

**ELVANOL® 71-30 polyvinyl alcohol**

Version 3.2

Revision Date 05/23/2014

Ref. 130000021506

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : ELVANOL® 71-30 polyvinyl alcohol  
MSDS Number : 130000021506

Manufacturer : DuPont  
1007 Market Street  
Wilmington, DE 19898

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)  
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)  
Transport Emergency : CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Resin particles, like other inert materials, are mechanically irritating to eyes. May form explosive dust-air mixture. Avoid breathing dust or solution spray.

**Potential Health Effects**

Processing temperatures that exceed those described in Section 10 (Conditions to Avoid), may evolve fumes irritating the eyes, nose and throat.

Skin : Experience shows no unusual dermatitis hazard from routine handling.

**Eyes**

Vinyl alcohol polymer : May irritate eyes.

Methanol : May cause eye irritation.  
May cause: Tearing, redness, or discomfort.

Methyl acetate : Causes eye irritation. May cause: Pain, tearing, swelling, redness, or temporary visual impairment..

Inhalation : Exposure may result in reddening, tears and itching of the eyes and soreness in the nose and throat, together with coughing.



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Ingestion  
Methanol : Toxic if swallowed.  
May cause: Central nervous system effects, narcosis, eye effects.  
Causes damage to the kidneys/ liver/ eyes/ brain/ digestive system/ central nervous system if swallowed. Impairment of vision, Blindness.

Repeated exposure  
Vinyl alcohol polymer : Adverse effects from repeated inhalation may include: Kidney damage  
Liver effects  
Adverse effects from repeated ingestion may include: Vomiting Diarrhea  
Kidney effects

Target Organ  
Methanol : Central nervous system Eyes

Methyl acetate : Central nervous system

Carcinogenicity  
None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No.	Concentration
Vinyl alcohol polymer		>89%
Process Aids		<10 %
Methanol	67-56-1	<1 %
Methyl acetate	79-20-9	<0.1 %

**SECTION 4. FIRST AID MEASURES**


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- Skin contact : In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse.
- Inhalation : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
- Ingestion : Not a probable route of exposure. However, in case of accidental ingestion, call a physician.

**SECTION 5. FIREFIGHTING MEASURES**
**Flammable Properties**

Flash point : no data available

Fire and Explosion Hazard : Static charges can accumulate and lead to a spark capable of starting a fire. Dust may form explosive mixture in air.

Under conditions giving incomplete combustion, hazardous gases produced may consist of: Carbon dioxide (CO<sub>2</sub>) Carbon monoxide hydrocarbon oxidation products Organic acids Aldehydes Alcohols Sodium oxides

Suitable extinguishing media : Water, Foam, Carbon dioxide (CO<sub>2</sub>)

Firefighting Instructions : Wear self-contained breathing apparatus and protective suit. The solid polymer can only be burned with difficulty. Grounding and elimination of the static charge is recommended. Under severe dusting conditions, this material may form explosive mixtures in air. Information about special precautions needed for bulk handling is available on request.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Cleanup : Shovel or sweep up. Avoid generating dust.

Accidental Release Measures : Do not discharge to streams, ponds, lakes or sewers.



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**SECTION 7. HANDLING AND STORAGE**

- Handling (Personnel) : Minimize the generation and accumulation of dust. Can accumulate high static electric charge during handling. Grounding and elimination of the static charge is recommended.  
Before using, read the product bulletin.
- Storage : Keep containers dry and tightly closed to avoid moisture absorption and contamination.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Engineering controls : In the event that the polymer is heated above 200 °C (392 °F), local ventilation should be used to avoid exposure to fumes. See Bulletin "Proper Use of Local Exhaust Ventilation During Processing of Plastics". Good general ventilation should be provided to keep fume and mist concentrations below exposure limits. Use static controls. Static charges can cause explosions in solvent and dust laden atmospheres.
- Personal protective equipment
  - Respiratory protection : Where there is potential for airborne exposures in excess of applicable limits, wear NIOSH approved respiratory protection. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or there are any other circumstances where air purifying respirators may not provide adequate protection.  
A respiratory protection program that meets country requirements must be followed whenever workplace conditions warrant respirator use. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.  
Consult the OSHA respiratory protection information located at 29CFR 1910.134.
  - Hand protection : Additional protection: Protective gloves
  - Eye protection : Wear coverall chemical splash goggles and face shield when the possibility exists for eye and face contact due to splashing or spraying of material.
  - Skin and body protection : If there is a potential for contact with hot/molten material wear heat resistant clothing and footwear.



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Exposure Guidelines  
Exposure Limit Values

Dust (inhalable and respirable fraction)				
Permissible exposure limit:	(OSHA)	5 mg/m3	8 hr. TWA	Respirable fraction.
Permissible exposure limit:	(OSHA)	15 mg/m3	8 hr. TWA	Total dust.
TLV	(ACGIH)	10 mg/m3	TWA	Inhalable particles.
TLV	(ACGIH)	3 mg/m3	TWA	Respirable particles.
Polyethylene oxide				
AEL *	(DUPONT)	10 mg/m3	8 hr. TWA	Total particulate.
AEL *	(DUPONT)	5 mg/m3	8 hr. TWA	Respirable particulate or fume.
Sodium acetate				
AEL *	(DUPONT)	10 mg/m3	8 & 12 hr. TWA	Total dust.
AEL *	(DUPONT)	5 mg/m3	8 & 12 hr. TWA	Respirable dust.
Methyl acetate				
Permissible exposure limit:	(OSHA)	200 ppm	610 mg/m3	8 hr. TWA
TLV	(ACGIH)	250 ppm	STEL	
TLV	(ACGIH)	200 ppm	TWA	
Methanol				
Permissible exposure limit:	(OSHA)	200 ppm	260 mg/m3	8 hr. TWA
TLV	(ACGIH)	250 ppm	STEL	



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		Skin designation	
TLV	(ACGIH)	200 ppm	TWA
AEL *	(DUPONT)	200 ppm	8 & 12 hr. TWA, Skin

Skin designation

Biological Exposure Indices

Methanol BEI	(ACGIH)	15 mg/l Methanol/Urine Sampling time: End of shift.
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\* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Form	: powder
Color	: clear
Odor	: mild
Melting point	: 200 °C (392 °F)
Specific gravity	: > 1
Water solubility	: partly soluble

**SECTION 10. STABILITY AND REACTIVITY**

Stability	: Stable at normal temperatures and storage conditions.
Conditions to avoid	: Temperature > 200 °C (> 392 °F)
Incompatibility	: None reasonably foreseeable.
Hazardous decomposition products	: Decomposition is a function of both processing temperature and time at that temperature. Decomposition can occur below the recommended processing temperature limit. At temperatures above the "conditions to avoid" temperature, thermal


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decomposition of the resin becomes rapid.  
 Hazardous decomposition products: Carbon monoxide, Organic acids,  
 Aldehydes, Alcohols, Sodium oxides

**SECTION 11. TOXICOLOGICAL INFORMATION**

ELVANOL <sup>®</sup> 71-30 polyvinyl alcohol	
Further information	: No data is available on the product itself.
Vinyl alcohol polymer	
Dermal	: rat No toxicologically significant effects were found.
Oral ALD - Approximate Lethal Dose	: > 11,000 mg/kg , mouse
Inhalation	: The substance is a polymer and is not expected to produce toxic effects.
Skin irritation	: rabbit slight irritation
Eye irritation	: rabbit non-irritant
Skin sensitization	: guinea pig Animal test did not cause sensitization by skin contact.
Methanol	
Dermal Acute toxicity estimate	: 300 mg/kg , animals (unspecified species) Target Organs: Central nervous system, Eye Central nervous system effects narcosis eye effects
Oral Acute toxicity estimate	: 100 mg/kg , animals (unspecified species) Target Organs: Central nervous system, Eye Central nervous system effects narcosis eye effects
Inhalation Acute toxicity estimate	: 3 mg/l , animals (unspecified species) Target Organs: Central nervous system, Eye Central nervous system effects narcosis eye effects


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Skin irritation	:	Slight or no skin irritation, rabbit
Eye irritation	:	slight irritation, rabbit
Skin sensitization	:	Did not cause sensitisation on laboratory animals., guinea pig
Carcinogenicity	:	Not classifiable as a human carcinogen.
Mutagenicity	:	Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Reproductive toxicity	:	No toxicity to reproduction
Teratogenicity	:	No toxicity to reproduction

## Methyl acetate

Dermal LD50	:	> 2,000 mg/kg , rat
Oral LD50	:	6,482 mg/kg , rat Target Organs: Central nervous system
Inhalation 4 h LC50	:	> 49.2 mg/l , rabbit Target Organs: Central nervous system
Skin irritation	:	Repeated exposure may cause skin dryness or cracking., rabbit
Eye irritation	:	Eye irritation, rabbit
Skin sensitization	:	Does not cause skin sensitisation., human
Repeated dose toxicity	:	Inhalation rat  No toxicologically significant effects were found., Information given is based on data obtained from similar substances.
Carcinogenicity	:	Not classifiable as a human carcinogen. Overall weight of evidence indicates that the substance is not carcinogenic. Information given is based on data obtained from similar substances.
Mutagenicity	:	Animal testing did not show any mutagenic effects. Did not cause genetic damage in cultured bacterial cells.




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Reproductive toxicity : No toxicity to reproduction  
Animal testing showed no reproductive toxicity.  
Information given is based on data obtained from similar substances.

Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

**SECTION 12. ECOLOGICAL INFORMATION**

Aquatic Toxicity  
Vinyl alcohol polymer  
96 h LC50 : Pimephales promelas (fathead minnow) > 10,000 mg/l

Methanol  
96 h LC50 : Pimephales promelas (fathead minnow) 28,100 mg/l  
96 h LC50 : Selenastrum capricornutum (green algae) 22,000 mg/l  
48 h EC50 : Daphnia > 10,000 mg/l

Methyl acetate  
96 h LC50 : Danio rerio (zebra fish) 250 mg/l OECD Test Guideline 203  
72 h ErC50 : Desmodesmus subspicatus (green algae) > 120 mg/l OECD Test Guideline 201  
72 h NOEC : Desmodesmus subspicatus (green algae) 120 mg/l OECD Test Guideline 201  
48 h EC50 : Daphnia magna (Water flea) 1,026.7 mg/l OECD Test Guideline 202

Environmental Fate  
Methanol  
Biodegradability : Readily biodegradable.  
Bioaccumulation : Bioaccumulation is unlikely.

Additional ecological information : No data is available on the product itself. Toxicity is expected to be low based on insolubility in water.



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**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste Disposal : Preferred options for disposal are recycling, incineration with energy recovery, and landfill. The high fuel value of this product makes incineration very desirable for material that cannot be recycled. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

**SECTION 14. TRANSPORT INFORMATION**

Not classified as dangerous in the meaning of transport regulations.

**SECTION 15. REGULATORY INFORMATION**

TSCA : In compliance with TSCA Inventory requirements for commercial purposes.

SARA 313 Regulated Chemical(s) : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

CERCLA Reportable Quantity : 3,823 lbs  
Based on the percentage composition of this chemical in the product.:  
Unspecified sodium compounds

California Prop. 65 : WARNING! This product contains a chemical or chemicals known to the State of California to cause cancer.  
WARNING! This product contains a chemical or chemicals known to the State of California to cause birth defects or other reproductive harm.

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances):  
None known.



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NJ Right to Know  
Regulated Chemical(s) : Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Methanol

**SECTION 16. OTHER INFORMATION**

Restrictions for use : Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative. You may also request a copy of the DuPont POLICY Regarding Medical Applications and DuPont CAUTION Regarding Medical Applications.

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