GARDENA, CA
NEW BRUNSWICK, NJ

Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment
	Health Hazard 2 Fire Hazard 1 Reactivity 0	 See Section 15.

Section 1. Chemical Product and Company Identification

Common Name/ Trade Name	**Phenothiazine**
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248
Commercial Name(s)	Agrazine; Anitverm; Biverm; Contaverm; Fenoverm; Fentiazin; Helmetina; Lethelmin; Nemazene; Orimon; Padophene; Penthazine; Phenegic; Phenosan; Phenoverm; Phenovis; Phenoxur; Reconox; Souframine; Wurm-thional
Synonym	Dibenzoparathiazine; Thiodiphenylamine; Dibenzothiazine; Dibenzo-1,4-thiazine
Chemical Name	Phenothiazine
Chemical Family	Not available.
Chemical Formula	C12-H9-N-S
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248

Catalog Number(s).	PH137
CAS#	92-84-2
RTECS	SN5075000
TSCA	TSCA 8(b) inventory: Phenothiazine
CI#	Not available.

IN CASE OF EMERGENCY
CHEMTREC (24hr) 800-424-9300

CALL (310) 516-8000

Section 2.Composition and Information on Ingredients

		Exposure Limits			
Name	**CAS #**	**TWA (mg/m³)**	**STEL (mg/m³)**	**CEIL (mg/m³)**	**% by Weight**
1) Phenothiazine	92-84-2	5	10		100

Toxicological Data on Ingredients

Phenothiazine:
ORAL (LD50): Acute: 5000 mg/kg [Mouse]. 4000 mg/kg [Rabbit].

Section 3. Hazards Identification

Potential Acute Health Effects Hazardous in case of skin contact (irritant), of eye contact (irritant). Slightly hazardous in case of skin contact (sensitizer, permeator), of ingestion, of inhalation.

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Potential Chronic Health Effects	Slightly hazardous in case of skin contact (sensitizer). **CARCINOGENIC EFFECTS**: Not available. **MUTAGENIC EFFECTS**: Not available. **TERATOGENIC EFFECTS**: Not available. **DEVELOPMENTAL TOXICITY**: Not available. The substance may be toxic to blood, the nervous system, liver, skin, eyes. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Not available.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	May be combustible at high temperature.
Auto-Ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Products of Combustion	These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).
Fire Hazards in Presence of Various Substances	Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on Fire Hazards	As with most organic solids, fire is possible at elevated temperatures. Material in powder form, capable of creating a dust explosion.
Special Remarks on Explosion Hazards	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

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Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light-resistant containers. Air Sensitive

Section 8. Exposure Controls/Personal Protection

Engineering Controls	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.
Personal Protection	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	TWA: 5 (mg/m^3) from ACGIH (TLV) [United States] TWA: 5 STEL: 10 (mg/m^3) [Canada] TWA: 5 (mg/m^3) from NIOSH [United States] TWA: 5 (mg/m^3) [Australia] Skin notation or designation: There is a potential for contributation to overall exposure by cutaneous route either by contact with vapors or by direct contact. Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Solid. (Powdered solid. Granular solid. Flakes solid.)	**Odor**	Slight.
Molecular Weight	199.26 g/mole	**Taste**	Tasteless.
pH (1% soln/water)	Not available.	**Color**	Grayish-Green to Greenish Yellow
Boiling Point	371°C (699.8°F)		
Melting Point	185.1°C (365.2°F)		
Critical Temperature	Not available.		
Specific Gravity	Not available.		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	The product is more soluble in oil; log(oil/water) = 4.2		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water, diethyl ether, acetone.		

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Solubility	Easily soluble in acetone. Soluble in diethyl ether. Very slightly soluble in cold water. Freely soluble in benezene. Soluble in hot acetic acid. Slightly soluble in alcohol and mineral oils. Practically insoluble in petroleum ether.

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Excess heat, incompatible materials, light, air.
Incompatibility with various substances	Reactive with oxidizing agents, acids.
Corrosivity	Not available.
Special Remarks on Reactivity	Light and Air Sensitive. Readily oxidized by sunlight and air. Darkens to deep olive green on exposure to light.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 4000 mg/kg [Rabbit].
Chronic Effects on Humans	May cause damage to the following organs: blood, the nervous system, liver, skin, eyes.
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant). Slightly hazardous in case of skin contact (sensitizer, permeator), of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	May cause adverse reproductive effects (female fertility (post-implantation mortality)) based on animal data.
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Can cause skin irritation characterized by severe itching and reddening. Exposure to the dust can also result in pinkish-red colored hair, brown fingernails. Hair and fingernail colorations are due to a dyeing effect. The color change was said to intensify with increased or prolonged phenothiazine exposure. May cause skin photosensitization if exposed at concentrations sufficient to produce hair and fingernail discoloration. It may be absorbed through skin. Eyes: Dust may cause severe eye irritation. May cause photosensitized keratitis with corneal opacity or corneal edema, which only develops in sunlight. Inhalation: Dust may cause respiratory tract irritation. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting, diarrhea, abdominal pain/cramps or colic, anorexia, tachycardia (fast heartbeat), weak, rapid pulse. May affect behavior/central nervous system/nervous system (headache, dullness, weakness, posterior paralysis, incoodination, antipsychotic, coma). May also affect the liver (jaundice, hepatitis, enlarged liver), kidneys (hemoglobinuria), spleen, and blood (normocytic or hemolytic anemia, blood dyscrasias). Chronic Potential Health Effects: Skin: Repeated and prolonged contact may cause allergic dermatitis and photosensitization. It may be absorbed through the skin and repeated absorption may affect the blood (hemolytic anemia), liver (jaundice, hepatitis, enlarged liver), and spleen (enlarged spleen). Eyes: Repeated and prolonged exposure may cause conjunctivitis, dryness of eyes, discoloration of the conjunctiva, sclera, and skin surrounding the eyes. May affect vision (blurred vision, night blindness, dilated or slugglish pupils, corneal opacity, electrooculogram disturbances). Ingestion: Repeated exposure may cause similar symptoms to acute exposure.

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Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Disposal Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information

DOT Classification	Not a DOT controlled material (United States).
Identification	Not applicable.
Special Provisions for Transport	Not applicable.
DOT (Pictograms)	

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

Illinois toxic substances disclosure to employee act: Phenothiazine
Rhode Island RTK hazardous substances: Phenothiazine
Pennsylvania RTK: Phenothiazine
Minnesota: Phenothiazine
Massachusetts RTK: Phenothiazine
New Jersey: Phenothiazine
California Director's List of Hazardous Substances: Phenothiazine
TSCA 8(b) inventory: Phenothiazine
TSCA 8(d) H and S data reporting: Phenothiazine

California Proposition 65 Warnings

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 202-196-5).
Canada: Listed on Canadian Domestic Substance List (DSL).
China: Listed on National Inventory.
Japan: Listed on National Inventory (ENCS).
Korea: Listed on National Inventory (KECI).
Philippines: Listed on National Inventory (PICCS).
Australia: Listed on AICS.

Other Classifications

WHMIS (Canada) CLASS D-2B: Material causing other toxic effects (TOXIC).

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	DSCL (EEC)	R36/38- Irritating to eyes and skin.	S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37- Wear suitable gloves.

HMIS (U.S.A.)

Health Hazard	2
Fire Hazard	1
Reactivity	0
Personal Protection	E

National Fire Protection Association (U.S.A.)

Flammability
Health
Reactivity
Specific hazard

WHMIS (Canada) (Pictograms)

DSCL (Europe) (Pictograms)

TDG (Canada) (Pictograms)

ADR (Europe) (Pictograms)

Protective Equipment

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator or equivalent.

Splash goggles.

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Section 16. Other Information

MSDS Code	**P3510**
References	Not available.
Other Special Considerations	Not available.

Validated by Sonia Owen on 9/14/2007.

Verified by Sonia Owen.

Printed 9/27/2007.

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. 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 MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.