



Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table border="1"> <tr> <td>Health Hazard</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;">0</td> </tr> </table>	Health Hazard	1	Fire Hazard	2	Reactivity	0	
Health Hazard	1							
Fire Hazard	2							
Reactivity	0							
See Section 15.								

Section 1. Chemical Product and Company Identification		<i>Page Number: 1</i>
Common Name/ Trade Name	Polyvinyl alcohol	Catalog Number(s) YY1448, P1180, P1372, PO141
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	CAS# 9002-89-5
Commercial Name(s)	Alvyl; Elvanol; Ivalon; Kuralon; Lemol; Mowiol; Rhodoviol; Polyvinol; Polyviol; Vinalal; Vinarol; Vinarole; Vinol; Vinyl Alcohol Polymer; Vinyl Alcohol Polymers;	RTECS TR8100000
Synonym	Ethenol, Homopolymer; PVA; PVOH	TSCA TSCA 8(b) inventory: Polyvinyl alcohol
Chemical Name	Polyvinyl Alcohol	CI# Not available.
Chemical Family	Not available.	IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300 CALL (310) 516-8000
Chemical Formula	(CH ₂ CHOH) _n	
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) Polyvinyl alcohol	9002-89-5				100	
Toxicological Data on Ingredients	Not applicable.					

Section 3. Hazards Identification	
Potential Acute Health Effects	Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

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	Not available.
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	OPEN CUP: 79°C (174.2°F).
Flammable Limits	Not available.
Products of Combustion	These products are carbon oxides (CO, CO ₂).
Fire Hazards in Presence of Various Substances	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. Slightly explosive in presence of open flames and sparks.
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	Not available.
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. 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.

Section 7. Handling and Storage

Precautions	Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. est. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, metals, acids, alkalis.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

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. (Powdered solid. Amorphous solid powder.)	Odor	Odorless.
Molecular Weight	(44.05)n g/mole	Taste	Not available.
pH (1% soln/water)	Not available.	Color	Off-white. White. Colorless.
Boiling Point	Not available.		
Melting Point	Softens at about 200°C (392°F) with decomposition. Decomposition @ 228 deg. C.		
Critical Temperature	Not available.		
Specific Gravity	1.19-1.31(Water = 1)		
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.		
Solubility	Soluble in cold water, hot water. Insoluble in diethyl ether, acetone, petroleum solvents, aromatic hydrocarbons, esters. Practically insoluble in animal and vegetable oils and chlorinated hydrocarbons.		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Heat, ignition sources, flame, excess dust generation, incompatible materials.
Incompatibility with various substances	Reactive with oxidizing agents, metals, acids, alkalis.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Incompatible with oxidizing agents (perchlorates, nitrates, etc.), reactive metals (sodium, calcium, zinc, etc.), sodium or calcium hypochlorite, materials reactive with hydroxyl compounds. Reaction with peroxides may result in violent decomposition of peroxide possibly creating and explosion.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Inhalation, Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 14700 mg/kg [Mouse]. Acute oral toxicity (LD50): > 20000 mg/kg [Rat].
Chronic Effects on Humans	CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
Other Toxic Effects on Humans	Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	May cause cancer (tumorigenic) based on animal studies. No human data found at this time. May affect genetic material (mutagenic).
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: May cause eye irritation. Ingestion: May cause gastrointestinal (digestive) tract irritation. May affect behavior/central nervous system (symptoms may include general depressed activity, altered sleep time, muscle weakness). May also affect blood and metabolism. Inhalation: May cause respiratory tract irritation. Chronic Potential Health Effects: Inhalation or ingestion for prolonged period of time may affect blood and metabolism, and behavior. May cause cancer (tumorigenic) based on animal studies. No human data found at this time.


Section 12. Ecological Information

Ecotoxicity	Ecotoxicity in water (LC50): 10000 mg/l 96 hours [Bluegill Sunfish]. >40000 mg/l 96 hours [Fathead Minnow].
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.
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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

<p>Federal and State Regulations</p> <p>California Proposition 65 Warnings</p> <p>Other Regulations</p> <p>Other Classifications</p> <p>HMIS (U.S.A.)</p> <p>WHMIS (Canada) (Pictograms)</p> <p>DSCL (Europe) (Pictograms)</p> <p>TDG (Canada) (Pictograms)</p> <p>ADR (Europe) (Pictograms)</p> <p>Protective Equipment</p>	<p>TSCA 8(b) inventory: Polyvinyl alcohol</p> <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> <p>EINECS: This product is not on the European Inventory of Existing Commercial Chemical Substances. Canada: Listed on Canadian Domestic Substance List (DSL). China: Listed on National Inventory. Japan: Not listed on National Inventory (ENCS). Korea: Listed on National Inventory (KECI). Philippines: Listed on National Inventory (PICCS). Australia: Listed on AICS.</p> <table border="1"> <tr> <td>WHMIS (Canada)</td> <td colspan="2">Not controlled under WHMIS (Canada).</td> </tr> <tr> <td>DSCL (EEC)</td> <td>This product is not classified according to the EU regulations.</td> <td>Not applicable.</td> </tr> </table> <table border="1"> <tr> <td>Health Hazard</td> <td>1</td> <td rowspan="4"> <p>National Fire Protection Association (U.S.A.)</p> <p>Health  Flammability</p> <p>Reactivity</p> <p>Specific hazard</p> </td> </tr> <tr> <td>Fire Hazard</td> <td>2</td> </tr> <tr> <td>Reactivity</td> <td>0</td> </tr> <tr> <td>Personal Protection</td> <td>E</td> </tr> </table> <p>Gloves.</p> <p>Lab coat.</p> <p>Dust respirator. Be sure to use an approved/certified respirator or equivalent.</p>	WHMIS (Canada)	Not controlled under WHMIS (Canada).		DSCL (EEC)	This product is not classified according to the EU regulations.	Not applicable.	Health Hazard	1	<p>National Fire Protection Association (U.S.A.)</p> <p>Health  Flammability</p> <p>Reactivity</p> <p>Specific hazard</p>	Fire Hazard	2	Reactivity	0	Personal Protection	E
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Safety glasses.

**Section 16. Other Information**

MSDS Code P4010

References Not available.

Other Special Considerations Major Uses: Resin in textile warp sizing and finishing, in adhesives, in grease-resistant paper, coating; suspension agent in polymerization of vinyl acetate and vinyl chloride; thickener in latex coatings, ingredient in pesticide sprays; masks, photographic and ether films; pigment binder in paper coatings; in cements and mortars; component of mixture for coloring shell eggs; used to form poly(vinyl acetal) resins; used to form poly (vinyl butyral) resins.

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Verified by Sonia Owen.

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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.