

# Safety Data Sheet

Material Name: Polyvinyl alcohol, 5-30% solutions

SDS ID: SSC10003

## Section 1 - PRODUCT AND COMPANY IDENTIFICATION

### Material Name

Polyvinyl alcohol, 5-30% solutions

### Trade Names

The following specific grades are covered by this SDS: 15-103, 21-103, 08-125, 09-325

### Synonyms

Polyvinyl alcohol, PVA

### Chemical Family

Ethenol, homopolymer

### Product Use

Intermediate, surfactant, adhesives, Food/foodstuff additives, Packaging materials, Auxiliary for leather, Auxiliary for textile.

### Restrictions on Use

None known.

### Details of the supplier of the safety data sheet

Educational Innovations, Inc.

5 Francis J. Clarke Cir.

Bethel, CT 06801

Emergency Phone Numbers:

In USA: CHEMTREC 800-424-9300

Outside USA: CHEMTREC 703-527-3887 (collect calls accepted)

Phone: +1-972-277-2900

## Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Skin Sensitization - Category 1

### GHS Label Elements

Symbol(s)



### Signal Word

Warning

### Hazard Statement(s)

May cause an allergic skin reaction.

### Precautionary Statement(s)

#### Prevention

Avoid breathing dust/fume/gas/mist/vapours/spray.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves.

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## Response

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Specific treatment (see label).

## Storage

None needed according to classification criteria.

## Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7732-18-5	Water	70.0-95.0
9002-89-5	Polyvinyl alcohol	5.0-30.0
127-09-3	Sodium acetate	0.01-0.1
79-20-9	Methyl acetate	0.001-0.1
67-56-1	Methyl alcohol	0.001-0.1
55965-84-9	5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	0.0038

### Section 4 - FIRST AID MEASURES

#### Description of Necessary Measures

Wash thoroughly after handling.

#### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

#### Skin

Wash with plenty of soap and water. If skin irritation or rash occurs, seek medical advice/attention. Wash contaminated clothing before reuse.

#### Eyes

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.

#### Ingestion

If a large amount is swallowed, get medical attention.

#### Most Important Symptoms/Effects

##### Acute

May cause an allergic skin reaction.

##### Delayed

May cause an allergic skin reaction.

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### Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

### Note to Physicians

Treat symptomatically and supportively.

## Section 5 - FIRE FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

The product itself does not burn in solution. dry polymer: Use dry chemical, carbon dioxide, alcohol-resistant foam or water spray.

#### Unsuitable Extinguishing Media

Do not scatter spilled material with high-pressure water streams.

#### Special Hazards Arising from the Chemical

carbon monoxide, carbon dioxide.

#### Advice for firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

#### Fire Fighting Measures

Keep unnecessary people away, isolate hazard area and deny entry. Do not enter confined spaces unless adequately ventilated. Cool containers with water spray until well after the fire is out. Keep away from heat, sparks and flame.

## Section 6 - ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Keep unnecessary people away, isolate hazard area and deny entry. The mixture is slippery when wet. Avoid contact with skin and eyes.

#### Methods and Materials for Containment and Cleaning Up

Use approved industrial vacuum cleaner for removal. Absorb spillage to prevent material damage. Collect in closed and suitable containers for disposal.

#### Environmental Precautions

Prevent environmental discharge consistent with regulatory requirements.

## Section 7 - HANDLING AND STORAGE

### Precautions for Safe Handling

Use only outdoors or in a well-ventilated area. Spilled polymer solution is very slippery. Use care to avoid falls. Wash thoroughly after handling.

#### Conditions for Safe Storage, Including any Incompatibilities

None needed according to classification criteria.

Protect from freezing. Store at room temperature. Store in original container.

#### Incompatible Materials

Oxidizing agents, acids, peroxides, perchlorates, nitrates, reactive metals.

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### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Component Exposure Limits

<b>Polyvinyl alcohol</b>	<b>9002-89-5</b>
ACGIH:	10 mg/m3 TWA inhalable particles, recommended ; 3 mg/m3 TWA respirable particles, recommended (related to Particulates not otherwise classified (PNOC))
OSHA (US):	15 mg/m3 TWA total dust ; 5 mg/m3 TWA respirable fraction (related to Particulates not otherwise classified (PNOC))
	15 mppcf TWA respirable fraction ; 5 mg/m3 TWA respirable fraction ; 50 mppcf TWA total dust ; 15 mg/m3 TWA total dust (related to Particulates not otherwise classified (PNOC))
<b>Methyl acetate</b>	<b>79-20-9</b>
ACGIH:	200 ppm TWA
	250 ppm STEL
NIOSH:	200 ppm TWA ; 610 mg/m3 TWA
	250 ppm STEL ; 760 mg/m3 STEL
	3100 ppm IDLH (10% LEL )
OSHA (US):	200 ppm TWA ; 610 mg/m3 TWA
Mexico:	200 ppm TWA VLE-PPT ; 610 mg/m3 TWA VLE-PPT
	250 ppm STEL [PPT-CT ] ; 760 mg/m3 STEL [PPT-CT ]
<b>Methyl alcohol</b>	<b>67-56-1</b>
ACGIH:	200 ppm TWA
	250 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route
NIOSH:	200 ppm TWA ; 260 mg/m3 TWA
	250 ppm STEL ; 325 mg/m3 STEL
	Potential for dermal absorption
	6000 ppm IDLH

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Europe:	200 ppm TWA ; 260 mg/m <sup>3</sup> TWA
	Possibility of significant uptake through the skin
OSHA (US):	200 ppm TWA ; 260 mg/m <sup>3</sup> TWA
Mexico:	200 ppm TWA VLE-PPT ; 260 mg/m <sup>3</sup> TWA VLE-PPT
	250 ppm STEL [PPT-CT ] ; 310 mg/m <sup>3</sup> STEL [PPT-CT ]
	Skin - potential for cutaneous absorption

**EU - Occupational Exposure (98/24/EC) - Binding Biological Limit Values and Health Surveillance Measures**

There are no biological limit values for any of this product's components.

**ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)**

**Methyl alcohol (67-56-1)**

15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific )

**Engineering Controls**

Provide local exhaust or process enclosure ventilation system. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Individual Protection Measures, such as Personal Protective Equipment**

**Eye/face protection**

Wear splash resistant safety goggles.

**Skin Protection**

Wear appropriate chemical resistant clothing. Recommended material type: neoprene.

**Respiratory Protection**

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

**Glove Recommendations**

Wear appropriate chemical resistant gloves.

**Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	viscous solution	<b>Physical State</b>	Liquid
<b>Odor</b>	odorless	<b>Color</b>	colorless to yellow
<b>Odor Threshold</b>	Not available	<b>pH</b>	5 - 7.5 , conc: 10%
<b>Melting Point</b>	Not available	<b>Boiling Point</b>	100 C
<b>Boiling Point Range</b>	Not available	<b>Freezing point</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Flammability (solid, gas)</b>	Not available
<b>Autoignition Temperature</b>	Not available	<b>Flash Point</b>	Not available
<b>Lower Explosive Limit</b>	Not available	<b>Decomposition temperature</b>	Not available

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<b>Upper Explosive Limit</b>	Not available	<b>Vapor Pressure</b>	Not available
<b>Vapor Density (air=1)</b>	Not available	<b>Specific Gravity (water=1)</b>	1.02 - 1.058 @ 20 °C
<b>Water Solubility</b>	Not available	<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Viscosity</b>	Not available	<b>Solubility (Other)</b>	Not available
<b>Density</b>	Not available	<b>Molecular Weight</b>	Not available

### Section 10 - STABILITY AND REACTIVITY

#### Reactivity

No hazard expected.

#### Chemical Stability

Stable under normal conditions of use.

#### Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

#### Conditions to Avoid

Protect from freezing.

#### Incompatible Materials

Oxidizing agents, acids, peroxides, perchlorates, nitrates, reactive metals.

#### Hazardous decomposition products

oxides of carbon.

### Section 11 - TOXICOLOGICAL INFORMATION

#### Information on Likely Routes of Exposure

##### Inhalation

No information on significant adverse effects.

##### Skin Contact

May cause slight irritation. May cause an allergic skin reaction.

##### Eye Contact

May cause slight irritation. viscous polymer solution.

##### Ingestion

May cause gastrointestinal irritation.

#### Acute and Chronic Toxicity

##### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

##### Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

##### Polyvinyl alcohol (9002-89-5)

LD50 Rat >5000 mg/kg

LC50 Rat >24 mg/L 1hr

##### Sodium acetate (127-09-3)

Oral LD50 Rat 3530 mg/kg

Dermal LD50 Rabbit >10 g/kg

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Inhalation LC50 Rat >30 g/m<sup>3</sup> 1 h

**Methyl acetate (79-20-9)**

Oral LD50 Rat >5 g/kg

Dermal LD50 Rabbit >5 g/kg

Inhalation LC50 Rat 16000 ppm 4 h

**Methyl alcohol (67-56-1)**

Oral LD50 Rat 6200 mg/kg

Inhalation LC50 Rat 22500 ppm 8 h

**5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone (55965-84-9)**

Oral LD50 Rat 53 mg/kg

**Product Toxicity Data**

**Acute Toxicity Estimate**

Dermal	> 2000 mg/kg
Oral	> 2000 mg/kg

**Immediate Effects**

No information on significant adverse effects. May cause an allergic skin reaction.

**Delayed Effects**

May cause an allergic skin reaction.

**Irritation/Corrosivity Data**

No information on significant adverse effects.

**Respiratory Sensitization**

No data available.

**Dermal Sensitization**

May cause an allergic skin reaction.

**Component Carcinogenicity**

Polyvinyl alcohol	9002-89-5
IARC:	Supplement 7 [1987] ; Monograph 19 [1979] (Group 3 (not classifiable))

**Germ Cell Mutagenicity**

Ames test found to be negative. No hazard expected.

**Tumorigenic Data**

No data available

**Reproductive Toxicity**

No data available.

**Specific Target Organ Toxicity - Single Exposure**

No target organs identified.

**Specific Target Organ Toxicity - Repeated Exposure**

No target organs identified.

**Aspiration hazard**

No data available.

**Medical Conditions Aggravated by Exposure**

eye disorders, gastrointestinal disorders

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### Section 12 - ECOLOGICAL INFORMATION

#### Component Analysis - Aquatic Toxicity

<b>Polyvinyl alcohol</b>	<b>9002-89-5</b>
Fish:	LC50 96 hr Danio rerio (Zebra fish) >5000 mg/L; LC50 96 hr Pimephales promelas (Fathead minnow) 40 g/L
Invertebrate:	EC50 48 hr Daphnia magna 8300 mg/L
<b>Sodium acetate</b>	<b>127-09-3</b>
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID
<b>Methyl acetate</b>	<b>79-20-9</b>
Fish:	LC50 96 h Pimephales promelas 295 - 348 mg/L [flow-through ]; LC50 96 h Brachydanio rerio 250 - 350 mg/L [static ]
Algae:	EC50 72 h Desmodesmus subspicatus >120 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 1026.7 mg/L IUCLID
<b>Methyl alcohol</b>	<b>67-56-1</b>
Fish:	LC50 96 h Pimephales promelas 28200 mg/L [flow-through ]; LC50 96 h Pimephales promelas >100 mg/L [static ]; LC50 96 h Oncorhynchus mykiss 19500 - 20700 mg/L [flow-through ]; LC50 96 h Oncorhynchus mykiss 18 - 20 mL/L [static ]; LC50 96 h Lepomis macrochirus 13500 - 17600 mg/L [flow-through ]

#### Bioaccumulative Potential

Low.

#### Biodegradation

90%

#### Chemical Oxygen Demand (COD)

Ca. 17000 mgO<sub>2</sub>/g

### Section 13 - DISPOSAL CONSIDERATIONS

#### Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components

### Section 14 - TRANSPORT INFORMATION

#### US DOT Information:

UN/NA #: Not Regulated



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**TDG Information:**  
UN#: Not Regulated

### Section 15 - REGULATORY INFORMATION

**U.S. Federal Regulations**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

<b>Methyl alcohol</b>	<b>67-56-1</b>
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ ; 2270 kg final RQ

**SARA Section 311/312 (40 CFR 370 Subparts B and C)**

**Acute Health:** Yes **Chronic Health:** No **Fire:** No **Pressure:** No **Reactivity:** No

**U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
<b>Methyl acetate</b>	<b>79-20-9</b>	Yes	Yes	Yes	Yes	Yes
<b>Methyl alcohol</b>	<b>67-56-1</b>	Yes	Yes	Yes	Yes	Yes

**The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):**

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

<b>Methyl alcohol</b>	<b>67-56-1</b>
Repro/Dev. Tox	developmental toxicity , 3/16/2012

**Canada Regulations**

**Canadian WHMIS Ingredient Disclosure List (IDL)**

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

<b>Methyl acetate</b>	<b>79-20-9</b>
	1 %
<b>Methyl alcohol</b>	<b>67-56-1</b>
	1 %

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### Component Analysis - Inventory

#### Water (7732-18-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	No	Yes	Yes	Yes	Yes

#### Polyvinyl alcohol (9002-89-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes

#### Sodium acetate (127-09-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes

#### Methyl acetate (79-20-9)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes

#### Methyl alcohol (67-56-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes

#### 5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone (55965-84-9)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
No	DSL	No	No	Yes	Yes	No	Yes	No	No	Yes	Yes	No	Yes

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### Section 16 - OTHER INFORMATION

#### HMIS Rating

Health: 0 Fire: 1 Reactivity: Not available

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

#### NFPA Ratings

Health: 0 Fire: 1 Reactivity: Not available

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

#### Summary of Changes

Updated SDS: 12/13/2016

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CFR - Code of Federal Regulations (US); CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KECI - Korea Existing Chemicals Inventory; KECL - Korea Existing Chemicals List; KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; NDSL - Non-Domestic Substance List (Canada); NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); WHMIS - Workplace Hazardous Materials Information System (Canada).

#### Other Information

##### Disclaimer:

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