

POLYVINYLPIRROLIDONE (PVP K30)

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

POLYVINYLPIRROLIDONE (PVP K30)
Povidone K30; Polyvidone K30; 1-Ethenyl-2-pyrrolidinone homopolymer
CAS: 9003-39-8

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Binder, film-former, disintegrant and viscosity modifier for pharmaceutical tablets/capsules, cosmetics, adhesives, inks and personal care formulations. For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3.

1.3 Supplier's details:

SURAJ CHEMICALS
No 92, Govindappa Naicken Street, Shiva Complex, Chennai – 600001, Tamil Nadu, India
Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
Email: sales@surajchemicals.com | Website: www.surajchemicals.com
GST No: 33ACEPV8190L1ZZ

1.4 Emergency phone number:

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS:
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Not classified as a hazardous substance or mixture per GHS criteria.

Per well-established published GHS data, PVP K30 is a standard low-hazard synthetic polymer and pharmaceutical excipient with an extensive history of safe use. Not classified for acute toxicity, skin/eye irritation, sensitization, carcinogenicity, mutagenicity, reproductive toxicity or aquatic hazard.

2.2 GHS label elements, including precautionary statements:

GHS: Not classified as hazardous – no signal word, pictogram or hazard statement required

Hazard statements:

None assigned under GHS.

Precautionary statements:

P262: Do not get in eyes, on skin, or on clothing (general dust hygiene practice).
P280: Wear protective gloves/eye protection where dust is generated.

2.3 Other hazards which do not result in classification:

Fine powder may form combustible dust clouds in air; avoid dust generation and ignition sources. Hygroscopic; may cause slip hazard when wetted.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: Polyvinylpyrrolidone, K-value 30 (PVP K30 / Povidone K30)
In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 9003-39-8	Polyvinylpyrrolidone (PVP K30) — Not classified	≥ 98% (typical commercial grade)

To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

3.2 Mixtures:

Non-applicable

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

Generally regarded as non-hazardous; standard dust/particulate first aid applies.

By inhalation:

Remove the person affected from dusty area to fresh air. Seek medical attention if coughing or respiratory discomfort persists.

By skin contact:

Wash skin with soap and water. Not expected to cause irritation under normal handling.

By eye contact:

Rinse eyes thoroughly with lukewarm water for several minutes to remove any dust particles. Seek medical advice if irritation persists.

By ingestion/aspiration:

Rinse mouth with water. Not expected to be harmful if accidentally ingested in small amounts; seek medical advice if feeling unwell.

4.2 Most important symptoms/effects, acute and delayed:

No significant acute symptoms expected under normal handling conditions. See sections 2 and 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Not relevant; treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable: Water spray/fog, foam, dry chemical powder, carbon dioxide
Unsuitable: High-pressure water jet (may disperse dust)

5.2 Specific hazards arising from the chemical:
Combustible organic powder. Fine dust may form explosive dust-air mixtures in the presence of an ignition source. Combustion may release carbon monoxide, carbon dioxide and nitrogen oxides.

5.3 Special protective actions for fire-fighters:
Evacuate non-essential personnel. Wear self-contained breathing apparatus and protective clothing in enclosed, dusty areas.

Additional provisions:
Avoid dust formation during fire-fighting/clean-up operations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
For non-emergency personnel:
Avoid generating dust. Use PPE described in section 8. Note that spilled material becomes slippery when wetted.
For emergency responders:
Wear appropriate protective equipment as per section 8.

6.2 Environmental precautions:
Avoid release of large quantities to drains and watercourses.

6.3 Methods and materials for containment and cleaning up:
Sweep up dry material (avoid dust generation) and place in a suitable, labelled container. If wetted, material becomes slippery – clean carefully to avoid slip hazards.

6.4 Reference to other sections:
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:
A. General precautions for safe use:
Avoid generating dust. Provide adequate ventilation. Keep away from open flame and ignition sources.

B. Technical recommendations for the prevention of fires and explosions:
Use dust-tight equipment and anti-static earthing where handling in bulk/powder form to control combustible dust hazard.

C. Technical recommendations on general occupational hygiene:
Do not eat, drink or smoke while handling. Wash hands after handling.

D. Technical recommendations to prevent environmental risks:
Prevent release to drains and watercourses in bulk quantities. Follow the protective measures given in section 8.

7.2 Conditions for safe storage, including any incompatibilities:
A. Specific storage requirements:

Minimum Temp.	Ambient
Maximum Temp.	30°C
Maximum time	24 Months (unopened, in original packaging, away from moisture)

B. General conditions for storage:
Store in a cool, dry, well-ventilated place in tightly closed containers, protected from moisture (strongly hygroscopic) and direct sunlight.

7.3 Specific end use(s):
Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:
No specific occupational exposure limit is established for PVP K30 under Indian regulations.

Identification	Occupational Exposure Limit Type	Value
Polyvinylpyrrolidone (PVP K30) CAS: 9003-39-8	No established OEL (general dust: TWA)	Typical value – refer to current specification sheet

8.2 Appropriate engineering controls:
Use local exhaust ventilation or dust extraction where powder/dust is generated, in addition to PPE as needed.

B. Respiratory protection:
Not normally required with adequate ventilation. Use a particulate (dust) respirator (FFP2/N95) if dust levels are elevated.

C. Specific protection for the hands:
Protective gloves recommended for prolonged or repeated handling.

D. Eye and face protection:
Safety glasses or dust goggles recommended where powder handling may generate dust.

E. Bodily protection:
Standard industrial workwear; antistatic clothing recommended where combustible dust may be present.

F. Additional emergency measures:
Eyewash station and washing facilities should be available in the work area.

Environmental exposure controls:
Avoid environmental spillage of both the product and its container. See subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance	
Physical state at 20°C	Solid (fine powder)
Appearance	White to creamy-white powder
Color	White to creamy-white
Odor	Odourless or near-odourless
Odour threshold	Not established
Volatility	

Boiling point at atmospheric pressure	Non-applicable (polymer, decomposes before boiling)
Vapour pressure at 20°C	Negligible
Evaporation rate at 20°C	Not relevant (solid)
Product Description	
Density / Relative density (bulk)	~0.4–0.5 g/cm³ (typical)
Dynamic / Kinematic viscosity (10% aqueous solution)	Typical value – refer to current specification sheet (K30 grade, K-value 27–32.4)
Concentration	≥98% (typical commercial grade)
pH (5% aqueous solution)	3.0–7.0 (typical)
Vapour density	Not relevant
Partition coefficient n-octanol/water	<0 (hydrophilic polymer)
Solubility in water at 20°C	Freely soluble, forming a clear to slightly opalescent solution
Decomposition temperature	Typical value – refer to current specification sheet (>150°C, discolours)
Melting point/freezing point	Non-applicable (amorphous polymer; glass transition ~130–170°C)
Flammability	
Flash Point	Non-applicable (solid)
Flammability (solid, gas)	Combustible solid; not readily flammable in bulk form
Autoignition temperature	Typical value – refer to current specification sheet
Lower / Upper flammability limit	Not established
Particle Characteristics	
Median equivalent diameter	Varies by grade – refer to current specification sheet

* Values are typical for the commercial grade; refer to current specification sheet for batch-specific data.

9.2 Other information:

Explosive properties	Not classified; fine dust may be combustible
Oxidising properties	Not relevant – not an oxidiser
Corrosive to metals	Not relevant
Heat of combustion	Not established
Surface tension	Not relevant
Refraction index	Not relevant

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

Stable under normal conditions of use. No known hazardous reactivity with common materials.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use. Strongly hygroscopic; can absorb significant moisture from humid air.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions are not expected. Fine dust clouds may be combustible in the presence of an ignition source.

10.4 Conditions to avoid:

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Avoid generating dust clouds	Hygroscopic – avoid prolonged exposure	Avoid excessive heat	No special measures	Avoid moisture ingress during storage

10.5 Incompatible materials:

Strong Oxidizers	Strong Acids/Bases	Ignition Sources
Avoid contact	No significant reaction known	Keep away

10.6 Hazardous decomposition products:

Thermal decomposition may release carbon monoxide, carbon dioxide and nitrogen oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Per well-established published data for this CAS number, PVP K30 is a low-hazard pharmaceutical excipient with an extensive history of safe use as a tablet binder and in other medical/cosmetic applications:

A. Ingestion (acute effect):

Very low acute oral toxicity; widely used as an oral pharmaceutical excipient.

B. Inhalation (acute effect):

Dust may cause transient mechanical irritation of the respiratory tract; not expected to cause systemic toxicity.

C. Contact with skin and eyes (acute effect):

Not expected to be irritating to skin. Dust may cause mechanical/transient irritation to eyes.

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):

Classification criteria for carcinogenicity, mutagenicity and reproductive toxicity are not met based on available data. IARC: Not listed.

E. Sensitizing effects:

Not classified as a skin sensitizer based on available data; rare sensitization reports exist in the medical literature with parenteral/injectable use of PVP, which are not relevant to this industrial-grade, non-injectable product.

F. Specific target organ toxicity (STOT) – single exposure:

Classification criteria are not met based on available data.

G. Specific target organ toxicity (STOT) – repeated exposure:

Classification criteria are not met based on available data.

H. Aspiration hazard:

Non-applicable (solid).

Product-specific toxicological information:

Identification	Acute Toxicity	Genus
Polyvinylpyrrolidone (PVP K30)	LD50 oral: >5000 mg/kg	Rat

CAS: 9003-39-8	LD50 dermal: >2000 mg/kg	Rabbit
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SECTION 12: ECOLOGICAL INFORMATION

Not classified as hazardous to the aquatic environment.

12.1 Toxicity:

Acute Toxicity	Species	Genus
LC50: >100 mg/L (96h)	Non-applicable	Fish
EC50: >100 mg/L (48h)	Non-applicable	Crustacean (Daphnia)

12.2 Persistence and degradability:

Not readily biodegradable (synthetic high-molecular-weight polymer); low inherent toxicity limits environmental hazard.

12.3 Bioaccumulative potential:

Not expected to bioaccumulate due to high molecular weight and hydrophilicity.

12.4 Mobility in soil:

Koc	Henry	Dry Soil	Moist Soil
Not relevant (water-soluble polymer)	Not relevant	Low mobility expected	May dissolve/disperse

12.5 Results of PBT and vPvB assessment:

Not classified as PBT/vPvB.

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Dispose of in accordance with local, state and national regulations as non-hazardous waste. Landfill or incineration at a licensed facility are suitable disposal routes. Empty containers may retain product residue; dispose of as per label/regulatory guidance.
Refer to national and local regulations on waste management.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023):

14.1 UN number	Not regulated (non-dangerous goods)
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Non-hazardous for transport
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22):

14.1 UN number	Not regulated (non-dangerous goods)
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Marine pollutant	No
14.6 Special precautions for user	Non-hazardous for transport
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024):

14.1 UN number	Not regulated (non-dangerous goods)
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Non-hazardous for transport
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product. Pharmaceutical-grade PVP K30 typically complies with applicable pharmacopoeial monographs (USP-NF/Ph.Eur./IP); refer to current specification sheet for grade-specific compliance status.

Other legislation:
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
Drugs and Cosmetics Act, 1940 (where applicable to pharmaceutical grade)

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3:

Not applicable – no hazard statements assigned.

This product is not classified as hazardous under GHS criteria based on well-established published data for this substance.

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

Published GHS classification data and standard chemical/pharmaceutical excipient reference sources for CAS 9003-39-8.

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50 | IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET