



**STOCK ID: YKKJ**  
STOCK CODE: 430179

PWP

**MADE IN SHANGHAI**

China Functional Polymer Industry Committee  
Shanghai Yuking Water Soluble Material Tech Co., Ltd.





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STOCK CODE: 430179

八載拼搏一輪回  
二朝更新三地飛  
上南鵬居游子洞  
張江軒亮英雄靡  
生死榮辱无可畏  
詩書笑傲有崔魏  
今向諸師求王道  
明朝乘得氣宇歸

襄陽王宇

**Yuking Spirit**

Impressive Appearance, Fighting Morale!





## Profile

**Shanghai Yuking Water Soluble Material Tech Co., Ltd.**, formerly Shanghai Yuking Chemtech Co., Ltd established in 2005. It was initiated to establish by China Functional Polymer Industry Committee (CFPIC), specializing in water soluble polymer of R&D, production, distribution and application, and as an innovative, science & technology intensive, growing, extraverted, high and new technology enterprise. Yuking is Shanghai High-Tech Enterprise, the secretariat & governing units of CFPIC and also the setter for PVP National Standard. Yuking has already been a public company whose stock code is "430179" and stock ID is "YKKJ" at Shenzhen Stock Exchange on Dec. 20th, 2012.

Our headquarter is located in Shanghai Zhangjiang Hi-Tech Park, and there are two factories in Shanghai & Shandong, Shanghai Biological R&D Center, an Union Laboratory in Tongji University, Two training bases in Tongji University & Hubei University of Arts and Science. Our biology pharmaceutical factory which produces 2000 - 3000 MT/Year PVP-K & 500 MT/Year PVP-I is established in Shanghai suburb, we already apply for ISO, DMF, GMP, etc. Until now, we export more than 40 countries and own steady orders from famous chemical companies, such as Novartis, Abbott, Merck, Brookes, Lipa, Rioquimica, Glenda etc.

We set up branches in Beijing, Guangzhou and Urumchi. Furthermore, we found offices in Sydney, Los Angeles, St. Paul, Buenos Aires, Seoul, Wellington and Karachi. Meanwhile, we have own right of import and export. We mainly deal in water soluble polymer products including PVP, SAP, PAM, fine chemicals, biology pharmaceutical raw material & ingredient, pharmaceutical intermediates, etc.



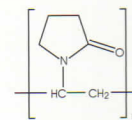


## History

- \* **2005** Mr Wang established Shanghai Yuking Chemtech Co., Ltd by himself. He is an expert in Chinese WSPs, especially in the fields of PVP.
- \* **2006** Our President Mr Wang was invited to participate the WSPS conference in USA as Chinese unique expert.
- \* **2007** We signed strategic cooperation agreement with Dongying Huaan Chemical Industry Co., Ltd. and built a PVP factory in Shandong.
- \* **2008** We joined the 9th International Chemicals Exhibition and got excellent efficiency.
- \* **2009** We applied for High and New Technology Achievement Transformation Project from our government and patent.
- \* **2010** We had our new office in Shanghai Zhangjiang High-Tech Park and established other two companies. We joined DUPHAT exhibition in Dubai. It is very meaningful for Yuking, we participated foreign fair successfully although this is our first time.
- \* **2011** We joined CPHI Frankfurt and catch a lot of European customers.
- \* **2012** We successfully changed into a new company name - Shanghai Yuking Water Soluble Material Tech Co., Ltd., being a Public company on PVP.
- \* **2013** We both attended CPhI Shanghai & Frankfurt, are well preparing DMF on PVP Iodine.







## PVP - K

Name: Povidone, Polyvinyl pyrrolidone

CAS No.: 9003-39-8

### Product Introduction

PVP appears as white or yellowish powder or aqueous solution. It is soluble in water and a variety of organic solvents. It has good hygroscopicity, film-forming capability, complexing ability and physiology compatibility.

### Specification(CP/BP/USP/EP)

Product Name	K value	NVP %	Moisture %	Residue on ignition%	Heavy metal ppm	Aldehydes %	Nitrogen %	Hydrazine ppm	Peroxide ppm	PH value
K15(powder)	13.5-16.2	<0.1	<5.0	<0.1	<10	<0.05	11.5-12.8	<1	<400	3-7
K17(powder)	15.3-18.4	<0.1	<5.0	<0.1	<10	<0.05	11.5-12.8	<1	<400	3-7
K25(powder)	22.5-27	<0.1	<5.0	<0.1	<10	<0.05	11.5-12.8	<1	<400	3-7
K30(powder)	27-32.4	<0.1	<5.0	<0.1	<10	<0.05	11.5-12.8	<1	<400	3-7
K30(30%liquid)	27-32.4	<0.1	--	<0.1	<10	<0.05	11.5-12.8	<1	<400	3-7
K90(powder)	81-97.2	<0.1	<5.0	<0.1	<10	<0.05	11.5-12.8	<1	<400	3-7
K90(20% liquid)	81-97.2	<0.1	--	<0.1	<10	<0.05	11.5-12.8	<1	<400	5-9

### Packing and Storage

Liquid is packed in 60kg/plastic drum; solid is packed in 25kg/fiber drum.

### Application

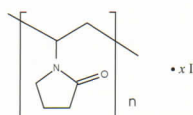
**Cosmetics:** PVP-K series can be used as film-forming agent, viscosity-enhancement agent, lubricator and adhesive. They are the key component of hair sprays, mousses, gels and lotions & solution, hair-dying reagent and shampoo in hair-care products. They can also be used as assistant in skin-care products, eye make-ups, lipsticks, deodorants, sunscreens and dentifrices.

**Pharmaceuticals:** Povidone K30 and K90 are new varieties of pharmaceutical excipients and have excellent performances. PVP works as an excipient in more than one hundred kinds of drugs, PVP is mainly used as binder for tablet, dissolving assistant for injection, flow assistant for capsule, dispersant for liquid medicine and stain, stabilizer for enzyme and heat sensitive drug, coprecipitant for poorly soluble drugs, lubricator and antitoxic assistant for eye drug.

**Other Utilities:** Also used as assistant in the realm of paint and coating, plastics and resin, adhesives, glass fiber, film, ink, TV tube, detergent, biocide, tabulating, textile dying and printing, etc.







Name: Povidone-Iodine, Povidone -Iodinated, PVP-Iodine

**PVP - I**  
CAS No.: 25655-41-8

## Product Introduction

PVP-I is the complex of PVP K30 and iodine. It has a powerful bactericidal activity against germs, viruses, fungi and molds. It is stable, non-irritating and completely soluble in water. We also have a self-developed high-stable PVPI which is called YK-1032 invented by our own R&D team.

## Specification (CP/BP/USP/EP)

Loss on drying%	Residue on ignition%	Available iodine %	Iodine ion%	Arsenic ppm	Heavy metal ppm	PH value	Nitrogen %
≤ 8.0	≤ 0.1	9.0-12.0	≤ 6.6	≤ 1.5	≤ 20	1.5-5.0	9.5-11.5

## New Star Product: PVPI POWDER 20%

Loss on drying%	Residue on ignition%	Available iodine%	Iodine ion%	Arsenic ppm	Heavy metal ppm	PH value	Nitrogen %
≤ 8.0	≤ 0.1	19.0-22.0	≤ 13.5	≤ 1.5	≤ 20	1.5-5.0	8.0-11.0

## Packing and Storage

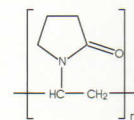
25kg/fiber drum. Drying and airproof storage.

## Application

PVP-I has a broad-spectrum microbial killing or repressing effect. PVP-I liquid has no sharp odor, no irritate or injure to skin mucous membrane and trachea, no secondary pollution and suffers no drug resistance. Since PVP-I can be easily diluted, simply used and has a stable effectiveness, it is nowadays the most advanced environmental antiseptic. PVP-I has an excellent effect in treating injuries of burn, frostbite, cut, graze and bruise, and is especially effective against skin inflammations and ulcers. Comparing to iodine and alcohol, PVP-I brings much lighter irritation and pain, so it is more bio-friendly. With wide usage and exact effect, PVP-I has replaced past skin mucous membrane antiseptics such as alcohol, merbromin, iodine and gentian violet. When PVP-I becomes liquid, it gradually dissolves in water and releases free iodine for sterilizing, thus its bactericidal activity is long-lasting, and brings light irritation and no dyeing effects. It overcomes many disadvantages such as easily subliming away, yellow dyeing and irritation of iodine tincture.







## Cross Povidone(PVPP)

Name: Crosopovidone, Insoluble PVP

CAS No.: 25249-54-1 / 9003-39-8

### Product Introduction

Cross Povidone is often called as crosslinked PVP, or insoluble PVP. It appears as white or off-white, free flowing hygroscopic powder, odorless or with faint characteristic odor, insoluble in water, alkali, acid and common organic solvents. It has strong expandability and complexing ability with polyphenols, carboxylic acid and other compounds with low molecular weight.

### Specification(BP/USP/EP)

Product name	Water %	Water-soluble substances%	NVP ppm	PH value (1% water)	Heavy metal ppm	Nitrogen %	Residue on ignition%	Remarks
PVPP-F	<5	<1.5	<10	5-8	<10	11.0-12.8	<0.4	One Time Type
PVPP-R	<5	<1.5	<10	5-8	<10	11.0-12.8	<0.4	Regenerated Type
PVPP XL	<5	<1.5	<10	5-8	<10	11.0-12.8	<0.4	30-60 um
PVPP XL-10	<5	<1.5	<10	5-8	<10	11.0-12.8	<0.4	100 um

### Packing and Storage

20kg/drum. Drying and airproof storage.

### Application

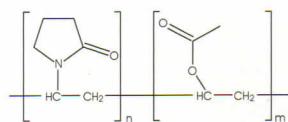
Belonging to insoluble cross polymers, PVPP has a special netlike micro-structure and also breaks through the application limitation of PVP because of its excellent solubility. Opposite to PVP, PVPP is insoluble in acid, alkali and common organic solvent. It has good physiological safety, hygroscopicity, insolubility and complexation capabilities, thus can be widely used in fields like pharmaceutical, food, personal care, feed, etc.

**Pharmaceuticals:** PVPP can be used as disintegration agent, medicine slow-releasing carrier and hemodialysis film, etc., as it has an excellent chemical inertness and biological compatibility. After PVPP absorb water, it provides very high pressure inside the tablet or capsule, then disintegrate them into small particles, thus improved bio-utilization of human body.

**Brewing and Beverage:** PVPP's strong selective adsorption ability, it can effectively eliminate anthocyanin and polyphenol from vegetable drinks while maintaining the taste, thus improve the clarity, color and extend the shelf life of the drinks.

**Household Chemicals:** PVPP can be used as moisture-preserving agent of top grade cosmetics, where it play the role of moisten skin, maintain aroma, ease pain and decrease pungency. Used in toothpastes, PVPP can not only clear the mouth, but also diminish inflammations.





Name: Copovidone, VP/VA Copolymer

CAS No.: 25086-89-9

## PVP-VA Copolymer Series

### Product Introduction

This series are different proportion of Vinylpyrrolidone and vinylacetate in powder, alcohol solution and aqueous solution. The aqueous solution products may be varied from transparent to turbid; the clarity of the solution depends on the proportion of Vinylpyrrolidone and vinylacetate. The solution is slight acidic but not electrolytic.

### Specification(Liquid)

Product Name	VA64W	VA64E	VA37E	VA37I	VA55E	VA55I	VA73W/E
Appearance	Colorless, Viscous Liquid						
K Value	30-36	30-36	24-32	24-32	24-32	24-32	28-38
N-Vinylpyrrolidone < %	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Solid Assay %	48-52	48-52	48-52	48-52	48-52	48-52	48-52
PH (5% solution)	--	--	--	--	--	--	--
VAc < %	0.03	0.03	0.03	0.03	0.03	0.03	0.03
VP/VA	60/40	60/40	30/70	30/70	50/50	50/50	70/30

### Specification(Powder) (USP/BP/EP)

Product Name	K Value	Nitrogen %	(VP+Vc)%	Loss on drying %
VA64 Powder	25.2-30.8	7.0-8.0	< 0.4	< 5.0
Heavy metals ppm	Aldehydes ppm	Peroxide ppm	Hydrazine ppm	α-p %
< 20	< 500	< 400	< 1	< 0.5

### Packing and Storage

Liquid is packed in 50kg/plastic drum or 1MT/IBC drum; solid is packed in 25kg/fiber drum.

### Application

**Pharmaceuticals:** It is mainly used as water soluble and drying adhesive agent in granulating and direct tableting. It can be used in film coatings and taste masking agents to prevent sugar coating from cracking and keep bottom coating from dampness.

**Cosmetics:** PVP-VA Series play a good role in film-former and hair-fixing agents. The hygroscopicity of PVP-VA decreases with the increase of the proportion of vinylacetate in the molecular, which property is extremely useful when added to hair sprays and hair-set lotion. Moreover, when mixed with PVP K-30, the effect of hair-fixing would be changed remarkably.

**Other Utilities:** PVP-VA series can be used in rewetting adhesive and other adhesives for paper or thickening agent and protecting colloid for all kinds of printing ink. Water-soluble PVP-VA series can also act as emulsifying agent or protecting colloid for plant-protecting agents or other dispersing systems and binder in coatings.



## PVP-Q100

### Product Introduction

PVP-Q100 appears as colorless or light yellow viscous liquid. Easily soluble in water, stable against hydrolysis under high PH. It can shape transparent and glossiness film, and the film is flexible and not stick. Belonging to CPAM family, PVP-Q100 can complex with APAM, NPAM and ampholytic surfactant. Affinite to hair and skin, and not easily to accumulate in conditioning hair care and skin care products, PVP-Q100 can improve wet combability and keep curl of the hair.

### Specification

Appearance	Color	Solid Content %	PH Value	VP%	Viscosity mPa.S
High viscosity liquid	Colorless to light yellow	19-21	5-8	< 0.2	$(4.0-5.0) \times 10^4$

### Packing and Storage

150kg/drum, 200kg/drum. Ventilated and lightproof storage.

### Application

1. As conditioner in the permanent wave sets, conditioning shampoos and cleaning products.
2. As film-forming agent in shaping products (sprays, Eau de Toilette, gel and mousse).
3. As additive to increase comfort in Hand sanitizers, shaving lotions and body lotions.





## PVP-Q755

### Product Introduction

Colorless to yellowish high viscosity liquid. Its solution can be made into transparent and non-viscous film. It has cationic character and makes the hair be to combed easily. It is not harmful to the eyes and skin. It can be mixed with non-ion, anionic ion surfactant.

### Specification

Appearance	Color	Solid Content %	PH Value	VP%	Viscosity mPa.S
High viscosity liquid	Colorless to light yellow	19-21	5-8	<0.2	$(1.5-8.0) \times 10^4$

### Packing and Storage

150kg/drum, 200kg/drum, it should be reserved in dry place under the room temperature and avoid sunshine.

### Application

1. It can be used in shampoo, milk frost and transparent cleaning products.
2. It can be used as film agent in the aerosol moss and gelatin.
3. It can be used in spray products of wet and dry hair.
4. It can be used as additive which can make skin feel comfortable in the moisten skin frost, deodorant and anti-perspirant.

## PVP-SH

### Product Introduction

Colorless or yellowish transparent liquid, neuter, it can be soluble in water, ethanol, etc. It is a kind of excellent dispersant.

### Specification

VP %	Cloud Point °C	Solid Assay %	Viscosity mPa.S
<0.2	$\geq 40$	29-31	1000-3000

### Packing and Storage

150kg/drum, 200kg/drum, it should be reserved in dry place under the room temperature and avoid sunshine.

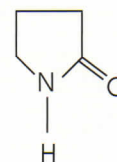
### Application

PVP-SH is professional dispersant when Fluorescence whitening cream become plasm. It can maintain the long stability(beyond three months) and avoid delamination.



## $\alpha$ -Pyrrolidone (2-P)

CAS No.: 616-45-5



### Product Introduction

$\alpha$ -Pyrrolidone is colorless liquid. Its solidifying point is 25.6°C, flashing point is 129.4°C, and boiling point is 245°C. It dissolves with water, lower alcohol, lower ketone, aether, chloroform and benzene.

### Specification

Appearance	Purity %	Water Content %	Refractive Index nD <sub>20</sub>	Speci Gravity D <sub>4</sub> <sup>25</sup>
Colorless and pure liquid(>25°C)	>99.0	<0.3	1.480-1.490	1.110-1.116

### Packing and Storage

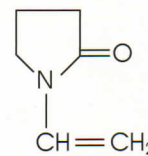
200kg/drum, drying surrounding and airproof storage.

### Application

$\alpha$ -Pyrrolidone is colorless and high boiling point polar solvent and also is organic and synthetic intermediate. It mainly is applied as the solvent of synthetic resin, agricultural pesticide, polybasic alcohol, printing ink, sulphur, and as the raw material of poly vinyl pyrrolidone, polyamide-4 and piracetam.

## N-Vinyl-2-Pyrrolidone (NVP)

CAS No.: 88-12-0



### Product Introduction

It is a colorless to light yellow transparent liquid with faint odor under ambient temperature, and dissolves with water and the other organic and synthetic solvents easily. Its chemical property is reactive, thus the product has easy hydrolysis and polymerization characters.

### Specification

Purity %	Water Content %	Crystalizing Point°C	Special Gravity (g/ml)	2-P %	Chroma (HaZen)
>99.5	≤0.2	13.5-14	1.04(25°C)	≤0.2	<25

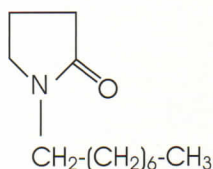
### Packing and Storage

200kg/Plastic drum. Under the condition of neutrality or alkalinity, lower temperature, lightproof and airproof storage, and the inhibitor need be added if long-time storage.

### Application

It is mainly used as the blood plasma substitute poly vinyl pyrrolidone and mercapto pyrrolidone, and also as the dispersant agent for paper industry, dyeing assistant and oil paint additive. It is applied in the adhesive and color film producing. And it is also a kind of organic solvent with good behaviour, it dissolves with water, methanol, acetic ether, alcohol, dichloromethane, hydrocarbon.





## N-Octyl Pyrrolidone (NOP)

CAS No.: 2687-94-7

### Product Introduction

N-octyl pyrrolidone is colorless to light yellow transparent liquid. Molecular weight: 197.3g/mol.

### Specification

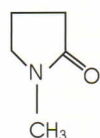
Content %	Moisture%	Melting Point℃	Specific Gravity(g/ml)	GBL%	Amine%	Chroma (APHA)
>99.5	≤0.1	-26	0.922 (25℃)	≤0.2	0.1%	<50

### Packing and Storage

180kg/white iron drum. In the ventilate place, lightproof storage.

### Application

NOP is highly active, safe and innoxious and can be used as pesticides, cotton defoliator, condensed abluent, chemical reaction solvent, drug synthesis medium, and coat release agent in the electric industry.



## 1-Methyl-2-Pyrrolidinone (NMP)

CAS No.: 872-50-4

### Product Introduction

N-methyl pyrrolidone is colorless transparent liquid, has faint odor of ammonia. It's a kind of organic solvent with strong polar, and can dissolve with water and normal solvent in any proportion.

### Specification

Appearance	Moisture%	Content%	Melting Point℃	GBL%	Amine%	Chroma (APHA)
Colorless and transparent liquid	≤0.1	>99.6	-24	≤0.1	0.1%	<50

### Packing and Storage

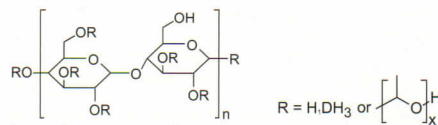
200kg/Plastic drum. In the ventilate place, lightproof storage.

### Application

The product is excellent higher solvent, it is widely used in the petrochemical, agricultural pesticide, pharmaceutical and electric materials industries. And this product also can be applied for acetylene concentration, synthesis gas desulfidation, lube polishing, lube antifreeze, alkene extractant, plastic polymerization solvent in the indissoluble program, agricultural herbicide, insulating material, integrated circuit making, PVC tail gas recovery, abluent, dyeing assistant and dispersant.







# Hydroxypropyl Methyl Cellulose (HPMC)

CAS No.: 9004-65-3

## Product Introduction

HPMC is water-soluble polymer which is produced by treating water-insoluble cellulose chemically. HPMC when dissolved in water, offers a variety of functions such as thickening, surface activity, protective colloid, water retention, shape retention etc. And these functions have been used in wide variety of fields from pharmaceuticals, food, civil engineering and construction industry, ceramics, cosmetics etc.

## Specification (Pharm Grade & Technical Grade)

ITEM		HE	HK
Methoxy	%	28 - 30	19 - 24
Hydroxypropyloxy	%	7 - 12	4 - 12
Gel temperature	°C	58 - 64	70 - 90
pH value (1% solution)		4.0 - 8.0	
Loss on drying	%	≤5.0	
Residual on ignition	%	≤1.5	
Arsenic	ppm	≤2.0	
Heavy metal	ppm	≤10	
Viscosity mpa.s (2% solution, 20°C)		5 - 200,000	

## Packing & Storage

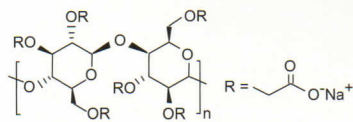
25 KG / Paper Drum or Plastic Bag. Drying and airproof storage.

## Application

For a long time, these versatile products have played an important role in pharmaceuticals, food, cosmetics, latex paints, construction products, ceramics, and a host of other applications.







# Sodium Carboxy Methyl Cellulose (Na-CMC)

CAS No.: 9004-32-4

## Production Introduction

CMC is white or grey cotton wool, odorless and non-toxic powder. It can dissolve in cold water and hot water, and it can form the transparent glue liquid. CMC solution assumes neutrality. It does not dissolve in acid, cresol, ethyl alcohol, acetone, chloroform, benzene and so on. It lightly dissolves in methyl alcohol, ether and so on such organic solvent. The solution viscosity increases along with density, and it is of pseudo-plastic flow, light-proof, thermal-proof, water absorbability, non-agglomerate, and anti- salty ability.

## Specification (Pharm Grade & Technical Grade)

ITEM	HF	HM
Degree of Substitution (D.S.)	$\geq 0.70$	$\geq 0.70$
Purity %	$\geq 99.5$	$\geq 70.0$
Loss on drying %	$\leq 8.0$	$\leq 10.0$
pH value	6.0 - 8.5	
Arsenic ppm	$\leq 2.0$	
Heavy metal ppm	$\leq 20$	
Viscosity cps (Brookfield, 2% solution, 25°C)	10 - 100,000	

## Packing & Storage

25 KG/Paper Drum or Plastic Bag. Drying and airproof storage.

## Application

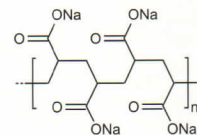
It is widely used in printing, agricultural chemicals processing, medicine, papermaking, coating, ceramics, petroleum, industry and so on. It is served as paste, thickening agent, emulsifier, coheres medicinal preparation, and so on. Different viscosity CMC has different use in the drug industry, some is served as bonding agent, some is used to breaks up the medicinal preparation, the other is used as medicinal preparation etc. High replacement CMC is used in food industry to make the ice cream, canned food as thickening agent, beer foam stabilizer and so on.





## Super Absorbent Polymer (SAP)

CAS No.: 9003-04-7



Super absorbent polymer (SAP) is a polymer material with good water absorption and water-holding capacity. It can absorb water up to several hundred times of its own weight, and become a natural gel within seconds. It has a good stability against light, heat, acid and alkali, and remains strong water holding capacity even under the conditions of heat and pressure. Moreover, it is also biodegradable. Due to its many advantages, SAP is now widely used in various fields (personal care, agroforestry, industry, etc.).

## SAP for Disposable Sanitary Products

### \*Used in Baby Diaper

#### Main specification:

Appearance		White Granular
Distilled water absorption (g/g)		300-500
Saline water absorption (g/g) 0.9% NaCl		≥48
Absorbency Under Load	(0.3 PSI), g/g	≥26
	(0.7 PSI), g/g	≥20
Absorption Speed (by Vortex Method)		≤70s
Particle Size (μm)		180-600
Rate Through Standard Sieve (%)		≥85
Moisture content (%)		≤7.0
PH Value		5.5-6.5

#### Features:

Strong water holding capacity, good fluidity, high water absorbent capacity under stress, and suffer no reverse osmosis.



## \*Used in Sanitary Napkin

### Main specification:

Appearance		White Granular
Distilled water absorption (g/g)		500-600
Saline water absorption (g/g) 0.9% NaCl		$\geq 60$
Absorbency Under Load	(0.3 PSI), g/g	$\geq 25$
	(0.7 PSI), g/g	-
Absorption Speed (by Vortex Method)		$\leq 40s$
Particle Size ( $\mu m$ )		150-450
Rate Through Standard Sieve (%)		$\geq 85$
Moisture content (%)		$\leq 7.0$
PH Value		5.5-6.5

### Features:

High absorbing speed, high water absorbing capacity under stress, and stable against moisture. Strong water retention and absorbent capacity make sanitary napkin more

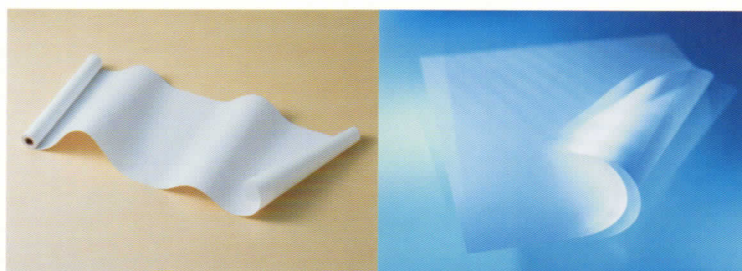
## \*Used in Sanitary Compound paper

### Features:

High absorbing speed, high water absorbing capacity under stress, and stable against moisture. Strong water retention and absorbent capacity make sanitary napkin more

### Main specification:

Free absorbent for distilled water  $\geq 480g/g$ ; Saline absorption  $\geq 50g/g$  (0.9% NaCl)



## \*Used in Surgical Mattress, Pet Mattress and Feet Bathing, etc.





## SAP for Agriculture, Forestry and Gardening

### Main specification:

Free absorbency for distilled water (ml/g)	$\geq 400$
Saline absorption (ml/g)	$\geq 50$
Water content (%)	$\leq 10.0$
PH value	6-8
Gel Strength	Strong
Particle size (mesh)	10-80

### Features:

A high absorbent resin commonly known as "aquasorb", which is used in agriculture, forestry, and gardening field. SAP is a new functional polymer material: innocuous as it is, it can absorb/release water circularly because of its strong absorption group and special mesh structure, people usually compare it as "mini-reservoir". Besides, it can also absorb fertilizer and slowly release it, thus increase its efficacy. This product is contributive to not only crop growth, but also soil improvement.

### Application:

widely used in agriculture, forestry and gardening, such as soil water retaining agent, seed coating, soilless cultivation, artificial turf, forest firefighting, etc. It has broad application prospects in water-saving agriculture and drought forestry.

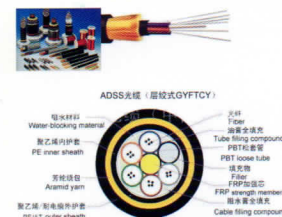


## SAP for Cable Drag Strip/Cable Water Ointment

### Main specification:

Deionized water absorption (ml/g)	$\geq 300$
Water content (%)	$\leq 10.0$
PH Value	5-7
20°C deionized water swelling height of the test (mm/min)	11 mm/1Minute
	15 mm/2Minutes
	19 mm/3Minutes
Partical Size (mesh)	100-200

Used in waterproof tapes and waterproof ointments for fiber optic cables. Its absorbency, quick reaction, overall expansion rate and expansion degree performs outstanding when contacting with water.



## SAP for Water Inflation Bag

**Efficient:** absorbing water completely in 3 to 5 minutes when contacting with water. This leads to quick inflating of the bag, its weight grows to more than 20kgs after absorption. It's about 10 times as efficient as traditional sandbag.

**Portable:** The bag is small and light before absorbing water, 480g for each piece with sealed packaging. Easy storing, easy transporting.

**Environmental:** The main parts of the inflation bag is cloth bag, sacks and SAP. Cloth bag and sacks will mix with soil and finally become humus, while SAP is decomposed naturally without any pollution.



## SAP for Drying

**Features:** Excellent drying performance. Its particle size is mainly 20-80 mesh, with absorbent multiples in 550g/g or more, thus it is widely used in various industries, can effectively play its roll in drying.

## SAP for Industry

**In Oil Industry:** as oil treatment agent, oil-water separating agent; lubricant and mud gel in oil exploration;

**In Mining industry:** as a blocking agent, base reinforcement agent, silent blasting agent, dust inhibitor for open-pit road and moisture-proof agent

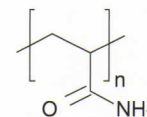
**In Environment Protection Industry:** used in waste water treatment, heavy metals recovery from industrial waste water, and also as the dehydrating agent of organic solvent.





## Anionic Polyacrylamide (Anionic PAM)

CAS No.: 9003-05-8



### Product Introduction:

Anionic PAM is synthesized by the alkali homopolymerization and hydrolysis of acrylamide, then output products through granulating, drying and grinding crafts. It appears as white fine grains or powdery solids.

### Application:

Industrial wastewater treatment agent; drinking water treatment agent; recovering agent of lost starch in lees in starch and ethanol plants; oil displacement agent in tertiary oil recovery; water shutoff agent and auxiliary of papermaking industry.

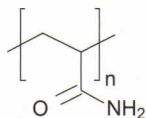
### Packaging and Storage:

Packed in 25kg P.P woven bags or paper-plastic bags with PE lined according to user needs. When storing and transporting, please pay attention on heatproof and moisture-proof. The powdery product will lump and become poor in solubility if exposed in damp air for too long time. Stacking should not exceed 20 layers. Shelf life is 2 years.

### Specification:

Appearance	Solid content (%)	Molecular Weight (Million)	Degree of Ion (%)	Dissolving time (min)
White powder	≥88	12-25	Low Medium High	≤60





## Cationic Polyacrylamide (Cationic PAM)

### Product Introduction:

Cationic PAM is the copolymer of cationic monomer (DM, DMC, CPF, DMDAAC and DMAEMA, etc.) and acrylamide. It is white fine grain powder made through granulating, drying and grinding crafts.

### Application:

As flocculant, Cationic PAM is mainly used in urban sewage treatment, paper making, food processing, petrochemical industry, metallurgical industry, mine dressing, dyeing, sugar production and all kinds of industrial wastewater treatment.

As chemical material in oilfield, used as clay anti-swelling agent, acidizing densifier in oil field, etc.

As paper-making auxiliary, cationic PAM paper reinforce is a water-soluble cationic polymer with functions of reinforcing, retention-aiding and filtration-aiding. It can effectively improve the strength of paper. It is also a efficient dispersant.

### Packaging and Storage:

Packed in 25kg P.P woven bags or paper-plastic bags with PE lined according to user needs. On storing and transporting, please pay attention on heatproof and moisture-proof. The powdery product will lump and become poor in solubility if exposed in damp air for long time. Stacking should not exceed 20 layers. Shelf life is 2 years.

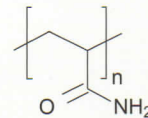
### Specification:

Appearance	Solid content (%)	Molecular Weight (Million)	Degree of Ion (%)	Dissolving time (min)
White powder	≥88	6-15	Low Medium High	≤60





## Nonionic Polyacrylamide (Nonionic PAM)



### Product Introduction:

Non-Ionic Polyacrylamide is a homopolymer composed by acrylamide with high purity, good solubility and high molecular weight. This product series is a kind of linear high polymer with high molecular weight and low ion abundance. Thanks to its special functional groups, it has the functions of flocculating, dispersing, thickening, bonding, filming, gelling and colloid stabilizing.

### Application:

As waste water treatment agent: It is now the most appropriate flocculant against acidic suspension in sewage. When work together with inorganic flocculant, it will perform the best effect of water treatment.

In textile industry: It forms chemical slurry on the textile products when adding some other chemicals as dressing.

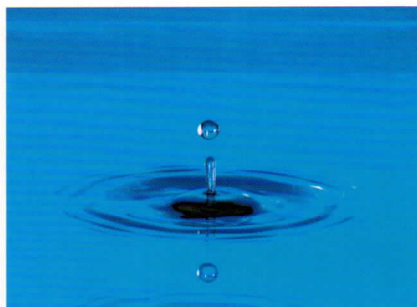
In sand control and stabilization: Add a certain concentration of the crosslinker and spray in the desert to form a solidified film which can control and stabilize the sand. In arid areas, it can be used as soil water-retaining agent, also it can be used in building industry as construction glue, interior wall paint and so on.

### Packaging and Storage:

Packed in 25kg P.P woven bags or paper-plastic bags with PE lined according to user needs. On storing and transporting, please pay attention on heatproof and moisture-proof. The powdery product will lump and become poor in solubility if exposed in damp air for long time. Stacking should not exceed 20 layers. Shelf life is 2 years.

### Specification:

Appearance	Solid content (%)	Molecular Weight (Million)	Degree of Ion (%)	Dissolving time (min)
White powder	≥88	8-12	≤5	≤60





**CHINA FUNCTIONAL POLYMER INDUSTRY COMMITTEE**  
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