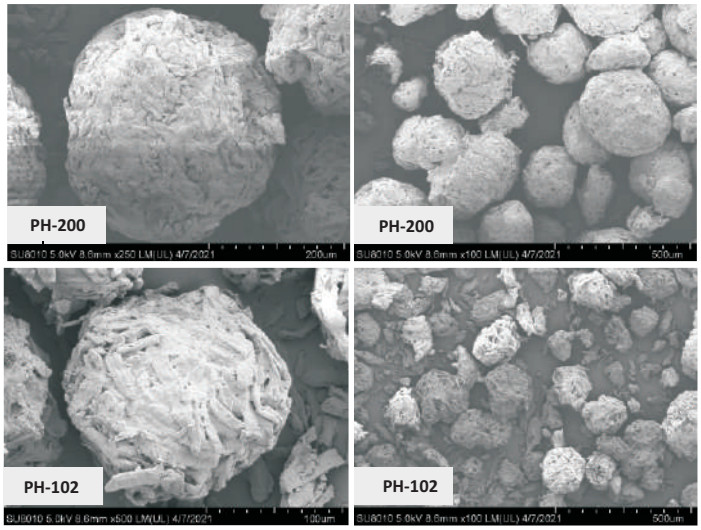
MCC CDE Registration No: F20209990322

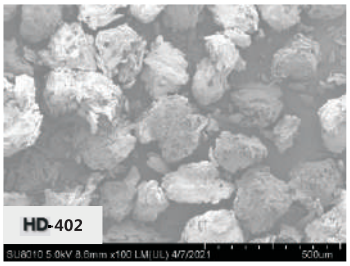
Microcrystalline Cellulose PH Series

- Good compressibility, can be used in direct compression
- Porous capillary structure has the abilities of water absorption and disintegration
- Excellent fluidity improves the fluidity of other powders
- Ideal filling diluent for solid preparation
- Various specifications for diferent prescription requirements



Items	Moisture (%)	D50 (μm)	Features
B	≤7.0	50	Basic specification, suitable for wet granulation, rotary tablet pressing and pill making
PH-101	≤7.0	50	Standard specification, suitable for wet granulation, rotary tablet pressing and pill making
PH-102	≤7.0	100	Larger particle size, suitable for direct compression, good fluidity and compressibility
PH-105	≤7.0	< 15	Small particle size, highest compressibility , suitable for buccal tablets, chewable tablets.
PH-200	≤7.0	200	Large particle size, suitable for high speed tablet press. Excellent fluidity, reduce tablets weight
PH-12	≤7.0	180	Improved MCC, suitable for direct compression, coarse particle size, good compressibility and adhesion, good fluidity
PH-301	≤7.0	50	Base on 101, the density was increased, and the fluidity was improved, so as to suppress small dose tablets
PH-302	≤7.0	100	Base on 102, the density was increased, better fluidity, suitable for high speed tablet press.
PH-103	≤3.0	50	101, low moisture (≤3.0%), suitable for water sensitive medicine.
PH-113	≤1.5	50	101, low moisture (≤1.5%),suitable for water sensitive medicine.
PH-112	≤0.8	100	102, low moisture (≤0.8%),suitable for water sensitive medicine.

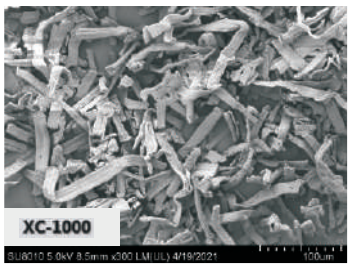
Microcystalline Cellulose HD Series



- The fluidity of the powder can be improved by increasing the bulk density without increasing the particle size
- Solve the problems of uneven mixing of materials and discrepancy on tablets weight.
- Effectively improve the screening rate of materials with viscosity and strong adhesion

Items	Moisture (%)	Bulk Density (g/cm^3)	D50 (μm)	Features
HD-401	≤7.0	0.45-0.65	50	Base on 301, the bulk density was increased, improve the fluidity.
HD-402	≤7.0	0.45-0.65	100	Base on 302, the bulk density was increased, further improve the fluidity.

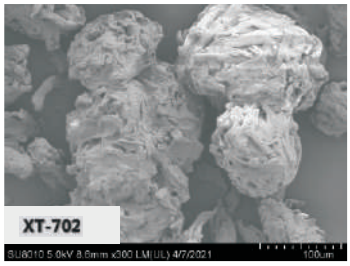
Microcrystalline Cellulose XC Series



- Low dosage, improve the hardness and brittleness of tablets.
- Improve and solve the common crack, fragment and decapitation of tablets.
- Suitable for pressing oil or liquid API into tablets.

Items	Moisture (%)	Bulk Density (g/cm^3)	D50 (μm)	Features
XC-802	≤7.0	0.18-0.30	50	The formability is about twice of PH type,its particle sieze is similar to 101, it is a high-performance pharmaceutical excipient.
XC-1000	≤7.0	0.1-0.35	50	Excellent formability , only a small amount of addition can meet the requirements of tablet hardness.

Microcrystalline Cellulose XT Series

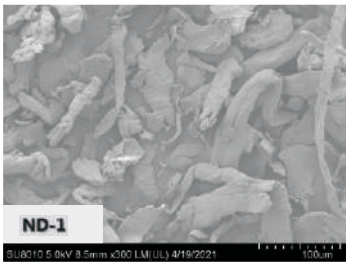


- Microcrystalline cellulose withhigh fluidity and high formability.
- It can effectively reduce the size of the tablet and prevent the tablets from high dosage , poor formability and falling off.
- High-end ideal diluent and filler in tablet pressing process.

Items	Moisture (%)	Bulk Density (g/cm^3)	D50 (μm)	Features
XT-711	≤7.0	0.20-0.26	50	Perfect combination of high formability and high fluidity, with high formability of 802 and high fluidity of 102
XT-702	≤7.0	0.26-0.32	100	Best Fluidity, good formability.

Powdered Cellulose

CDE NO: F20190000240

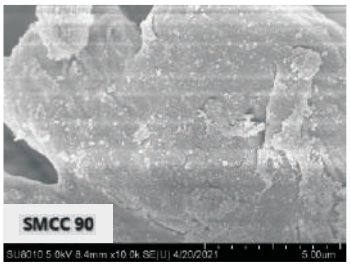


Powdered cellulose is made from α cellulose originates from plant pulp and by mechanical crushing.
In pharmaceutical preparation field, powder cellulose is used as tablet binder, filler and disintegrating agent, diluent for hard capsule, etc.

Items	Moisture (%)	Bulk Density (g/cm^3)	D50 (μm)	Features
LD-1	≤6.5	0.10-0.20	50	Fine, suitable for wet granulation
ND-1	≤6.5	0.10-0.25	50	Fine, high density, suitable for wet granulation and direct tablet pressing
ND-2	≤6.5	0.05-0.20	70	Similar to LD-1 , with longer fiber length
PC150	≤6.5	0.18-0.28	60	More fine , with higher bulk density, and better fluidity , suitable for wet granulation and direct tablet pressing, tablet and capsule filler .
PC250	≤6.5	0.31-0.43	250	Large particle size , with higher bulk density, and better fluidity , suitable for direct tablet pressing, tablet and capsule filler .

Silicified Microcrystalline Cellulose

CDE Registration No: F20210000317

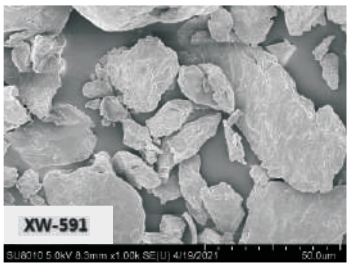


Silicified Microcrystalline Cellulose is a special mixture made from microcrystalline cellulose and Colloid silicon dioxide, this processing step takes place in an aqueous solution.
It holds good fluidity, compressibility and dispersibility in prescription.At the same time with brittle fracture and plastic deformation , the bonding performance is better.

Items	Moisture (%)	Bulk Density (g/cm^3)	Particle Size (%)	Features
SMCC 50	≤6.0	0.25-0.37	50	Suitable to formulations with high tablet hardness and good fluidity.
SMCC 90	≤6.0	0.25-0.37	100	Suitable to formulation requiring uniform flow and compaction
SMCC 90HD	≤6.0	0.38-0.50	100	With the best fluidity and firmness, and fast disintegration time
SMCC 90LM	≤1.5	0.27-0.39	100	Similar to the SMCC90 , nut with lower moisture(< 1.5%)

Microcrystalline cellulose gel

CDE Registration No: F20220000087

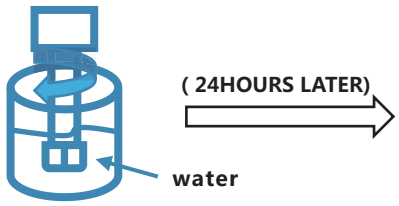


Microcrystalline cellulose gel is made from microcrystalline cellulose and Sodium carboxymethyl cellulose by a special technology. It is a good suspending agent , It has good lubrication taste and is widely used in suspensions of insoluble drugs and dry suspensions.

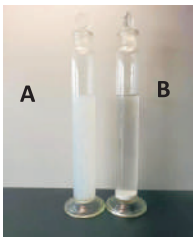
Items	CMC-Na Assay(%)	Viscosity (mpa.s)	PH Value	Loss on Drying(%)
XW-591	8.3-13.8	1.2%SOLUTION,39-91	6.0-8.0	≤8.0
XW-611	11.3-18.8	2.6%SOLUTION,50-118	6.0-8.0	≤8.0

CHARACTER 1: Suspension property

- After depressing , a kind of carrier with spatial network structure can be formed to prevent the sedimentation of drug particles in the prescription and ensure the excellent suspension stability of the suspension formulation.
- The main difference between 591 and 611 is that they result in different viscosity/adhesive strength of the final product.



(High speed dispersion homogenizer)



A: Microcrystalline cellulose gel
B: Microcrystalline cellulose

CHARACTER 2: Thixotropy

- the network suspension structure formed after dispersing has high thixotropy, the viscosity is reduced after shaking, and there is no sticky feeling when taking the medicine, which can reduce the sticky feeling of the bitter taste in the throat.
- After the shear force is removed, the gel structure can be reconstructed, forming a long-term stable suspension state without phase separation.

condition of rest

in the same direction

Before the oscillation

After the oscillation

STEARATES AND STEARIC ACID

Stearates are mainly prepared by the reaction of stearic acid with the corresponding salts. In pharmaceutical preparations, calcium stearate, zinc stearate, magnesium stearate and sodium stearate are commonly used as lubricants for tablets and capsules.

Product Name	Application	Registration NO.
CALCIUM STEARATE	Used in pharmaceutical preparations as a lubricant in tablets and capsules at a concentration not exceeding 1.0%（W/W）	F20190000137
ZINC STEARATE	In pharmaceutical preparations, it is mainly used as lubricant for tablets and capsules, and its concentration can be up to 1.5%（W/W）	F20190000468
MAGNESIUM STEARATE	Used as lubricant for tablets and capsules in pharmaceutical preparations, the concentration used is 0.25%-5.0%（W/W）	F20190000543
SODIUM STEARAYE	Used as lubricant and emulsifier and hardening agent in medicine , especially in topical and rectal medicine .	F20210000277

Remarks: Different models can be customized according to different content of stearic acid (C18) to meet different requirements.

Product Name	Items	Application	Registration NO.
STEARIC ACID	SA-50	It is widely used in oral and topical medicines.Mainly used as a lubricant for tablets and capsules.It also can be used as an adhesive for tablet coating in combination with shellac. It also can be used as a sustained-release carrier. In topical preparations, stearic acid is used as emulsifier and solvent-enhancing agent, it is hardener in glycerin suppositories .	F20190000510
	SA-70		
	SA-95		

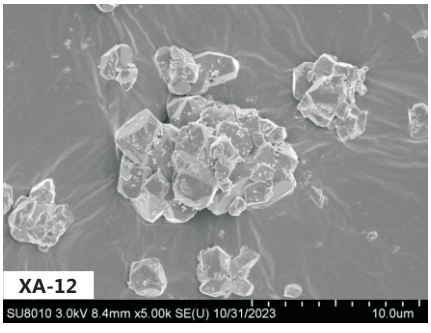
Note: The content of stearic acid (C18) varies with different types of stearic acid.

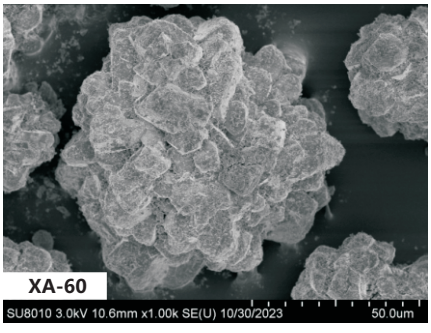
Dicalcium phosphate anhydrous

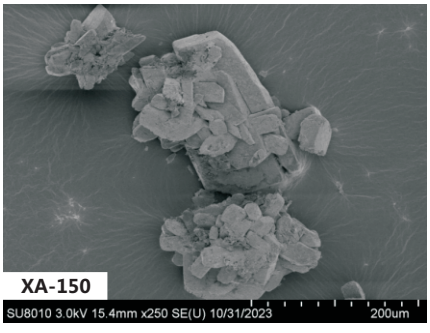
CDE Registration NO: F20210000341

- Non-hygroscopic, stable at room temperature, will not be hydrated into dihydrate.
- Coarse particle compressibility and fluidity is excellent, can be used for direct pressing; Finer particles can be used for wet granulation or rolling granulation.
- The main deformation mechanism of coarse granular anhydrous calcium hydrogen phosphate is brittle fracture, which can improve compactness and water stability.
- Synergistic action with MCC and other auxiliary materials to show plastic deformation and improve compressibility.
- Its unique particle size, shape and density enable it to show the best fluidity on high-speed tablet presses.

Model	D50 (μm)	Bulk density (g/cm^3)	PH	Characteristic
XA-12	12	0.75	7.5	Neutral and weak alkaline PH, fine particle size, suitable for wet granulation, dry granulation
XA-20	20	0.90	7.5	Neutral and weak alkaline PH, high density, suitable for wet granulation, dry granulation, direct tablet and capsule filling
XA-60	60	1.20	7.5	Neutral and weak alkaline PH, high pile density, small surface area, low hygroscopic, ideal for water sensitive API or probiotics, suitable for direct tablet pressing and capsule filling (case: Amlodipine besylate tablets, Bisoprolol fumarate tablets)
XA-120	120	0.45	5.5	With its unique porous structure, the liquid medicine can be solidified with high oil absorption, and its super adsorption ability can be used to pulverize the oily medicine or Chinese traditional medicine extract. Also because of its unique porous environment can maintain the activity and survival rate of probiotics, so as to become an excellent carrier of probiotics. Suitable for micro-environment PH control, direct compression, dry granulation, hard capsule filling.
XA-150	150	0.68	5.5	Slightly acidic PH, coarse particle size, excellent compressibility and fluidity, suitable for PH control in microenvironment, suitable for direct tablet pressing and capsule filling
XA-200	200	0.70	5.5	Micro-acidic PH, circular particles with excellent fluidity and enhanced compaction characteristics, suitable for micro-environmental pH control suitable for direct compression, capsule filling, high-speed compression



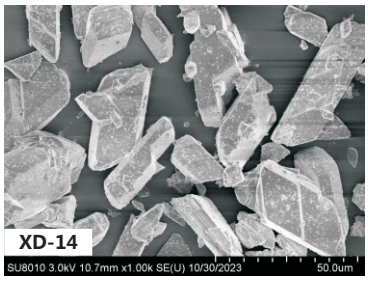


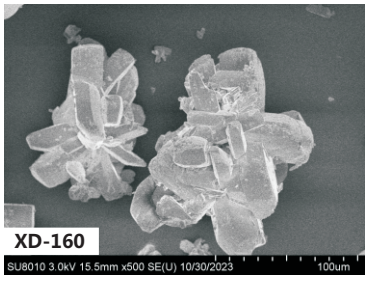


Calcium Hydrogen phosphate Dihydrate

CDE Registration NO.: F20230000432

- Calcium Hydrogen phosphate Dihydrate is widely used in tablet prescription as an excipient and adjuvant of calcium supplement. It is one of the most widely used raw materials in nutrition and health food, due to its coarse particles have good compressibility and good fluidity, so it is also used in pharmaceutical preparations. The main deformation mechanism of coarse granular Calcium Hydrogen phosphate Dihydrate is brittle fracture, which decreases and its sensitivity to strain. Calcium Hydrogen phosphate Dihydrate is non-hygroscopic and stable at room temperature. But under certain temperature and humidity conditions will lose the crystallization water.





Items	D50 (μm)	Bulk Density (g/cm^3)	PH	Features
XD-14	< 50	0.45	7.8	Low density, fine particle size, suitable for wet and dry granulation.
XD-160	160	0.82	7.8	Large particle size, high fluidity, high compressibility, good tablet hardness, Suitable for direct tableting and capsule filling.
XD-220	220	0.88	7.8	High quality coarse particle size, high fluidity, high compressibility, improve tablet hardness, suitable for direct tableting, capsule filling.