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# Leading PVP Manufacturer in China



## **Product Guide** JH Nanhang Life Sciences Co.,Ltd.

To supply the Best Quality, **Competitively Priced Products** that meet all International Standards.

We aim to provide **Outstanding Customer Service** through a Flexible Approach to busness.

# **Company Information**

JHNH is the leading PVP & PVPP manufacturer in China with an annual production capacity of 5,000MT.

Our manufacturing plant in Quzhou (just 2 hours SW of Shanghai) meets all international standards for quality and safety including GMP Compliance and ISO 9001. We hold several regulatory certificates including DMF, CEP, FDA Registration, KOSHER, HALAL etc. Our products for pharmaceutical applications conform to the Current USP/EP/JP/BP/IP standards. Our plant has been successfully audited by many multinational pharmaceutical companies and audit reports form independent auditors are also available.

customer care.



JHNH serves its customers with high quality products, manufactured to international standards with strong technical service and responsive

Chemistry:

# Povidone Crospovidone

## **Pharma Grade-Povidone**

**Description**: Polyvinylpyrrolidone (PVP) Appearance: White to creamy white powder

**CAS No.** 9003-39-8

**INCI: PVP** 

| Items                                    | K15   | K17             | K25             | K30           | K90       |
|--|---|-----------------|-----------------|---------------|-----------|
| Appearance                               | V   | White or yellow | vish-white, hyg | roscopic powo | ler       |
| Identification A, B,C, D, E              |   |                 | Positive        |               |           |
| Appearance of solution                   |   | Clear a         | ind NMT B6, B   | /6 or R6      |           |
| Solubility                               | Freely soluble in water ,in ethanol (96%) and in methanol, very slightly soluble in acetone |                 |                 |               |           |
| K-value                                  | 12.8-17.3   | 15.3-18.4       | 22.5-27.0       | 27.0-32.4     | 81.0-97.2 |
| Water %                                  | ≤ 5.0   | ≤ 5.0           | ≤ 5.0           | ≤ 5.0         | ≤ 5.0     |
| Impurity A (1-vinylpyrrolidin-2-one) ppm | ≤ 10  | ≤ 10            | ≤ 10            | ≤ 10          | ≤ 10      |
| Impurity B (2-pyrrolidone) %             | ≤ 3.0   | ≤ 3.0           | ≤ 3.0           | ≤ 3.0         | ≤ 3.0     |
| рН                                       | 3.0-5.0   | 3.0-5.0         | 3.0-5.0         | 3.0-5.0       | 4.0-7.0   |
| Peroxides ppm                            | ≤ 400   | ≤ 400           | ≤ 400           | ≤ 400         | ≤ 400     |
| Nitrogen content %                       | 11.5-12.8   | 11.5-12.8       | 11.5-12.8       | 11.5-12.8     | 11.5-12.8 |
| Heavy metals (as Lead) ppm               | ≤ 10  | ≤ 10            | ≤ 10            | ≤ 10          | ≤ 10      |
| Sulphated ash %                          | ≤ 0.1   | ≤ 0.1           | ≤ 0.1           | ≤ 0.1         | ≤ 0.1     |
| Aldehydes ppm                            | ≤ 500   | ≤ 500           | ≤ 500           | ≤ 500         | ≤ 500     |
| Hydrazine ppm                            | ≤ 1   | ≤ 1             | ≤ 1             | ≤ 1           | ≤ 1       |
| Formic acid %                            | ≤ 0.5   | ≤ 0.5           | ≤ 0.5           | ≤ 0.5         | ≤ 0.5     |
| Mircobiological                          |   |                 | Complies        |               |           |

\* Products supplied conform to the latest USP, EP & JPE

\* We can also supply Povidone K30 USP - conform to USP31.

#### **Applications:**

- Binder for tablets, granules and hard gelatin capsules
- · Bioavailability enhancement , film formation and solubilization
- Injection preparations, stabilization of suspensions and drug stabilization
- Dietetic tablets in nutritional products

## **Pharma Grade-Crospovidone**

**Description:** Polyvinylpolypyrrolidone (PVPP) Appearance: White to creamy white powder

CAS No. 9003-39-8 **INCI:** Crosslinked PVP

| Item                       | XL   | XL-10                               | SL                                  |  |
|----------------------------|--|-------------------------------------|-------------------------------------|--|
| Appearance                 | White or yellowish-white, hygroscopic powder                       |                                     |                                     |  |
| Solubility                 | Practically insoluble in water, ethanol 96% and methylene chloride |                                     |                                     |  |
| Identifications A, B, C    | Pass   |                                     |                                     |  |
| Identifications D          | Residue fraction > 15% as<br>Type A                                | Residue fraction ≤ 15% as<br>Type B | Residue fraction ≤ 15% as<br>Type B |  |
| Water soluble substances % | ≤ 1.5  | ≤ 1.5                               | ≤ 1.5                               |  |
| Loss on drying %           | ≤5.0   | ≤ 5.0                               | ≤ 5.0                               |  |
| Vinylpyrrolidine ppm       | ≤ 10   | ≤ 10                                | ≤ 10                                |  |
| Peroxides ppm              | ≤ 400  | ≤ 1000                              | ≤ 400                               |  |
| Nitrogen content %         | 11.0-12.8  | 11.0-12.8                           | 11.0-12.8                           |  |
| Heavy metals (as Lead) ppm | ≤ 10   | ≤ 10                                | ≤ 10                                |  |
| Sulphated ash %            | ≤ 0.1  | ≤ 0.1                               | ≤ 0.1                               |  |
| Particle size μm           | 40-120   | 20-40                               | below 20                            |  |
| Hydration capacity         | 3 -9   | 3 -9                                | 3 -9                                |  |
| Powder flow                |  | Positive                            |                                     |  |
| Setting Volume ml          |  | ≥ 60                                |                                     |  |
| Mircobiological            |  | Complies                            |                                     |  |

\* Products supplied conform to the latest USP, EP & JPE

#### **Applications:**

- Disintegrant for tablets, granules and hard gelatin capsules
- Stabilizer for oral and topical suspensions
- · Improvement of dissolution, bioavailability and filtration aid







# Copovidone Povidone lodine

## **Pharma Grade-Copovidone**

**Description:** Vinylpyrrolidone-vinylacetate copolymer (PVP/VA64) **Appearance:** White to creamy white hygroscopic powder

CAS No. 25086-89-9 **INCI:** PVP/VA Copolymer



| Item                           | Specification  |
|--------------------------------|--|
| Aspect                         | White or yellowish-white, hygroscopic powder                     |
| Solubility                     | Freely soluble in water, ethanol 96% and methlene chloride       |
| Identifications A, B, C        | Positive   |
| Appearance of solution         | Clear and NMT B <sub>5</sub> , R <sub>5</sub> or BY <sub>5</sub> |
| K-value                        | 27.0 - 33.0  |
| Loss on drying %               | ≤ 5  |
| Monomers %                     | ≤ 0.1  |
| Peroxides ppm                  | ≤ 400  |
| Nitrogen content %             | 7.0 - 8.0  |
| Heavy metals (as Lead) ppm     | ≤ 20   |
| Sulphated ash %                | ≤ 0.1  |
| Aldehydes ppm                  | ≤ 500  |
| Hydrazine ppm                  | ≤ 1  |
| Impurity A (2-Pyrrolidone) ppm | ≤ 0.5  |
| Ethenyl acetate %              | 35.3 - 42.0  |
| Mircobiological                | Complies   |

\* Products supplied conform to the latest USP, EP & JPE

#### **Applications:**

- Binder for tables
- Wet granulation and dry granulation binder, direct compression
- Tablet coating and film-forming agent

## Pharma Grade – Povidone Iodine

**Description:** Complex of polyvinylpyrrolidone with Iodine (PVP-1) Appearance: Yellowish-brown or Reddish-brown, amorphous powder

**CAS No.** 25655-41-8 **INCI:** PVP lodine

| Item                      | Specification   |
|---------------------------|---|
| Appearance                | Yellowish-brown or reddish-brown amorphous powder                       |
| Solubility                | Soluble in water and in ethanol (96 %) practically insoluble in acetone |
| Identifications A, B, C   | Positive  |
| рН                        | 1.5 - 5.0   |
| lodine %                  | ≤ 6.0   |
| Available Iodine %        | 9.0 - 12.0  |
| Loss on drying %          | ≤ 8.0   |
| Sulfated ash %            | ≤ 0.1   |
| Heavy metal (as Lead) ppm | ≤ 20  |

\* Products supplied conform to the latest USP, EP & JPE

#### **Applications:**

- Skin antiseptics
- · Surgical hand disinfection, treatment of wounds
- Scalp, vaginal and throat infection, veterinary medicine



Chemistry:





# Personal Care Personal Care

#### **Cosmetic Grade - PVP**

**Description:** Polyvinylpyrrolidone (PVP) **Appearance:** White to creamy white powder

**CAS No.** 9003-39-8 **INCI:** PVP

Chemistry:

| Item   | K30 Powder K90 Powder                           |  | K30 Solution                    | K90 Solution |  |
|--|---|--|---------------------------------|--------------|--|
| Appearance                                   | White or yel<br>hygroscor                       | lowish-white,<br>pic powder                        | Colorless or clear light yellow |              |  |
| Solubility                                   | Freely soluble in<br>96%, methand<br>soluble in | n water, ethanol<br>bl, very slightly<br>n acetone | /                               |              |  |
| Solid Content %                              |   |  | 28 -32                          | 18-22        |  |
| Identification A,B,C                         | Pos   | itive  | /                               |              |  |
| Appearance of solution                       | Clear and NMT B6, BY6, or R6                    |  | /                               |              |  |
| рН   | 3.0 - 5.0                                       | 4.0 -7.0   | 3.0 - 7.0                       | 7.0 - 10.0   |  |
| K-value                                      | 27.0 - 32.4                                     | 81.0 - 97.2  | 27.0 - 32.4                     | 81.0 - 97.2  |  |
| Aldehydes ppm                                | ≤ 500   | ≤ 500  | ≤ 500                           | ≤ 500        |  |
| Peroxide ppm                                 | ≤ 400   | ≤ 400  | ≤ 400                           | ≤ 400        |  |
| Impurity A<br>(1-vinylpyrrolidone-2-one) ppm | ≤ 400   | ≤ 400  | ≤ 400                           | ≤ 400        |  |
| Heavy metals (as Lead) ppm                   | ≤ 10  | ≤ 10   | /                               |              |  |
| Water %                                      | ≤ 5.0   | ≤ 5.0  | /                               |              |  |
| Sulphated ash %                              | ≤ 0.1   | ≤ 0.1  | /                               |              |  |
| Nitrogen content %                           | 11.5 - 12.8                                     | 11.5 - 12.8  | /                               |              |  |

#### **Applications:**

- Film former agents that are used as hair fixatives, particularly in aerosol sprays, pump sprays, liquid products, mousses and gels
- Emulsion stabilizer in creams and lotions, dispersant for hair colourant, Form stabilizer
- De-stainer and gelling agent in toothpastes, skin adhesive

## Cosmetic Grade - PVP/VA64 & PVP/VA64W

**Description:** Vinylpyrrolidone-vinylacetate copolymer (PVP/VA64) **Appearance:** White to creamy white hygroscopic powder

CAS No. 25086-89-9 **INCI:** PVP/VA Copolymer

| Item                         | Specification  |
|------------------------------|--|
| Aspect                       | White or yellowish-white, hygroscopic powder                     |
| Identifications A,B,C        | Positive   |
| Appearance of solution       | Clear and NMT B <sub>5</sub> , R <sub>5</sub> or BY <sub>5</sub> |
| K-value                      | 27.0 - 33.0  |
| Aldehydes ppm                | ≤ 500  |
| Peroxides ppm                | ≤ 400  |
| Hydrazine ppm                | ≤1   |
| Monomers %                   | ≤ 0.1  |
| Impurity A (2-pyrrolidone) % | ≤ 0.5  |
| Heavy metals (as Lead) ppm   | ≤ 20   |
| Loss on drying %             | ≤ 5  |
| Sulfated ash %               | ≤ 0.1  |
| Nitrogen content %           | 7.0 -8.0   |
| Ethenyl acetate %            | 35.3 - 42.0  |
|                              |  |

| Item                      | Specification            |
|---------------------------|--------------------------|
| Appearance of solution    | Clear or faint yellowish |
| рН                        | 3.0 -7.0                 |
| K-value                   | 26.0 -34.0               |
| Free Vinylpyrrolidone ppm | ≤ 400                    |
| Free Vinlyl acetate ppm   | ≤ 400                    |
| Solid Content %           | 48 - 52                  |

#### **Applications:**

- Particulary used in aerosol hair spray, pump spray, setting lotions,
- Setting mousses, gels and hair waxes
- Styling agent





# Food/Beverage Tech/Industry

## **Food/Beverage Grade - PVPP**

**Description:** Polyvinylpyrrolidone (PVPP) **Appearance:** White to creamy white powder

**CAS No.** 9003-39-8 INCI: PVP



| Item                             | PVPP-F (One-way)   | PVPP-R (Regenerable)              |  |
|----------------------------------|--|-----------------------------------|--|
| Appearance                       | A white hygroscopic powder with a faint, non-objectionable odour |                                   |  |
| Solubility                       | insoluble in water, ethanol and ether                            |                                   |  |
| Identifications A, B, C          | Positive   |                                   |  |
| Identifications D                | Residue fraction > 15% as Type A                                 | Residue fraction <= 15% as Type B |  |
| Odor (500mg/L of water)          | Faint,   | typical                           |  |
| рН                               | 5.0 -  | - 8.0                             |  |
| Moisture (Karl Fischer) %        | ≤ !  | 5.0                               |  |
| Water soluble substance %        | ≤ 1.0  |                                   |  |
| Acid/Alcohol soluble from PVPP % | ≤ 1.0  |                                   |  |
| Vinylpyrrolidine ppm             | ≤ 10   |                                   |  |
| Nitrogen content %               | 11.0-12.8  |                                   |  |
| Heavy metals ppm                 | ≤  | 10                                |  |
| Sulphated ash %                  | ≤ 0.4  |                                   |  |
| Hydration capacity               | 3 -9   |                                   |  |
| Particle size µm                 | 20 - 40 40 - 100   |                                   |  |
| Setting Volume ml                | ≤ 60   |                                   |  |
| Adsorptive capacity %            | ≥ 40   |                                   |  |

## **Technical Grade - PVP**

**Description:** Polyvinylpyrrolidone (PVP) Appearance: White to creamy white powder

CAS No. 9003-39-8 **INCI:** PVP

| Item               |  |
|--------------------|--|
| Appearance         |  |
| Solubility         |  |
| рН                 |  |
| K-value            |  |
| Vinylpyrrolidone % |  |
| Water %            |  |

#### **Applications:**

· Clarifying agent and stabilizer in beer, wine and fruit juice

#### **Regulation:**

• PVPP is permitted for use in beer stabilization in Europe, US and Asia (the Reinheitsgebot)

#### **Applications:**

- Adhesives: glue sticks, hot-melt adhesive
- Paper: coating of ink -jet paper and special papers
- Agriculture: seed coating and plant protection
- · Coating and Inks: dispersion and paints, catheter coating
- Others: membranes, metallurgy, enzymes, laundry detergent





| K15   | К30 | К90 |  |  |
|---|-----|-----|--|--|
| White or yellowish-white, hygroscopic powder    |     |     |  |  |
| Freely soluble in water, ethanol 96%, methanol, |     |     |  |  |
| 3.0-7.0   |     |     |  |  |
| 12.8-17.3 27.0-32.4 81.0-97.2                   |     |     |  |  |
| ≤ 0.2   |     |     |  |  |
| ≤ 6.0   |     |     |  |  |

• Electronic: screens, batteries, printed circuit boards, ceramics, textile and fibers, photographic film and paper



# N-Vinylpyrrolidone 2-Pyrrolidone

**Description:** N-vinyl-2-pyrrolidone (NVP)

#### **Appearance:** Colorless to light yellow liquid

#### **Chemistry:**



#### CAS No. 88-12-0

#### **Description:** 2-Pyrrolidone (2-P)

#### **Appearance:**

Colorless or light yellow liquid

#### **Chemistry:**

Ο

CAS No. 616-45-5

| Items                | Specification                    | 30 | Items                                   |
|----------------------|----------------------------------|----|---|
| Appearance           | Colorless or light yellow liquid |    | Appearance                              |
| Purity %             | ≥ 99.0 %                         |    | Purity %                                |
| APHA(Color standard) | 60 max (Pt-co color)             | 20 | APHA(Color standard)                    |
| 2-pyrrolidone %      | ≤ 0.2                            |    | γ-Butyroladone(by gas chromatography) % |
| Water %              | ≤ 0.2                            |    | Water %                                 |
| Total Impurities %   | ≤1                               | 10 |   |

#### **Applications:**

- Important monomer for varieties of homopolymers and copolymers
- Reactive diluent in UV curable coatings for plastics, wood, metal, inks, electronics and adhesives etc

#### Applications:

- · Solvent for veterinary injection preparations
- Absorption enhancer in topical preparations
- · Humectant and cosolvent in digital printing inks
- Plasticizer for acrylic resins



#### Specification

Colorless or light yellow liquid

≥ 99.0 %

30 max (Pt-co color)

≤ 0.2

≤ 0.3

## **Regulatory Certification**

- ✓ China Pharmaceutical Registration License
- ✓ China Excipient Manufacturing License
- ✓ FDA certificate of registration
- ✓ DMF certificate
- ✓ ISO 9001 certificate
- Certificate of Suitability (CEP)  $\checkmark$
- ✓ GMP Compliance
- ✓ HALAL certificate
- ✓ KOSHER certificate
- ✓ Stability data (studies carried out in accordance with ICH Q1 guidelines)
- ✓ Confirmation Letter of REACH Pre-registration



## **Available Packaging** Product Povidone K Series Crospovidone Type A Crospovidone Type B Copovidone VA64 Povidone Iodine \* One 20' FCL with pallet can load 6,000kg Povidone K Series product.

| ackaging   | N.W. (kgs) |
|------------|------------|
| astic Drum | 25         |
| ber Drum   | 25         |
| astic Drum | 25         |
| per Drum   | 20         |
| astic Drum | 20         |
| per Drum   | 20         |
| astic Drum | 20         |
| ber Drum   | 20         |
| astic Drum | 25         |
| per Drum   | 25         |

Other product loading information upon request.