



## Material Safety Data Sheet

**Product Name: PVP K 90**

### Section 1-Product Information

**Chemical Name** : PVP K90  
**CAS Registry No** : 9003-39-8  
**CAS Registry Name** : 2-Pyrrolidone, 1 Ethenyl, Homopolymer  
**Synonym** : Polyvinylpyrrolidone  
**Molecular Formula** :  $(C_6H_9NO)_x$

### Section 2-Composition, Information on Ingredients

None

### Section 3-Hazards Identification

#### Acute Toxicity

Oral toxicity : rat  $ld_{50} > 100\ 000$  mg/kg.  
Dermal toxicity : not absorbed topically  
Inhalation toxicity : human, guinea pig and rabbit, exposure to aerosols and dusts of small particle size produced no evidence of harmful effects.  
Skin irritation : human, repeated insult patch test not a primary irritant.  
Eye irritation : rabbit, no irritation observed  
Sensitizer : no-human, repeated insult patch test : not a sensitizer  
Dot corrosive : not data found  
Primary route(s) of entry : contact

-Signs and symptoms of exposure-

Symptoms of ingestion : no effect of exposure expected  
Symptoms of inhalation : no effect of exposure expected  
Symptoms of skin contact : no effects of exposure expected due to contact may possibly cause irritation or dermatitis in some individuals upon prolonged contact.  
Symptoms of eye contact : no effects of exposure expected with the exception of possible irrigation

Medical conditions aggravated by exposure : no data found



#### **Other Toxicity:**

Other acute toxicity	:	No data found
Sub chronic oral toxicity	:	Rodent and dog studies, no adverse effect level exceeds 10% of total diet, no evidence of carcinogenic activity.
Sub chronic inhalation toxicity	:	No data found
Sub chronic miscellaneous Toxicity	:	No data found
Aquatic toxicity	:	No data found
Tumorigenicity	:	Chronic rodent and dog feeding studies show that the no adverse effect levelexceeds 10% of the diet with no evidence of carcinogenic activity.
Mutagenicity	:	Pvp was tested in the ames assay ; dominant lethal test on mice, 15178y mouse (tk+/-) lymphoma assay;bond marrow chromosomal aberration assay; and the balb/c 3t3 transformation; in each case pvp was found not to be mutagenic .
Reproductive toxicity	:	Teratology studies with pvp concentrations upto 10% of the diet show no eembryotoxicity, fetotoxicity or teratogenicity.
Miscellaneous toxicity	:	No data found

#### **Section 4-First Aid Measure**

First aid for ingestion	:	Drink plenty of water, call a physican never give anything by mouth to an unconscious person
First aid for inhalation	:	None required
First adi for skin contact	:	For all foreign material, wash after exposure
First aid for eye contact	:	For all foreign materials, imme. Flush eyes with plenty of water

#### **Section 5-Fire fighting procedure**

Flash point	:	Not applicable
Autoignition temp.	:	No data found
Flammable limits	:	No data found
Fire fighting media	:	Use media proper to primary cause of fire.
Special fire fighting procedures	:	None known
Fire/explosion hazards:	:	May form explosive dust-air mixtures

NFPA hazard codes-health/flammability/reactivity	1	2	3
HMIS hazard codes-health/flammability/reactivity	0	3	0



## Section 6-Accidental Release Measure

**Spill/leak clean-up procedures :** Scoop up avoid dusting, dispose of with solid waste according to federal state and local regulations. Flush spill area with water.

## Section 7-Handling and Storage

**Precautionary Measures :** Avoid breathing dust avoid excessive dusting conditions  
**Disposal Method :** Dispose of with solid waste according to federal, state and local regulations  
**RCRA Class :** Not regulated

## Section 8-Exposure control/Personal protection

Ventilation : General precautionary measures suggest use with adequate ventilation.  
 Respiratory protection : Dust mask where dusting cannot be avoided  
 Eye protection : Safety glasses  
 Skin protection : None required  
 Personal hygiene : Observe ordinary measures of personal hygiene  
 Protective measure during repair/maintenance of equipment : Wash equipment thoroughly with steam or warm water until clean, check for flammables with an 'explosion meter' and also check the oxygen level with an oxygen meter in all cases, follow good industrial safety practices before entering equipment.  
 Exposure limits : for inert or nuisance dust (particulars not otherwise regulated/classified) osha pel:twa 15 mg/m<sup>3</sup>-total dust, 5 mg/m<sup>3</sup>-respirable fraction  
 acgih tlv twa 10 mg/m<sup>3</sup> - inhalable, 3 mg/m<sup>3</sup>-respirable

## Section 9-Physical Chemical Properties

Boiling point : no data found  
 Vapor pressure : not volatile  
 Vapor density (air=1) : not volatile  
 Water solubility : complete  
 Melting/freezing point : no data found  
 Appearance : powder  
 Specific grav.(water=1) : no data found  
 Percentage volatiles : 5 00% water  
 Evaporation rateq : not volatile  
 pH of solution : 3.00-7.00 (5% as is in distilled water)  
 Odor : no data found



### Section 10-Stability and Reactivity

Stability	:	Stable under normal storage conditions
Hazardous polymerization	:	Will not occur under normal storage conditions
Conditions to avoid	:	Heat, fire, sparks and others sources of ignition avoid excessive dusting conditions.
Incompatible materials	:	Strong oxidizing or reducing agents
Hazardous decomposition products	:	Toxic fumes of nox emitted when heated to decomposition

### Section 11-Toxicity Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 40000 mg/kg [Mouse].

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: Not available.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: It is not considered a primary irritant. However, it may cause skin irritation. Eyes: May

cause eye irritation. Inhalation: Breathing dust may cause respiratory tract irritation.

Symptoms may include coughing,

sore throat, labored breathing, and chest pain. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting,

hypermotility, and diarrhea. Chronic Potential Health Effects: Ingestion: Prolonged or repeated ingestion may affect the urinary system, and spleen.

### Section 12-Ecological Information

Environmental Fate : No information found

Environmental Toxicity : No information found

### Section 13-Disposal Considerations

Other Protective Measures : Impermeable apron and boots to prevent skin contact

Respiratory Protection : Approved dust respirator if dusting occurs.

Gloves : Rubber Plastic

Eyes Protection : Chemical Goggles



## Section 14-Transport Information

### Domestic data

Dot shipping name : Not regulated  
Dot hazard class : Not regulated  
Hazardous ingredients (s) : None  
UN number : None

### Export data

Export shipping name : Not regulated  
Export hazard class : Not regulated  
Hazardous ingredients (s) : None  
UN number : None

## Section 15-Regulatory Information

Federal and State Regulations:

California Director's List of Hazardous Substances: Povidone K-90 TSCA 8(b) inventory:  
Povidone K-90

Other Regulations: Not available.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

This product is not classified according to the EU regulations. Not applicable.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

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

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.



## Section 16-Additional Information

**References:** Not available.

**Other Special Considerations:** Not available.

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