



Material Safety Data Sheet

<p>NFPA</p>	<p>HMIS</p> <table border="1" style="margin: auto;"> <tr><td style="background-color: #00FFFF;">Health Hazard</td><td style="text-align: center; font-weight: bold;">3</td></tr> <tr><td style="background-color: #FFC0CB;">Fire Hazard</td><td style="text-align: center; font-weight: bold;">1</td></tr> <tr><td style="background-color: #FFFF00;">Reactivity</td><td style="text-align: center; font-weight: bold;">0</td></tr> </table>	Health Hazard	3	Fire Hazard	1	Reactivity	0	<p>Personal Protective Equipment</p> <p>See Section 15.</p>
Health Hazard	3							
Fire Hazard	1							
Reactivity	0							

Section 1. Chemical Product and Company Identification		<i>Page Number: 1</i>
Common Name/Trade Name	Warfarin Sodium	Catalog Number(s) W1006
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	CAS# 129-06-6
Commercial Name(s)	Athrombin; Coumadin sodium; Coumafene sodium; Marevan; Panwarfin; Prothromadin; Ratsul soluble; Sodium coumadin; Sodium Warfarin; Tintorane; Varfine; Waran; Warcoumin; Warfarin, sodium salt	RTECS Not available.
Synonym	3-(alpha-Acetylbenzyl)-4-hydroxycoumarin Sodium Salt; 2H-1-Benzopyran-2-one,4-hydroxy-3-(3-oxo-1-phenylbutyl)-, sodium salt; Sodium, ((3-(alpha-acetylbenzyl)-2-oxo-2H-1-benzopyran-4-yl)oxy)-	TSCA TSCA 8(b) inventory: Warfarin Sodium
Chemical Name	Coumarin, 3-(alpha-acetylbenzyl)-4-hydroxy-, sodium salt	CI# Not available.
Chemical Family	Not available.	<p style="text-align: center; color: blue; font-weight: bold;">IN CASE OF EMERGENCY</p> <p style="text-align: center; color: blue; font-weight: bold;">CHEMTREC (24hr) 800-424-9300</p> <p style="text-align: center;">CALL (310) 516-8000</p>
Chemical Formula	C19-H15-Na-O4	
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	

Section 2. Composition and Information on Ingredients					
		<i>Exposure Limits</i>			
Name	CAS #	TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	% by Weight
1) Warfarin Sodium	129-06-6				100
Toxicological Data on Ingredients		Warfarin Sodium: ORAL (LD50): Acute: 8.7mg/kg [Rat]. 374 mg/kg [Mouse]. 182 mg/kg [Guinea pig].			

Section 3. Hazards Identification

Potential Acute Health Effects	Very hazardous in case of ingestion. Hazardous in case of skin contact (permeator), of inhalation. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant). Severe over-exposure can result in death.
Potential Chronic Health Effects	<p>CARCINOGENIC EFFECTS: Not available.</p> <p>MUTAGENIC EFFECTS: Not available.</p> <p>TERATOGENIC EFFECTS: Not available.</p> <p>DEVELOPMENTAL TOXICITY: Not available.</p> <p>Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.</p>

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. Get medical attention if irritation occurs.
Skin Contact	Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate 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	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.
Ingestion	If swallowed, 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 immediately.
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, CO ₂). Some metallic oxides.
Fire Hazards in Presence of Various Substances	Slightly flammable to flammable in presence of heat.
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. When heated to decomposition it emits toxic fumes of sodium oxide.
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.

Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
Large Spill	Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

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. Avoid contact with skin. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light-resistant containers.

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	Safety glasses. 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	Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance	Solid. (Crystalline powder.)	Odor	Odorless.
Molecular Weight	330.31 g/mole	Taste	Tasteless to Bitter.
pH (1% soln/water)	7.2 - 8.3	Color	White.
Boiling Point	Not available.		
Melting Point	157°C (314.6°F) - 167 C.		
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.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water, methanol.		
Solubility	Soluble in cold water, methanol. Very slightly soluble in diethyl ether. Soluble in ethanol. Very slightly soluble in chloroform.		

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Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Excess heat, incompatible materials, dust generation.
Incompatibility with various substances	Not available.
Corrosivity	Not available.
Special Remarks on Reactivity	Sensitive to light. May discolor on exposure to light.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Dermal contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 8.7mg/kg [Rat].
Chronic Effects on Humans	Not available.
Other Toxic Effects on Humans	Very hazardous in case of ingestion. Hazardous in case of skin contact (permeator), of inhalation. Slightly hazardous in case of skin contact (irritant).
Special Remarks on Toxicity to Animals	Lethal Dose/Conc 50% Kill: LD50 [Dog] - Route: Oral; Dose: 200 mg/kg LD50 [Rabbit] - Route: Oral; Dose: 800 mg/kg
Special Remarks on Chronic Effects on Humans	May cause adverse reproductive effects and birth defects (teratogenic)
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: May cause skin irritation. It can be absorbed into the skin in toxic amounts with systemic effects similar to ingestion. Eyes: May cause eye irritation. Inhalation: It may cause respiratory tract irritation. It may be absorbed through inhalation. Ingestion: May be fatal if swallowed. The major effect is prolongation of prothrombin time, leading to hemorrhage. Symptoms include cause tissue/skin necrosis, skin discoloration, dermatitis, uncontrolled bleeding, hypotension, hemorrhage in the retina, epistaxis, chest tightness, upper airway occlusion and dyspnea (shortness of breath) or asphyxiation due to hemorrhage into the soft tissues of the neck and pulmonary/alveolar hemorrhage, coughing up blood, and paralysis from intracerebral hemorrhage, abdominal pain, vomiting, gastrointestinal bleeding, bloody or dark stools, easy bruising, abdominal and back pain, shock, and rupture of the spleen. It may also affect behavior/central nervous system. Symptoms may include somnolence, convulsions Chronic Potential Health Effects: Ingestion or Skin contact: Warfarin sodium has a cumulative toxicity. Warfarin sodium has caused abnormal bleeding following chronic skin contact. Chronic exposure may also produce alopecia and calcification of the cartilaginous rings in the trachea and bronchi. It may also affect the liver.


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 products of degradation are less toxic than the product itself.
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.
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Section 14. Transport Information

DOT Classification	CLASS 6.1: Poisonous material.
Identification	: Toxic solid, organic, n.o.s. (warfarin sodium) UNNA: 2811 PG: II
Special Provisions for Transport	Not available.
DOT (Pictograms)	

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations	<p>Illinois chemical safety act: Warfarin Sodium New York release reporting list: Warfarin Sodium Pennsylvania RTK: Warfarin Sodium Massachusetts RTK: Warfarin Sodium Massachusetts spill list: Warfarin Sodium New Jersey: Warfarin Sodium New Jersey spill list: Warfarin Sodium Louisiana RTK reporting list: Warfarin Sodium TSCA 8(b) inventory: Warfarin Sodium SARA 302/304/311/312 extremely hazardous substances: Warfarin Sodium CERCLA: Hazardous substances.: Warfarin Sodium: 100 lbs. (45.36 kg)</p>
California Proposition 65 Warnings	<p>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.</p>
Other Regulations	<p>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. 204-292-4). Canada: Listed on Canadian Non-Domestic Substance List (NDSL). China: Not listed on National Inventory. Japan: Not listed on National Inventory (ENCS). Korea: Not listed on National Inventory (KECI). Philippines: Not listed on National Inventory (PICCS). Australia: Listed on AICS.</p>

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Other Classifications

WHMIS (Canada)	CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).	
DSCL (EEC)	R28- Very toxic if swallowed.	S36/37/39- Wear suitable protective clothing, gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.)

Health Hazard	3
Fire Hazard	1
Reactivity	0
Personal Protection	E

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

Health  Flammability
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. Wear appropriate respirator when ventilation is inadequate.



Safety glasses.

Section 16. Other Information**MSDS Code** **W3001****References** Not available.**Other Special Considerations** Uses: a synthetic vitamin K antagonist used as a rodenticide and in anticoagulation therapy.

Validated by Sonia Owen on 5/4/2007.

Verified by Sonia Owen.

Printed 5/23/2007.

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.