

# N-Biotinyl dopamine

CAS # 241142-94-9

**EXIM-INDIS** INC  
EVOLVING CHEMISTRY

## Product In Focus


## N-Biotinyl dopamine

### INTRODUCTION

Polyvinylpyrrolidone (PVP) is a water-soluble synthetic polymer obtained from the polymerization of N-vinyl-2-pyrrolidone. It is widely used across pharmaceutical, biomedical, and industrial applications due to its excellent biocompatibility, low toxicity, strong film-forming ability, and exceptional solubilizing and stabilizing properties. PVP is chemically stable, relatively inert, and resistant to thermal degradation, making it a versatile functional polymer.

- ✓ Synthetic, non-ionic, water-soluble polymer
- ✓ Linear polymer composed of N-vinyl-2-pyrrolidone units
- ✓ Available in a wide range of molecular weights (commonly expressed as K-values, e.g., K-30, K-90)
- ✓ Typically supplied as white to off-white hygroscopic powder.

### KEY DETAILS

CAS No	9003-39-8
Formula	(C <sub>6</sub> H <sub>9</sub> NO) <sub>n</sub>
Synonyms	PVP, Povidone, Polyvidone, Poly[1-(2-oxo-1-pyrrolidinyl) ethylene]
Common Grades (K-values):	K-15, K-30, K-90
MDL Number	MFCD00149016
Structure	



PVP

### MANUFACTURE

It is typically manufactured by free-radical polymerization of N-vinyl-2-pyrrolidone monomer. Industrial production may also utilize the Reppe synthesis route to prepare the monomer, followed by controlled polymerization to achieve desired molecular weight and performance characteristics.

### APPLICATION

#### Advanced Materials / Nanotechnology

- ✓ Carrying polymer for electrospinning of continuous titania nanofibers and zirconium tungstate ultra-thin fibers
- ✓ Structure-directing agent in fabrication of metal oxide nanofibers and porous materials
- ✓ Acts as a reducing agent and colloidal stabilizer in synthesis of palladium nanobars, triangular nanoplates, and related nanostructures
- ✓ Serves as a capping agent to control nanoparticle size, morphology, and dispersion stability

#### Pharmaceutical

- ✓ Tablet binder and granulation aid
- ✓ Solubilizing agent for poorly water-soluble drugs (solid dispersions)
- ✓ Stabilizer in suspensions and emulsions
- ✓ Film-forming agent in coatings

#### Food & Beverage

- ✓ Clarifying agent in beverages such as beer and wine
- ✓ Stabilizer for flavors, colors, and active ingredients
- ✓ Used as a processing aid in food formulations

#### Cosmetic / Personal-care

- ✓ Film-forming agent in hair sprays, gels, and styling products
- ✓ Binder and stabilizer in creams and lotions
- ✓ Enhances texture, spreadability, and formulation stability

# Polyvinylpyrrolidone (PVP)

CAS # 9003-39-8

Product In Focus

**EXIM-INDIS** INC  
EVOLVING CHEMISTRY

## Polyvinylpyrrolidone (PVP)

### APPLICATION (Continued)

#### Toiletry & Hygiene

- Used in toothpaste and oral care formulations as a binder and stabilizer
- Provides viscosity control and formulation consistency

#### Photographic / Imaging

- Protective colloid and binder in photographic emulsions
- Used in coating formulations for imaging films and specialty papers

#### It is widely used because it

- has excellent solubility in water and many organic solvents
- provides strong steric stabilization for nanoparticles and colloids
- forms clear, flexible, and adhesive films
- is biocompatible, non-toxic, and chemically stable functions as both a performance enhancer and processing aid

# Polyvinylpyrrolidone (PVP)

CAS # 9003-39-8

**EXIM-INDIS** INC  
EVOLVING CHEMISTRY

## Product In Focus

# Polyvinylpyrrolidone (PVP)

### SPECIFICATIONS

Test	Unit	Specification
Description	-	White to off-white hygroscopic powder
Identification	a) By IR Absorption/NMR Spectrum	The infrared absorption/NMR spectrum of the test sample should be concordant with the reference spectrum of PVP
	b) By solubility	Freely soluble in water and alcohol
K-Value (Molecular Weight Indicator)	-	As specified (e.g., K-30, K-90)
pH (5% solution)	-	3.0 – 7.0
Moisture Content	%	NMT 5.0
Residue on Ignition (Ash)	%	NMT 0.1
Residual Monomer (N-vinylpyrrolidone)	ppm	NMT 10
Heavy Metals	ppm	Complies with pharmacopeial limits

### STORAGE & PRECAUTION

Store in tightly sealed containers in a cool, dry, well-ventilated area. Protect from moisture due to hygroscopic nature.

### PACKING

HDPE bags / fiber drums with inner polyethylene liner

### GMP STATUS

Manufactured under cGMP or non GMP conditions based on customer specifications and intended application.

### COMMERCIAL NOTE

PVP is available in multiple grades with tailored molecular weight (K-values) to meet specific requirements across pharmaceutical, cosmetic, food, and industrial applications.

Exim-Indis offers Polyvinylpyrrolidone (PVP) on commercial scales and welcomes enquiries. No matter the quantity you need, our exceptional quality and service will make Exim-Indis your supplier of choice. If you need any additional information or SDS, please contact us.