Sodium Alginate is white or yellowish powder, almost tasteless and odorless. It is a highly polymerized compound with high viscosity, also a kind of typical hydrophilic colloid. The Chemical compound Sodium Alginate is the Sodium Salt of Alginic Acid. Its empirical chemical formula is NaC6H7O6. Its form as a gum, when extracted from the cell wall of brown algae, is used by the foods industry to increase viscosity and as an emulsifier. Sodium Alginate is a good chelator for pulling radioactive toxins such as iodine -131 and strontium-90 from the body which have taken the place of their non-radioactive counterparts.

APPLICATIONS

It is widely used in food, pharmaceutical and textile industry for its stability, thickening and emulsibility, hydratability and gel properties. It is also used in indigestion tablets and the preparation of dental impressions. Sodium alginate has no discernible flavor. Another major use of Sodium Alginate is reactive dye printing, where it is used in the Textile Industry. Sodium Alginate is also used in immobilizing enzymes by inclusion.

PHARMACEUTICAL GRADE

In pharmaceutical field, Sodium Alginate is widely used in pharmaceutical preparation, tissue engineering, clinical treatment, cell culture and food processing fields because of its exclusive physicochemical property and favorable biocompatibility. In pharmaceutical preparation field, Sodium Alginate is usually used as thickening agent, suspending agent and disintegrating agent, it also can be used as the microencapsulated materials and the cold resistant agent for cells. Further more, it can lower blood sugar, antioxidant and increase immunological competence.

In recent years, with the development of biological medical material and the new pharmaceutical dosage form, as a kind of bioadhesive polymer and PH sensitivity of the gel material, the application research of Sodium Alginate is increasing. In the conventional preparation, sustained release microcapsules or mini-pills are made availing of its polyelectrolyte character, gel matrix tablets are made availing of its gel character and targeted intestinal absorption tablet disintegrant is made availing of its PH sensitivity.

In addition, Sodium Alginate can be used as thickening agent of the topical ointment. The viscosity of the oral tablet is increased if added Sodium Alginate into it, then gel barrier effect comes into being and prolong the drug release time, reduce adverse reactions. long acting Isosorbide Dinitrate tablet is made with the Sodium Alginate as base material. Long term effect can also be caused if added Sodium Alginate into antibiotic, insulinum and hormone drugs solution.

Sodium Alginate molecule contains free carboxyl and oxdydryl than can form gel with many metal ions. The mini-pills we made have PH sensitivity, suitable grain size that can prevent burst and oral toxicity. Sodium Alginate gel is so powerful bio-adhesive that it can be used in local wound dressing, drug delivery system for nasal cavity and ocular region, oral pellicles and chewable tablet. Sodium Alginate has the characteristic of blood compatibility, degradation and elimination inside the body, it is a good carrier material for targeting drug.

SPECIFICATIONS

PARAMETER	SPECIFICATION
Appearance	Milk White Powder
Viscosity(1% Aqueous sol) (RVDV-II+,2#,20rpm,20 Celsius)	40-50mPa.s,300-700mPa.s
Particle Size	80 mesh
Loss on drying (105 Celsius,4h)	15% w/w max.
PH	6.0-8.0
Water insoluble material	0.6% w/w max.
Ash	18-27.0% w/w
Heavy Metal	
Lead(Pb)	5 ppm max.
Arsenic	3 ppm max.
Hg	1 ppm max.
Microbiology	
Cd	1 ppm max.
Mercury	1 ppm max.
Total Plate Count	5000cfu/g max.
Yeast and mould	500cfu/g max.
Coliform	Negative in 1g
E.coli	Negative in 1g
Salmonela	Negative in 1g
Endotoxins	50EU/gram max.

Packing : Poly woven bag, 25kg/bag

FOOD GRADE

Typical applications as stabilizer:

To substitute for starch, gelatin as ice cream stabilizer can control the formation of ice crystals and improve the taste of ice cream. It can also stabilize mixed beverages like syrup ice cream, iced sherbet, frozen milk etc. its stable function can prevent the adhesion between foods and packing material in many dairy products such as refined cheese, whipped cream, dry cheese, etc. if it is used as the cover of milk on ornaments, Sodium Alginate can make it stable and prevent icing sugar pastry cracking.

Typical applications as thickener and emulsifier:

Used as thickener for salad sauce, pudding, jam, ketchup and canned products that can enhance the stability and reduce fluid exudation.

Typical applications of hydratability:

Used in noodles, silk noodles and rice flour, Sodium Alginate can improve bonding inside the product, making them with high tensile strength, curvature, reducing the end breakage rate, especially for low gluten flour, the effect is more apparent. If added in bread and cakes, the uniformity and water retention ability of internal organizations of these products will be improved, thus prolong the storage time. When added in frozen dessert products, Sodium Alginate can provide a protective shield of heat fusion, prevent fragrance loss and improve the melting point.

Typical applications of gel property :

Various gel food can be made by Sodium Alginate with good colloid form yet without drainage of shrinkage, suitable for frozen food and man-made imitation food. It can also be used to cover fruit, meat, poultry and aquatic products as protective layers, to prevent from the air and thus extend the storage time. It can be as self-solidification forming agent such as sugarcoating of bread, stuffed filling, cover layer of dessert , canned food, etc. in high temperature, freezing and acidic media can still maintain the original shape. It can also be made into flexible, non-stick tooth and transparent crystal candy instead of agar agar.

Sodium Alginate is an indispensable dietary fiber for human body with unique nutrition. Combined with organic matter, it can decrease serum and cholesterol in liver, inhibit the rise in total fat and fatty acid concentration. Besides, it can also improve the digestion and absorption of nutrient; at the same time inhibit the absorption of harmful elements such as radioactive strontium, cadmium, etc. Long-term consumption of health food with Sodium Alginate will be helpful to treat hypertension, coronary heart disease, obesity, diabetes and intestinal tract diseases etc.

In addition, Sodium Alginate can also be used as feed binder, pet food binder, monomer raw materials of cosmetics.

SPECIFICATIONS

Execute Standard:

National food ingredient standard: Sodium Alginate GB1976-2008,

International standard in accordance with E401 or FCC

Specifications	GB1976-2008
Viscosity (mpa.s)	Low viscosity < 150 Medium viscosity 150~400 High viscosity > 400
Characteristics	Milky White or light yellow granule or powder
PH value	6.0 ~ 8.0
Moisture, %	≤15.0
Ash content, %	18 ~ 27
Water unsolvable, %	≤ 0.6
Light transmittance, %	qualified
Lead (Pb), (mg/kg)	≤ 4
Arsenic (As), (mg/kg)	≤ 2

Packing : Poly woven bags, 25kg /bag

INDUSTRIAL GRADE

In printing and dyeing industry, Sodium Alginate is used as active dyestuff, which is superior than grain, starch and other sizing agents. Using Sodium Alginate as the printing paste would not affect the reactive dyes and dyeing process. The printed textile products have good permeability and plasticity with colourful pattern, clear line, high and symmetrical color yield. Sodium Alginate is the best sizing agent in current printing and dying industry, widely used in cotton, wool, silk, nylon and other kinds of textile printing, particularly applicable to the preparation of discharge printing paste. In addition, it can also be used as warp sizing, not only saving a large amount of grain, but also making the warp fibers without raising and with friction resistence, low breakage rate, thereby enhancing the efficiency of weaving, effective for both cotton fibers and synthetic fibers.

In addition, Sodium Alginate can also be used in paper making, chemical, casting, welding electrode sheath material, fish and shrimp bait, fruit trees pest control agent,

release agent for concrete, water treatment with high polymer agglutination settlement agent etc.

SPECIFICATIONS

Executive Standard: Line Standard, Sodium Alginate for

Printing and dyeing SC/T3401-2006

Specifications	SC/T3401-2006
Viscosity (mpa.s)	Low viscosity < 150 Medium viscosity 150 ~ 400 High viscosity > 400
Colour and characters	White to light yellow or light brown yellow
pH value	6.0 ~ 8.0
Moisture, %	≤15.0
Water unsolvable, %	≤0.6
Calcium, %	≤0.4

Packing : 25 kgs poly woven bag

TEXTILE GRADE

Printing paste refers to the polymer compound as thickeners if added into printing color SPECIFICATIONS

Product Name	Applicable Fabric	Product Characters
HZTEX - N01	Closely woven fabrics e.g. Cotton	Bad penetrability
HZTEX - CM	Closely woven fabrics e.g. Cotton	Bad penetrability
HZTEX - F	Polyester	Higher color yield and screen penetrability
HZTEX - DHL	Polyester	Higher color yield and screen penetrability
HZTEX - DHK	Polyester	Fine lines and clear boundaries
HZTEX - DB	Polyester	Using for direct printing, discharge printing and color resist over printing
HZTEX - SN	Silk, Nylon, Polyester and Acrylic fibers	Good uniformity and good penetrability
HZTEX - SQ	Silk, Spandex, Polyester & Acrylic fibers	High color yield and good penetrability
HZTEX - SH	Nylon fabrics	Higher color yield and brilliant
HZTEX - H01	Cotton, Rayon Polyester	Higher color yield, sharpness and penetrability
HZTEX - H02	Cotton, Rayon Polyester	Good fluidity and screen penetrability
HZTEX - H03	Cotton, Rayon Polyester	Good fluidity and uniformity
HZ - 80	Percale, terry towel	Convenient for making paste and good penetrability

Formula $(C_6H_7O_6Na)n$
Molecular weight : 216;
appearance : white powder
Weight lost on drying : 15% max
heavy metal (Pb, %): 0.004 max ;
arsenic (%) : 0.0003 max;
Lead (%) : 0.0005 max
Insoluble matter in water : 3.0 %max ;

PH value : 6.0 - 8.0
ash content : 30 - 37%
transparency (cm) : qualified;
total plate count (cfu/g):5000 maximum
yeast & mould (cfu/g) :100 maximum
e-coli: less than 100 cuf/g.
enterobateriacea (cfu/g): 30 maximum
salmonella : negative in 25 g:
particle size: as per buyers' requests (60-170 mesh);
viscosity (mPa.s) : 100-700
gel strength: as per the seaweed variety

1) LJ type, 100-250g/cm2 (seaweed "Laminaria Japonica")
2) LN type, 250-400g/cm2 (seaweed "Lessonia Nigrescens")
3) LF type, 400 – 650 g/cm2 (seaweed "Lessonia Flavicans")

Packing : 25 kgs poly woven bag

aste. Before adding into the printing color paste, the printing paste usually is the hydrophilic macromolecule thick colloidal solution or the oil/water type or water/oil type emulsion paste which is soluble in water or fully dispersive after fully selling. When preparing the printing color paste, a part of dye will be dissolved into the stock paste.

The printing paste is a main component of the printing color paste. It determines the printing operation performance, the surface color yield of the dyestuff, the fineness of the decorative pattern outline etc. Generally, the printing paste is processed together with Guar Gum, Tamarind Gum and Sodium Alginate.

Our company has developed series products of printing paste targeted with Sodium Alginate as raw material according to the features of different fabrics.