

MATERIAL SAFETY DATA SHEET

Product: **Polyvinyl Alcohol**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: Polyvinyl Alcohol, Technical

Product Code: CH-9002895A

Chemical Formula: (CH₂CHOH)_n

General or Generic ID: Ethenol, Homopolymer; PVA; PVOH.

Company

ArtChemicals.com

2250 Davis Street

San Leandro, CA 94577-2204

510-639-4670

Emergency Telephone Number:

1-800-451-8346

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS No.</u>	<u>Chemical Identity</u>	<u>Common Name</u>	<u>%</u>
9002-89-5	N/A	Polyvinyl Alcohol	100

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye:

Slightly hazardous in case of eye contact (irritant). Symptoms include stinging, tearing, redness and impairment of vision. The degree of injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment.

Skin:

Slightly hazardous in case of skin contact (irritant). Symptoms may include redness, burning of skin, or, occasionally, blistering. The degree of injury will depend on the amount of material that gets on the skin and the speed and thoroughness of the first aid treatment.

MATERIAL SAFETY DATA SHEET

Product: **Polyvinyl Alcohol**

Ingestion:

Slightly hazardous in case of ingestion. Inhalation of dust will produce irritation to gastrointestinal tract.

Inhalation:

Slightly hazardous in case of inhalation (lung irritant). Breathing in large amounts may cause respiratory irritation, burning, sneezing and coughing.

Symptoms of Exposure:

Not available.

Development Information:

Not available.

Repeated or prolonged exposure is not known to aggravate medical condition.

Cancer Information:

Not available.

3 (Not classifiable for human.) by IARC.

Primary Route(s) of Entry:

Inhalation, skin absorption, skin contact, and eye contact.

4. FIRST AID MEASURES

Inhalation:

If inhaled, promptly remove individual to fresh air. If not breathing, give oxygen. Get medical attention.

Ingestion:

Do NOT induce vomiting, unless directed by medical personnel. Seek medical attention. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Do not leave individual unattended. Loosen tight clothing such as collar, tie, belt or waistband. Get medical attention.

Eyes:

Remove contact lenses if worn. Spread eyelids with fingers and flush eye for minimum of 15 minutes with water; keep rotating the eyes to ensure complete flushing. Cold water may be used. Do not use an eye ointment. Seek medical attention.

MATERIAL SAFETY DATA SHEET

Product: **Polyvinyl Alcohol**

Skin:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Note to Physicians:

Not available.

5. FIRE FIGHTING MEASURES

Flash Point: May be combustible at high temperature. Open Cup: 79 °C (174.2 °F).

Explosive Limit: Not available.

Auto-ignition Temperature: Not available.

Hazardous Products of Combustion: These products are carbon oxides (CO, CO₂), phosphates.

Extinguishing Media: SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

SPECIAL FIRE-FIGHTING PROCEDURES: Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

NFPA CODES: Health = 1 Flammability = 2 Reactivity = 0

6. PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled:

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.

MATERIAL SAFETY DATA SHEET

Product: **Polyvinyl Alcohol**

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 dispose of according to local and regional authority requirement. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container tightly closed. Keep container in a cool, well-ventilated area. 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Be sure to use an approved/certified respirator or equivalent.

Skin Protection:

Wear resistant gloves. To prevent repeated or prolonged skin contact, wear impervious clothing and boots or lab coat.

Eye Protection:

Chemical splash goggles in compliance with OSHA regulations are advised. Face shield. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Other Protective Clothing or Equipment:

Provide sufficient mechanical ventilation to maintain exposure below level of overexposure. Boots. Full suit. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling product.

MATERIAL SAFETY DATA SHEET

Product: **Polyvinyl Alcohol**

Exposure Limits:

Not available.

Consult local authorities for acceptable exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: White/Off-White Powdered Solid. (Odorless.)

Molecular Weight: (44.05)_n g/mole

pH (1% soln/water): N/A

Boiling Point: Not available.

Melting Point: Softens at about 200 °C (392 °F) with decomposition. Decomposition 228 °C.

Specific Gravity: 1.19-1.31 (Water=1).

Vapor Pressure (@20 °C): Not available.

Evaporation Rate: Not available.

Solubility in Water: Soluble in cold water and hot water.

10. STABILITY AND REACTIVITY

Incompatibility: Excess heat, ignition, dust generation and alkalis.

Stability: Stable.

Hazardous Decomposition: N/A

Hazardous Polymerization: Will not occur.

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.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity (LD50): 14700 mg/kg [Mouse].

Acute oral toxicity (LD50): > 20000 mg/kg [Rat].

MATERIAL SAFETY DATA SHEET

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CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
May cause damage to the following organs: upper respiratory tract, skin, eyes.

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.

12. ECOLOGICAL INFORMATION

Not available.

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

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. The product itself and its products of degradation are not toxic.

13. DISPOSAL CONSIDERATION

Waste Disposal Method:

Dispose of in accordance with all applicable local, state and federal regulations.

MATERIAL SAFETY DATA SHEET

Product: **Polyvinyl Alcohol**

14. DOT SHIPPING NAME & IDENTIFICATION:

NON-REGULATED. Not a DOT controlled material (United States).

15. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that information is current, applicable, and suitable to their circumstances.