
BP/BP range	N/A
MP/MP range	N/A
Freezing Point	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Bulk Density	N/A
Odor Threshold	N/A
Volatile%	N/A



Property	Value
VOC Content	N/A
Water content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Surface Tension	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp.	N/A
Refractive Index	N/A
Optical rotation	N/A
Solubility	N/A

N/A = not available

Section 10 Stability and Reactivity

Stability: Stable

Materials to avoid: Strong oxidizing agents.

Hazardous Decomposition Products

Nature of decomposition products not known.

Hazardous Polymerization

Will not occur.

Section 11 Toxicological Information

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

Conditions Aggravated by Exposure

The toxicological properties have not been thoroughly investigated.



Section 12 Ecological Information

No data available.

Section 13 Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation:
Observe all federal, state and local environmental regulations.

Section 14 Transport Information

DOT

Proper Shipping Name: None

Non-Hazardous for transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport/

Section 15 Regulatory Information

United States Regulatory Information

TSCA 8(b) inventory: No products were found

Canada Regulatory Information

WHMIS Classification: Not available

EEC Regulatory Information: Not available

HMIS (USA):

Health Hazard: 0

Fire Hazard: 0

Reactivity: 0

National Fire Protection Association (USA):

Health: 0

Flammability: 0

Reactivity: 0