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*Food Ingredients For Bakery, Confectionery, Beverages, Brewing and Meat Processing*

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## SODIUM ALGINATE

**Molecular Formula :**  $C_5H_7O_4COONa$

**Molecular Weight:** 216

### 1. Application in Food Industry

#### A: Stabilizer

As a stabilizer of ice cream replacing starch and carrageenan, Sodium Alginate can avoid of ice crystal and make the product tasty. It also applies to the mixed drinks, such as ice lolly, iced fruit juice and iced milk, etc. When adding some into dairy products like refined cheese, canned cream and dry cheese, the final product will not stick to the package. Moreover, Sodium Alginate can keep the product fine and avoid of splitting open if it is used as a cover of mild food.

#### B: Thickener and emulsion

Sodium Alginate can raise the product's stabilization and decrease the liquid out when it is used in salad (a cold dish) flavoring, pudding (a sweet pastry) jam, tomato ketchup and the canned products.

#### C: Hydration

Sodium Alginate will make noodle, vermicelli or ice powder have a strong cohesiveness, pulling, bending and reduce breaking, special suitable in the less gluten content of wheat flour. SODIUM Alginate also can equal the products' internal form and hold water so that it can be kept for a long time. Adding some into iced sweet products, Sodium Alginate will come into being a protecting cover against heated quickly, and it can quicken the flavor sending forth, raise melting point of the products.

#### D: Coacervation

Sodium Alginate suits to make kinds of gel product, which can be kept the fine state, conleakge and contraction. So it also fits iced products and man-made products. Using this specific property, it can be used as a cover for fruit, meat and seaweed products away from air and keep it stored longer. In addition, it also can be used as the sugar coating of bread, the cover of filling and cake and the auto-coagulant of canned food, which will not change in high/low temperature and acid conditions. It also can replace carrageenan to make a crystal sugar, elastic, unsticky, transparent.

## **2.In Pharmaceutical Industry**

### **A. dental impression material**

In the past dental impression material mainly used by the mixture of rubber and plaster. Recently it has been replaced by Sodium Alginate material. This material operates easily and the marks of printing accurately. Sodium Alginate material and Coagulant packed separately. When using, mix them with water, then a few minutes after a coagulum will come into being.

### **B. Hemostatic**

The solution of Sodium Alginate will have a wadding sediment, which molecular structure is like thread. Making use of this mechanism, Sodium Alginate can be made into all kinds of hemostatic, such as hemostic gauze, hemostic cotton, scald gauze, spraying hemostatic, etc.

### **C. Preventing and exclusion from radioactive harmful metals**

Sodium Alginate has a special function of exchanging for some elements. It not only can prevent from absorbing strontium but also have a certain treatment against them. Taking some Sodium Alginate before or after absorbing strontium, then the radioactive element will be absorbed quickly and be drained away.

### **D. Salve, tablet and drugs**

Using of the thickener and coacervation, Sodium Alginate can be made into all kinds of additive of medicines, such as Sulphur Paste mixed by Sodium Alginate and wool oil which can treat skin disease. Sodium Alginate can be mixed with sulphanilamide into eye ointment or with benzene mercury acetate into contraceptive jelly. If Sodium Alginate used as capsule for intestines, it can cause the medicine staying and absorbing longer in the intestines then have a good curative effect.

## **3. In Printing And Textile Industry.**

### **A. printing agent**

It has been a long history that Sodium alginate is used in starching, packing and printing, mainly in printing. It, as a reactive printing agent, has a special property. During the chemical reaction of fibre and reactive dye, the dye is fixed in fibre and printing agent do not attend this reaction. Otherwise, the agent will be fixed in the fibre and make it hard, fragile and bad color. If you use Sodium Alginate as a printing agent, it not only affects the dyeing reaction but also makes the product outline clear, color bright, feeling smooth. This agent is also suitable for cotton, wool, silk and synthetic fibre. The products of medium and low viscosity fit for the printing requirements by net or roll style. Actually the printing agent mixed with low - viscosity Sodium Alginate is stabler than with the other viscosity, which is the results to produce a high content of printing agent. This agent will make a dense cover during drying and raise dyeing.

### **B. Synthetic fibre**

Mix Sodium Alginate and asbestos shon fibre, then mixture solidify the by a solution of Calcium Acetate. This treatment can avoid Asbestos fibre of flying around to harm to health.

#### 4.In Other Industry

Papermaking starching: When using the solution of Sodium Alginate replacing pan of Rosin as dispersing agent of paper pulp of paper surface starching, it can make paper glooss and smooth, raise the absorption of printing ink, wax, soil and paper's pliability and tough.

Coating of the welding electrode:

The mixture of welding - coating powder and Sodium Alginate can stick and humify the coating of welding and make it easy to burn into ash and lighten flying during welding operation. In addition , Sodium Alginate can also apply to disposing of seeds, pesticide, antitoxin and antibiotic.

#### SODIUM ALGinate SPECIFICATION :

INDEX	INDUSTRIAL GRADE:	FOOD GRADE FCC IV
PARTICLE SIZE	30 MESH 100% PASS THROUGH /OR ON BUYER'S OPTION	80MESH OR 200MESH 95% MIN PASSING THROUGH
VISCOSITY (1% AQUEOUS SOL RVDVI + 1,RPM,20 DEC)	ON BUYER'S OPTION	300-600CPS
MOISTURE	15%MAX	15%MAX
PH	6.0-7.5	6.0-8.0
CaCONTENT	0.3%MAX.	/
ASH CONTENT	20.0-24.0%	18-27%
INSOLUBLE MATTER IN WATER	0.6%MAX	0.6%MAX
TRANSPARENCY	3CM MIN	COMPLY TO STIPULATED
HEAVY METAL(PB)	/	20PPM MAX
ARSENIC	/	3PPM MAX
LEAD	/	5PPM MAX
APPEARANCE	MILK WHITE POWDER	MILK WHITE POWDER

#### Packing of Products:

IN 25KG NET PAPER BAGS.