INTERSTARCH

STARCH & SYRUP MANUFACTURER

NATURE'S POWER FOR POWERFUL BRANDS

INTERSTARCH OFFERS MORE THAN 30 PRODUCTS, WITH 3 MAJOR APPLICATION FIELDS:

NON-FOOD APPLICATION

Modified non-food starches

Native non-food starches

Glucose syrups (industrial)

Corn steep liquor (industrial)

Corn fuel pellets

ANIMAL FEED

Corn gluten meal

Corn gluten feed

Corn steep liquor

Vital Wheat Gluten

Wet-milled corn germ

Corn oil cake

Pregelatinized corn & wheat starches

Native corn & wheat starches

HUMAN NUTRITION

Native corn & wheat starches

Modified corn & wheat starches

Pregelatinized corn & wheat starches

Waxy corn starch

Vital Wheat Gluten

Liquid Glucose

Glucose-Fructose syrups

High-Maltose syrups

Dried Syrups

Crystalline fructose

Maltodextrins

Gluten-free ingredients & blends

Corn oil

MAIN APPLICATIONS IN FOOD AND FEED INDUSTRIES

BAKERY PRODUCTS

CONFECTIONERY

BEVERAGES

CONVENIENCE FOODS

PROCESSED FRUIT AND VEGETABLES

SAUCES AND GRAVIES

PROCESSED MEAT AND FISH PRODUCTS

DAIRY AND ICE CREAM

PET FOOD

FUNCTIONAL FOOD AND INSTANT PRODUCTS

DOMESTIC LIVESTOCK NUTRITION

FISH FEED

QUALITY ASSURANCE

Interstarch provides high-quality products for use in food, feed and non-food industries. Production facilities are certified according to ISO9001, ISO22000 (HACCP), FSSC 22000 (GFSI) and Halal standards. Systematic testing and audits conducted by production laboratories, as well as by independent experts, confirm that our products meet high standards of quality and food safety.

SHIPMENT CONDITIONS

Interstarch provides efficient organized logistic around the world. We deliver our products by rail, sea and road transport, covering the supply to more than 75 countries on all continents. Our solutions satisfy the needs of each client.

OUR PRODUCTION BASE:

At 3 production sites in Europe,
we process 760 thousand mt of harvested
grain annually into the wide range of
corn and wheat ingredients.

CORN PRODUCTS FOR FEED

The Interstarch company offers a wide range of products from the feed group, which is a valuable supplement to the diet of animals in the production of compound feed for various industrial livestock, domestic animals and pets. Such products as corn gluten meal, corn gluten feed, corn germ expeller and corn germ are well-known feed additives. Thus, corn gluten meal contains a large amount of amino acids, and thanks to the complex of microelements, fat-soluble and water-soluble vitamins, corn gluten improves the useful properties of feed, improving performance indicators and reducing protein deficiency.

Corn gluten feed is a source of feed fibers, protein, soluble carbohydrates due to the use of corn steep liquor, it is enriched with amino acids, mineral salts, phosphorus, magnesium, calcium. The use of corn germ expeller as a high-energy, fat-protein, vitamin and phosphorus-containing additive in the diet of animals and in the production of compound feed ensures high and stable productivity of animals, allows you to save scarce and expensive feed additives. Corn germ expeller contains polysaturated fatty acids, which are indispensable in the body of animals and poultry. Corn germ is a high-calorie fat-protein product that is an independent ingredient in the diet of farm animals in the production of compound feed and premixes.

		Corn gluten meal (CGM)	Corn gluten feed (CGF)	Corn germ	Corn germ expeller
Moisture	%	< 10,0	< 12,0	< 7,0	< 5,0
Protein content (in DS)	%	> 65,0	> 18,0	< 15,0	> 20,0
Total fat content (in DS)	%	< 10,0	> 1,5	> 45,0	< 14,0
Starch content (in DS)	%	< 20,0	12 - 27	< 20,0	< 20,0
Ach content (in DS)	%	< 3,0	< 1,8	< 1,5	< 1,5

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VITAL WHEAT GLUTEN

Wheat gluten is a natural protein derived from wheat. Due to the delicate removal and proper drying of raw materials, our AllStarch vital wheat gluten distinguished by its original natural properties, therefore labeled as «vital gluten».

Gluten is used in baking, pasta production, as well as in meat and fish processing (sausages, etc.). In bakery production, gluten gives porous structure, crunchiness and aroma. It makes raw dough firm, elastic and easy to work with. During meat and fish processing, gluten is used as a natural binding protein component, which increases density. In pasta production, it is valued for its elasticity.

Also, wheat gluten is a well-balanced component of dry and wet pet food with an amino acid profile that is complementary to meat protein profiles. It is easily digestible in the small intestine, so the delivery of undigested proteins into the large bowel is minimal, suitable even for some veterinary-exclusive diets.

VITAL WHEAT GLUTEN APPLICATIONS & BENEFITS

Baked goods	Processed meat and fish food	Pet food	Fish feed
Gives softness	Structure improvement	Protein source	Amino acid source
Increases shelf life	Protein binder	Pellet binder	High digestibility
Taste improvement	Cost optimization	Cost optimization	Pellet binder
Dough strength	Partial replacement of animal protein	Storage stability	Cost optimization
Gas retention			Storage stability
Structure improvement			

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NATIVE WHEAT STARCH

Native wheat starch is a natural ingredient derived from wheat grains. Due to clear taste, odour and whiteness, wheat starch has a huge area of application in various food and non-food industries.

Interstarch produces AllStarch 1550 & AllStarch WN1 native wheat starches. They are used as an ingredient for baking, instant food products, dairy products, confectionery, meat and fish products, and other cooking processes due to their stabilizing and gelatinizing properties, and ability to regulate viscosity.

We also offer gluten-free native wheat starch – AllStarch 1550 GF – particularly developed for products with additional health & safety value, especially for people with gluten intolerance. AllStarch 1550 GF is produced by the method, that destroying gluten during processing of native wheat starch. The actual gluten content < 5 ppm. Non-GMO and GF product status is regularly confirmed by independent certified laboratory.

NATIVE WHEAT STARCH APPLICATIONS & BENEFITS

Baked goods	Dairy products	Canned foods	Confectionery	Processed meat and fish food	Prepared mixes
Humidity control	Increases shelf life	Emulsion stabilization	Humidity control	Emulsion stabilization	Structure control
Prevention fat penetration	Thickening and stabilization	Provides necessary texture	Smoothness enchance	Humidity control	Stability
Form restoring	Viscosity	Prevents phase separation and ensures stability	Structure improvement	Increases shelf life	Taste improvement
Increases shelf life		Smoothness enchance	Thickening and stabilization	Thickening and stabilization	
Structure improvement		Viscosity			

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NATIVE REGULAR CORN STARCH

Corn starch is a natural substance, carbohydrate polymer, which consists of two structurally different fractions of amylose and amylopectin with the general formula ($C_6H_{10}O_6$).

Native corn starch is starch obtained by the process of the corn wet-milling. The technological process of starch production consists of the following steps:

- corn grains steeping for separation of extractive substances;
- fine grinding of grain to obtain a grain mush;
- grain mush washing, then separation of starch milk;
- starch milk is centrifugally dewatering and then dried into starch.

Native regular corn starch is a natural powdery white ingredient, used for bakery, fast food, dairy, confectionery, processed meat and fish products. No genetically modified organisms or commodities are used in the production. Product quality and safety are permanently supervised according to Quality Assurance System FSSC 22000 and Halal certified.

NATIVE CORN STARCH APPLICATIONS & BENEFITS

Baked goods	Dairy products	Confectionery	Prepared mixes	Alcoholic beverages, brewing
Dough rheology	Prevents of lumps formation	Humidity control	Humidity control	Structure control
Gives friability crispiness	Binding agent	Smoothness enchance	Prevents phase separation and ensures stability	Source of fermented sugars
Damage resistance	Filler	Structure improvement	Structure improvement	Sweetness control
Structure improvement	Dehydrating agent	Thickening and stabilization		Viscosity
Thickening and stabilization	Viscosity	Molding products		
Appearance improvement				

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NATIVE WAXY CORN STARCH

The main feature of waxy corn starch is amylopectin content up to 99%. This starch has better paste stability, greater characteristics in clarity and texture. Native waxy corn starch is easily cooked up and forms a smooth, dense structure, during the cooling preserves creamy structure.

Starch from waxy corn is a perspective raw material for food application worldwide. With this starch, producers reduce the fat content without affecting taste and texture. Waxy corn starch forms texture similar to modified starches, while its labeling as a native (not modified!) corn starch. Another benefit is improving the flavor, due to neutral taste of the starch. High viscosity characteristics of waxy corn starch help to decrease the amount of starch added to food products.

WAXY CORN STARCH MAIN CHARACTERISTICS

Moisture, %, no more than	13,0
Protein (on DS), %, no more than	0,35
Sulphur dioxide content (SO_2), mg / kg, no more than	10,0
Sieve analysis (> 200 μm), %, no more than	1,0
Amylopectin content, not less than	97,0
Brabender viscosity (5 % DS, 350 cmg, peak viscosity; after 20 min. 93°C, distilled water), BU	approx. 1100-1300; 400
Bulk density (loose), g / dm^3	450-550

WAXY CORN STARCH APPLICATIONS & BENEFITS

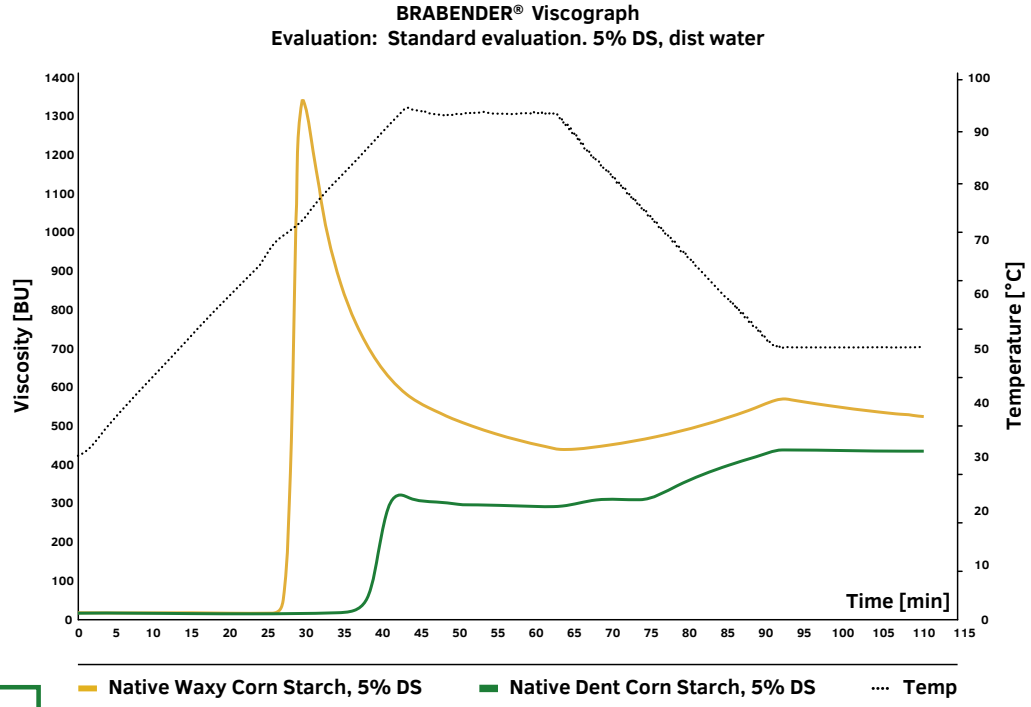
Baked goods	Dairy products	Confectionery	Prepared mixes	Sauces & dressings	Snacks
Structure control	Smoothness	Viscosity	Structure control	Fat reduction	Structure control
Dough viscosity	Creaminess	Creaminess	Paste stability	Smoothness	Fat reduction
Flavor enhancement	Texturizer	Texturizer	Flavor enhancement	Creaminess	Crispiness
Crispy crust	Spreadable		Clear structure	Clear structure	Flavor enhancement

Starch from waxy corn differs from the standard corn starch, both on molecular structure and main characteristics. No genetically modified organisms or commodities are used for production. Product quality and safety are permanently supervised according to the Quality Assurance System FSSC 22000 (GFSI) and Halal certified.

WAXY CORN STARCH IN COMPARISON WITH REGULAR CORN STARCH

Main properties	Native waxy corn starch	Native regular corn starch
Viscosity	More stable viscosity High viscosity characteristics	Retrogradation Standard viscosity
Paste structure	Long structure paste with water binding capacity	Short and dense structure
Reaction to a high temperature	Elasticity and stability when heated	Weak stability
Gelatinize properties	Relatively fast gelatinize	Relatively slow gelatinize
Digestibility	Fully digestibility	Standard digestibility
Percentages of retrogradation	Lower percentages of retrogradation	Higher percentages of retrogradation
Appearance	Clear	Cloudy
Content of amylose	Less content of amylose	Typical content of amylose

WAXY CORN STARCH AND REGULAR CORN STARCH AMYLOGRAMS



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MODIFIED COOK-UP STARCHES

Interstarch offers a wide range of cook-up modified starches: stabilized, cross-linked, oxidized and acid thinned. The range of presented starches allows to choose the starch with the particular characteristics in almost all areas of the food industry. This is achieved by combining the process of cross-linking, stabilization or thinning process, as well as a fine selection of raw materials (waxy corn or wheat). Production of modified starches is inextricably linked with the assessment of their consumer properties to meet various specific needs of our customers: to stabilize, to develop a specific viscosity or gelling profile, etc.

	Wheat starches			Waxy corn starches	
	E1401	E1404	E1414, E1422	E1412	E1422
Heat resistance	▲	▲	▲	▲	▲
Shear resistance	▲	▲	▲	▲	▲
Freeze-thaw stability	▼	▼	▼	▬	▬
Acid resistance	▬	▬	▲	▲	▲
Retrogradation	▲	▲	▼	▼	▼
Appearance	☁	☁	☁	◍	◍
Taste	~	~	~	~	~

▲ High ▼ Low ▬ Medium ☁ Cloudy ◍ Translucent ~ Neutral

Each type of starch has undergone technological testing in R&D laboratories, as well as in real production conditions and adapted to a wide range of applications in the food industry. We would like to offer our customers the most effective products. Therefore, our team of professional chemical technologists and specialists is constantly studying and creating modified starches, according to special customer requests.

MODIFIED COOK-UP STARCHES APPLICATION AREA

Baked goods	Dairy products	Confectionery	Convenience foods	Sauces & dressings	Processed fruit and vegetables	Processed meat and fish food	Beverages
Bakery fillings	Yogurt	Panning and coating	Canned foods	Salad dressings	Industrial fruit preparations	Coating systems	Beverage mixes
Bakery frostings	Dairy desserts and drinks	Gums and jellies	Microwave products	Low pH sauces	Canned fruit and vegetables	Sausages, meats	
Dry biscuits	Dessert mixes		Dry mixes	Neutral sauces	Compotes	Crab sticks	
Bakery mixes and bread improvers	Cheese products and analogues		Puddings	Relishes			
Pies	Condensed milk		Soups and meats	Mayonnaise			
Noodles, pizza							

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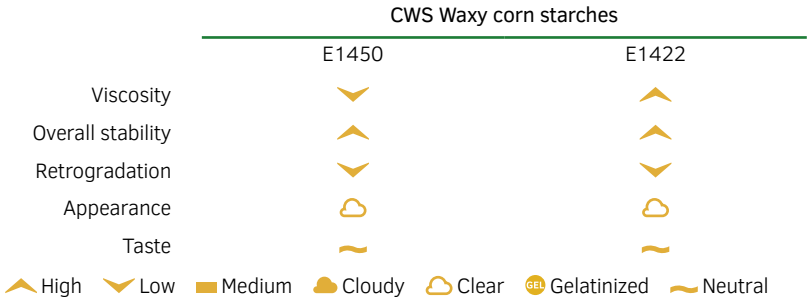
PREGELATINIZED MODIFIED STARCHES

Interstarch offers a wide range of chemically modified pregelatinized starches (cold water swelling starches) for food products, which require a certain viscosity texture without heating. For good texture or more hard production conditions usually recommended to use modified pregelatinized starches. We offer starches based on waxy corn.



Modified pregelatinized starches can quickly obtain a paste of necessary viscosity without heating. They increase the consumer qualities of finished products and optimize their production. Each type of starch has undergone technological testing and adapted to a wide range of applications according to customer's needs. Starch E1450 allows you to create stable emulsions in products such as mayonnaise, non-dairy creams, and beverage emulsions.

PREGELATINIZED MODIFIED STARCHES APPLICATION AREA

Baked goods	Convenience foods	Sauces & dressings	Instant products and mixes	Processed meat and fish food	Beverages
Bakery fillings and cream	Microware products	Mayonnaise	Soups	Coating systems	Beverage mixes
Bakery frostings	Canned food	Salad dressings	Beverages, hot chocolate	Injected meat	Beverage emulsions
Dry biscuits		Low pH sauces	Dairy desserts and drinks		
Bakery mixes and bread improvers		Neutral sauces			
Pies		Relishes			
Noodles, pizza					

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LIQUID GLUCOSE SYRUPS

Glucose syrup is produced from corn starch. It is undergo to multistage purification, which guarantees high product purity and constant quality. Interstarch produces glucose syrups with wide range of dextrose equivalent.

Low DE syrups, with glucose equivalent of 26-32%, are economically advantageous source of dry substances, which do not increase the sweetness of the product. It becomes an excellent anti-crystallizer, due to the large amount of higher sugars in its composition.

Regular DE syrups, with glucose equivalent of 38-42%, are widely used as a sweetener and anti-crystallizer in the confectionery industry (as the main raw material along with sugar).

High DE syrups, with more than 60% glucose content, have an increased sweetness and a lower viscosity in comparison with other syrups. They prevent the crystallization of sugars.

LIQUID GLUCOSE SYRUPS APPLICATIONS & BENEFITS

Baked goods	Confectionery	Dairy products	Processed fruit and vegetables	Processed meat and fish food	Sauces & dressings	Prepared mixes	Beverages, non-alcoholic	Canned foods
Strengthening of chewing properties	Gives elasticity/ hardness	Stability	Sweetness control	Affects the taste	Sweetness control	Binding agent	Sweetness control	Structure improvement
Dough rheology	Crystallization control	Sweetness control	Smoothness enchancement	Humidity control	Smoothness enchancement	Viscosity	Affects the taste	Sweetness control
Glossy or shiny surface	Humidity control	Provides necessary texture	Thickening and stabilization	Provides necessary texture	Syneresis resistant	Structure improvement	Viscosity	Crystallization control
Gives a wet / soft consistency	Sweetness control	Viscosity	Viscosity	Viscosity	Thickening and stabilization		Enhance flavor	Glossy or shiny surface
Source of fermentable sugars	Structure improvement				Viscosity		Energy value	Viscosity
Sweetness control	Viscosity							

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DRIED GLUCOSE SYRUPS

Along with traditional liquid syrups, Interstarch produces dried glucose syrups. They are made from corn starch by drying liquid syrups in the spray dryer. This white dispersed powder is odorless and well soluble in water. Dried glucose syrups are easy to transport, also they are convenient to store and easy dosing.

Dried glucose syrups are used in the production of the bakery, confectionery, dairy products, and canned food. They are also used in the production of sauces, beverages, and fast food. Dried glucose syrups are used in dietary and infant formulas; they replace sugar in products where the excess water is critical. Also dried glucose suryps are actively applicable in the production of instant drinks such as hot cocoa and chocolate, 3 in 1 coffee, instant coffee.

Dried glucose syrups are widely used in ice cream production. They help to enhance the mouthfeel sensation of flavor filler, decrease the excessive sweetness, improve the product's consistency and dairy ingredient taste, decrease the freezing-point, has anti-crystalizing properties, regulate the sweetness, meltdown rate and the hardness indicator.

DRIED GLUCOSE SYRUPS APPLICATIONS & BENEFITS

Baked goods	Beverages, non-alcoholic	Confectionery	Dairy products	Prepared mixes	Processed meat and fish food	Processed fruit and vegetables	Sauces & dressings
Crust / crumb color	Additional nutritional value	Gives elasticity/ hardness	Prevents of lumps formation	Binding agent	Affects the taste	Source of dry solids	Taste improvement
Fermentation	Prevents of lumps formation	Taste improvement	Fermentation reaction	Taste improvement	Humidity control	Taste improvement	Sweetness control
Gives a wet / soft consistency	Filler	Humidity control	Freezing point control	Sweetness control	Gives necessary texture	Increased penetration capability	Smoothness enchance
Crispiness	Aroma carrier	Ability to compress	Ice crystallization control	Structure improvement	Viscosity	Sweetness control	Syneresis resistant
Sweetness control	Sweetness control	Sweetness control	Stability				Viscosity
Glossy or shiny surface		Glossy or shiny surface	Sweetness control				

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MALTOSE SYRUPS

Maltose syrup is a natural substance, produced from corn starch by conversion of the starch. It has a high sweetness (maltose is main sugar in the carbohydrate profile) and does not contain any artificial or synthetic substances, as well as nutritional supplements.

Maltose syrup is widely used in caramel production, bakery and confectionery. It makes product transparent and extends its shelf life, also maltose syrup acts as a stabilizer. High maltose is widely used in brewing for the partial replacement of the carbohydrate portion in brewing wort.

Owing to its unique features, high maltose syrup is often applicable in the food industry for fruit jam, cake stuffing, ham sausages production. Products with high maltose content bolsters resistance to crystallization in finished products, helping to maintain optimum texture and mouthfeel. Maltose syrup has improved hydration properties and therefore helps to increase the shelf life of products. Interstarch offers maltose syrups with different maltose content according to customer's needs.

MALTOSE SYRUPS APPLICATIONS & BENEFITS

Baked goods	Beverages, non-alcoholic	Confectionery	Dairy products	Prepared mixes	Processed fruit and vegetables	Sauces & dressings
Strengthening of chewing properties	Sweetness control	Gives elasticity / hardness	Stability	Binding agent	Crystallization control	Sweetness control
Dough rheology	Affects the taste	Crystallization control	Sweetness control	Crystallization control	Increased penetration capability	Smoothness enchance
Gives a wet / soft consistency	Viscosity	Humidity control	Provides necessary texture	Viscosity	Sweetness control	Syneresis resistant
Sweetness control	Enhance flavor	Sweetness control	Viscosity	Structure improvement	Viscosity	Viscosity
Structure improvement	Energy value	Structure improvement		Glossy or shiny surface	Glossy or shiny surface	
Glossy or shiny surface		Viscosity				

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GLUCOSE-FRUCTOSE SYRUPS

Glucose-fructose syrups (GFS) is manufactured by the process of deep conversion of corn grain. Our syrups are purified by ion-exchange process to assure low content of allergens (SO_2 <10 ppm) and to achieve transparent and pure structure. Then our syrups are purified using filters to guarantee the best microbiological limits. GFS contains fructose and glucose with minor content of other carbohydrates.

Interstarch produces glucose-fructose syrups (GFS) with different fructose content, in accordance with customer's specifications. GFS are used as natural sweeteners with the same sweetness as crystalline sugar for the full replacement of sugar in confectionery and bakery products, for the preparation of dairy products, sauces, and breakfast cereals.

GLUCOSE-FRUCTOSE SYRUPS APPLICATIONS & BENEFITS

Baked goods	Beverages, non-alcoholic	Confectionery	Dairy products	Prepared mixes	Processed fruit and vegetables	Sauces & dressings
Crust / crumb color	Additional nutritional value	Gives elasticity/ hardness	Taste improvement	Binding agent	Taste improvement	Taste improvement
Fermentation	Calorie reduction	Crystallization control	Stability	Crystallization control	Hygroscopicity	Glossy or shiny surface
Taste improvement	Taste improvement	Taste improvement	Sweetness control	Taste improvement	Osmotic control	Hygroscopicity
Gives a wet / soft consistency	Osmotic control	Glossy or shiny surface	Viscosity	Sweetness control	Increased penetration capability	Sweetness control
Sweetness control	Sweetness control	Humidity control			Sweetness control	Viscosity
Structure improvement	Viscosity	Sweetness control				

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MALTODEXTRINS

Interstarch introduces the new assortment of starch products — wide range of maltodextrins that fully meets modern requirements of food industry technological processes.

Maltodextrin is an easily digestible organic substance, a simple sweetener and thickener. It is processed by incomplete hydrolysis of starch by the action of enzymes. Maltodextrins have neutral or slightly sweet taste, well soluble in water.

This ingredient is a part of wide range of food products: yogurts, puddings, sauces, salad dressings, bakery and confectionery products, chips, ice cream, chocolate bars, sausages and many others. In addition, maltodextrin is often added to the composition of baby food: in cereals and in milk formulas.

MALTODEXTRINS APPLICATIONS & BENEFITS

Dairy products	Ice-cream	Instant beverages	Fast food & flavoring spices	Confectionery	Sauces & dressings	Processed meat and fish food	Sports food	Food additives
Increase dry matter by partially replaced milk or sugar	Prevention of sugar crystallization during storage	Dry matter increasing	Dry matter increasing	Crystallization inhibition	Enhance the fat feeling in low-fat product	Enhance the fat feeling in low-fat product	Inert excipient in sports supplements	Neutral spray dryer
Sugar crystallization inhibition	Cryoscopy point mix increase	Sweetness adjustment	Taste improvement	Decrease sweetness	Taste improvement	Increase the taste	Solubility improvement of the mixes	Solubility improvement of the additive
Lactose crystallization inhibition	Enhance the fat feeling in low-fat product	Taste improvement	Solubility improvement	Viscosity increasing	Giving the product a smearing texture	Speeding up the ripening process of dry sausages	Reducing water absorption capacity of mixes hygroscopic components	Improving the organoleptic characteristics and flavors
Sweetness adjustment	Improving the effectiveness of stabilizers	Foaming properties improvement (for aerated drinks)	Structure improvement	Sugar prevention		Reducing the risk of minced souring	Anti-caking agent	Aromatic encapsulation
	Sweetness degree correction	Precipitate prevention	Anti-caking agent	Reducing the feeling of «bonding»				Anti-caking agent
	Change viscosity	Anti-caking agent						

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CRYSTALLINE FRUCTOSE

Crystalline fructose is a dry product, convenient to use and to store. It has clear and very sweet taste, without odor. Fructose is a natural sweetener and functional ingredient, which is well absorbed by human organism without causing side effects. Crystalline fructose is permitted for use by persons controlling body weight and diabetic patients. It has a low crystallisability and high solubility, and acts as a powerful moisturizer to prevent food products from drying out. Fructose perfectly preserves the aroma and sweetness of the product throughout its shelf life. The best way to use crystalline fructose is in the products consumed in cold conditions.

CRYSTALLINE FRUCTOSE MAIN BENEFITS

- Crystalline fructose has a mild and clean taste without aftertaste;
- intense sweetness, that allows to use it in small doses;
- provides calorie reduction with potential cost savings;
- provides the added health benefit of a low Glycemic Index;
- synergism with other sweeteners and starches, enhances their effect;
- prolongs the shelf life of products;
- flavors enhancement, such as fruit, spices, chocolate, caramel, cinnamon and other sweet and fruity flavors;
- increased gel strength and improved texture;
- effective moisture binding, to prevent products from drying out;
- increased osmotic pressure and solubility;
- imparts a golden brown color in food products where browning is needed;
- allows the development of innovative confectionery sugar-free products.

CRYSTALLINE FRUCTOSE APPLICATION AREA

Baked goods	Dairy products	Confectionery	Functional foods	Sauces & toppings	Processed fruit & vegetables	Beverages	Baby food	Frozen foods
Baked goods	Yogurts	Gums and jellies	Dietary products	Sweet sauces and dressings	Canned fruits & vegetables	Sport drinks	Sweet porridge	Industrial frozen foods
Microwaveable baked goods	Puddings	Caramels and candies	Reduced-calorie foods	Fruity toppings	Jams	Energy drinks	Fruit and vegetable purees	
Bakery fillings	Other dairy desserts and drinks	Gelatins and liquid fondants	Diabetic foods	Chocolate toppings	Fruit preserves	Enhanced waters and drink concentrates	Milk mixtures	
Creams		Marmalade	Sugar-free foods	Clear structure	Industrial fruits & vegetables preparation	Instant / powdered beverages		
		Chocolate				Soft drinks		
						Fruit juices		

GLUTEN-FREE WHEAT STARCH ALLSTARCH 1550 GF ACTUAL GLUTEN CONTENT < 5 ppm

GLUTEN FREE PRODUCTS

We believe that a sharp outbreak of gluten-related disorders should not remain without reaction, that is why we developed a product line of gluten-free ingredients.

GENERAL INFORMATION ABOUT

AllStarch 1550 GF is native starch. During the production process, gliadin in the native wheat starch is destroyed. Therefore, this product retains the taste and certain properties of wheat starch, without harm to health and it is a gluten free product. AllStarch 1550 GF is declared as “gluten free” according to EU Directive 41/2009 and “Codex Alimentarius”.

LEGAL REGULATIONS

AllStarch 1550 GF complies with EU Regulation 178/2002/EC, with Regulation 1881/2006 for maximum levels for certain contaminants in foodstuffs as well as other EU regulation concerning food safety. Production site is FSSC 2000 (GFSI) and Halal certified. No genetically modified organisms or commodities are used.

GF NATIVE WHEAT STARCH APPLICATION AREA

Baked goods	Convenience foods	Dairy and ice cream	Processed meat and fish food
GF Bread and buns	Canned foods	Yogurt	Coating systems
GF Crackers, dry biscuits, waffles	Microware products	Dairy desserts and drinks	Sausages, meats
GF Sponge cakes, pies		Puddings	Crab sticks
GF Snack coatings		Cheese products and analogues	
GF Bakery mixes and bread improvers			
GF Fresh noodles			
GF Pizza			

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INTERSTARCH

PREGELATINIZED NATIVE STARCHES

Interstarch offers a wide range of native pregelatinized starches (cold water swelling starches) for food products, which require a certain viscosity texture without heating. For good texture would be enough to use CWS native starches (native pregelatinized starches), for more hard production conditions it is better to use chemically modified pregelatinized starches. We offer starches based on waxy corn and wheat.

	CWS Wheat starches			CWS Waxy corn starch
	CWS14	CWS11	CWS12	CWS30
Viscosity	Medium	Medium	Low	High
Overall stability	Medium	Low	High	Medium
Retrogradation	Gelatinized	Gelatinized	Gelatinized	Medium
Appearance	Cloudy	Cloudy	Cloudy	Clear
Taste		Neutral	Neutral	Neutral

High · Low · Medium · Cloudy · Clear · Gelatinized · Neutral

Native pregelatinized starches can quickly obtain a paste of necessary viscosity without heating. They increase the consumer qualities of finished products and optimize their production. Each type of starch has undergone technological testing and adapted to a wide range of applications according to customer's needs.

PREGELATINIZED NATIVE STARCHES APPLICATION AREA

Baked goods	Instant products and mixes	Dry snacks	Functional food	Pet food, animal feed
Bread and buns	Soups, cream soups	Coating for nuts	Baby food	Calf milk replacers
Sponge cakes	Beverages, hot chocolate	Formed chips	Sport food	Wet pet food
Waffles	Dairy desserts and drinks	Crackers, straws	Adult nutrition	Dry pet food
Bakery mixes and bread improvers	Pastry creams	Extruded snacks		Granulated feed
		Snack pellets		

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CORN OIL

Interstarch offers crude corn oil as well as refined and deodorized corn oil. Corn oil is a germ oil and therefore contains far more essential elements than ordinary seed oils. It is a natural substance produced in the process of corn germ pressing. During the corn starch production process, the corn germ is separated, crushed and heated in special roasters. Then it goes to two-stage pressing. Received oil is purified and filtrated. As a result we receive an unrefined (crude) corn oil. To receive the refined and deodorized oil, crude oil is hydrated, neutralized and afterwards filtrated, deodorized and cooled without any use of chemical reagents.

APPLICATION

- Preparation of salads and for frying.
- Production of margarine both separately and in mixture with the other vegetable fats.
- Production of mixtures with dairy butter (40% of butter and 60% of corn oil of margarine type).
- Production of mayonnaises and dressings.
- As ingredients for chips and snack products.
- As ingredients for bakery and flour confectionary products.

BENEFITS

ANTICHOLESTEROL

The most studied property of corn oil is that its limited usage lowers LDL blood cholesterol.

GENERAL HEALTH STRENGTHENING

Corn oil provides essential fatty acids like linoleic acid (omega - 6) required for some immune system functions. Linoleic acid is required for proper functioning of kidneys, liver, heart and digestive system.

HYPOTENSIVE

Like olive oil, corn oil reduces blood pressure in hypertensive patients.

ANTIOXIDANT

Corn oil contains Vitamin E which is an antioxidant.

CANCEROGEN-FREE

Unlike sunflower oil, corn oil does not create cancerogen substances during frying.

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COMPLETE LIST OF PRODUCTS FOR SALE

Goods	Grade	Harmonized System Commodity Code
Corn (maize) starch	Food, industrial	HS 11081200
Waxy corn (maize) starch	Food, industrial	HS 11081200
Wheat starch	Food, industrial	HS 11081100
Modified starches (incl. pre-gel)	Food, industrial	HS 3505105000
Maltodextrins	Food, industrial	HS 1702905000
Cold swellable native starches (pre-gel)	Food	HS 3505109000
Vital wheat gluten (VWG)	Food, feed	HS 11090000
Liquid Glucose syrups	Food, industrial	HS 170230
Dried Glucose syrups	Food	HS 170230
High-Maltose syrups	Food	HS 170230
Glucose-Fructose syrups	Food	HS 170240
Crystalline fructose	Food	HS 17025000
Gluten-free wheat starch	Food	HS 11081100
Corn oil (crude)	Food	HS 151521
Corn oil (refined and deodorized)	Food	HS 151529
Corn gluten meal (CGM)	Feed	HS 23031011
Corn gluten feed (granulated)	Feed	HS 23031000
Corn steep liquor	Feed	HS 1302199900
Vet-milled corn germ	Feed	HS 1104309000

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