FOOD CHEMICALS BROCHURE

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About Us

Tradeasia International Pte. Ltd. is a privately owned, independent company headquartered in Singapore. We are a global trading organization providing integrated chemical procurement services with certainty and trust, which makes Tradeasia unique.

Tradeasia International was setup with the sole intention of carrying out chemical distribution services especially to commodity industries in many parts of the world. Today, Tradeasia International represents a growing number of businesses that are serving a variety of markets. We source and supply about 500-600 containers monthly to our customers worldwide.

12 Locations

50+ Suppliers

500+ Products

400+ Clients

Category: Gelling Agent

Corn Starch

Maize starch, also commonly known as corn starch, has the chemical formula $(C_6H_{10}O_5)_n$. It is a fundamental ingredient in most packaged food and industrial products. Maize starch in natural, modified, pre-geletanized and dextrinized forms provides viscosity, texture and other desired properties to all types of food & paper, products from canned chilled frozen to microwaveable goods, dry mixes and extruded snacks.

HS Code	: 1108.12.00
CAS No.	: 9005-25-8
Origin	: China
Packaging	: 25kg kraft paper or plastic woven bag

Specifications:

Property	Unit	Value
Appearance		White to slightly yellowish fine powder
Fineness	%	100
Moisture	%	≤14
Whiteness	%	≥90
pH		6 - 7
Viscosity	CP	2 - 25
Heavy Metal (Pb)	ppm	10 (max)
Mesh (Pass 100 Mesh)		≥99

Applications :

Adhesive Industry

The major use for starch-based adhesives is in so-called converting processes applied to paper and paperboard.

Paper Industry

During papermaking, native maize starch is used to provide dry strength and as a surface improvement aid in alkaline papermaking.

Chemical Industry

Corn starch is an economical fermentation feedstock to produce many organic chemicals such as ethanol.

Textile Industry

In the manufacture of textiles, starch keeps the yarn straight and strong, significantly improving its ability to chemical's withstand the stress of weaving.

Food Industry

It is used as a thickening and gelling agent for its viscosity and opaqueness in sauces, soups, gravies and various desserts. It is also an effective binder and acts as a stabilizer to give necessary texture and sweetness to bakery products.

Category: Gelling Agent

Tapioca Starch

Starch is obtained naturally through extraction from the grain or root of cassava, a root vegetable. It is often commercially sold in the form of a dry powder and its grade varies based on the type of application it is being used for. However, often it is used in the food industry due to the lack of certain properties that are needed in other industries.

HS Code : 1108.14.00
CAS No. : 9057-07-2
Origin : China
Packaging : • 380 @ 50 kg PP/PE bag, 19 MT / 20'FCL
• 720 @ 25kg PP/PE bags, 18 MT/20'FCL

Specifications:

Property	Unit	Value
Appearance		White crystalline powder
Starch Content	%	85 (min)
Moisture Content	%	13 (min)
Whiteness	%	93 (min)
pH		5.0 - 7.0
Viscosity 6% @Peak	%	550 (min)
SO_2	ppm	30 (max)
Residues	%	0.1 (max)
Ash Content	%	0.2 (max)

Applications :

Adhesive Industry

Tapioca starch is popular in the adhesive industry due to its appreciable binding capacity due to its high viscosity sticky properties when mixed with water or certain chemicals.

Food Industry

Tapioca starch used to reduce manufacturing costs because of its efficiency as a thickener. It is also used to delay the melting of ice cream.

Textile Industry

Tapioca starch used in thread process in order to reduce friction and fraying. It is also used to increase flexibility of the thread generated.

Paper Industry

In the paper industry, tapioca starch is used to increase the elasticity and concentration of the paper before the pulp is pressed into sheets.

Category: Preservative

Citric Acid

Citric acid is a weak organic acid with formula $C_6H_8O_7$ which occurs naturally in citrus fruits. It is part of the citric acid cycle which occurs in the metabolism of all aerobic organism. Citric acid exists in the form of anhydrous, which is crystallized from hot water, or monohydrate that crystallized from cold water. The anhydrous form of citric acid can be produced by heating citric acid monohydrate.

HS Code	: 2918.14.00
CAS No. (Anhydrous)	: 77-92-9
CAS No. (Monohydrate)	: 5949-29-1
Origin	: China
Packaging	: 60 @ 250 kg Plastic Drum, 15 MT / 20'FCL

Specifications of Citric Acid Anhydrous:

Property	Unit	Value
Appearance		Colorless translucent crystals or as white, fine, crystalline powder
Content	%	99.5 - 100.5
Moisture	%	0.5 (max)
Heavy Metal	ppm	10 (max)
Oxalic Acid	mg/kg	100 (max)
Sulphate	ppm	150 (max)
Sulphated Ash	%	0.05 (max)
Aluminium	ppm	0.2 (max)

Specifications of Citric Acid Monohydrate:

Property	Unit	Value
Appearance		Colorless crystals or white crystalline powder
Assay	%	99.5 - 100.5
Water	%	7.5 - 8.8
Heavy Metal	ppm	1 (max)
Oxalate	ppm	20 (max)
Sulphate	ppm	20 (max)
Sulphated Ash	ppm	0.05 (max)
Aluminium	ppm	0.2 (max)

Applications :

Food & Beverages Industry

Citric acid is widely used in food such as jellies, jams, candies, dairy product, frozen fruit, oils and animal feed. In beverages such as wine, ciders, soft drinks, and syrups also contain citric acid. Citric acid can be used for pH adjustment, preservation, as an antioxidant agent, sequestering agent, acidulate and flavour enhancer.

Pharmaceutical Industry

Citric acid is also used in pharmaceuticals. It is combined with bicarbonates to use as an effervescent and an anticoagulant. It is also used to adjust pH and as an antioxidant agent. Citric acid is used to increase the solubility of brown heroin. It is also used as feed in the production of antiviral tissues.

Agriculture Industry

Citric acid is used as an agricultural repellent against frogs, especially in Hawaiian plants. As a corrosive and acidic compound, the amount of citric acid for plants must be specified. Adding too much citric acid can cause acidic soil, which can burn the plant root and cause the plant's death.

Detergent Industry

Citric acid is a chelator or an acid that inactivates water hardness and creates foam, making it especially useful in soaps, laundry detergents, and as a cleaning agent.

Category: Preservative

Sodium Benzoate

Sodium benzoate is widely used as food preservative. While it is safe in small doses, having large amounts of sodium benzoate can be fatal. It is also known as sodium salt of benzoic acid. When water is added to salt of benzoic acid, we get sodium benzoate. Sodium benzoate occurs naturally too, especially in fruits like cranberries, blueberries and foods like seafood and dairy products.

HS Code	: 2916.31.40
CAS No.	: 532-32-1
Origin	: China
Packaging	: 720 @ 25 kg PP Bag, 18 MT / 20'FCL

Specifications:

Property	Unit	Value
Appearance		White crystalline solid
Purity	%	99
Density °C	g/cm^3	1.44
Flash Point	°C	>100
pH		7.0 - 8.5
Solubility in Water		1 molarity (20°C)
Storage Condition	°C	25

Applications :

Food Industry

Sodium benzoate is a preservative. As a food additive, sodium benzoate has the E number E211. It is bacteriostatic and fungistatic under acidic conditions. It is most widely used in acidic foods such as salad dressings (vinegar), carbonated drinks (carbonic acid), jams and fruit juices (citric acid), pickles (vinegar), and condiments.

Detergent Industry

Sodium benzoate is a preservative that has antifungal properties which kills bacteria, fungi and yeasts. It is often used in conventional and even some green cleaning furniture polishes, toilet bowl cleaners, dish washing detergent gels, carpet cleaning products, upholstery cleaners, and dishwasher cleaners.

Pharmaceutical Industry

Sodium benzoate is used as a treatment for urea cycle disorders. Recent research shows that sodium benzoate may be beneficial as an add-on therapy (1 gram/day) in schizophrenia. Total Positive and Negative Syndrome Scale scores dropped by 21% compared to placebo

Category: Artificial Sweetener

Liquid Glucose

Liquid glucose ($C_6H_{12}O_6$) or glucose syrup is colorless or light yellow, viscous syrup that is derived from purified corn starch through hydrolysis by the double enzyme method, decoloration, ion exchange and purification. It has a moderately sweet flavor and is a starch sugar product that is widely used in the food industry. Liquid glucose has high viscosity, humidity, sweetness and pervasion. It also has such advantages as anti-crystallinity and a lower freezing point.

HS Code	: 1702.30.10
CAS No.	: 8029-43-4
Origin	: China, India
Packaging	: 60 @ 250 kg Plastic Drum, 15 MT / 20'FCL

Specifications:

Property	Unit	Value
Appearance		Clear or yellowish viscous liquid
pH		4 - 6
Boiling Temparature	°C	130
Transparence	%	95
As	mg/kg	≤1
Pb	mg/kg	≤0.5
Cu	mg/kg	≤5
SO_2	mg/kg	≤40

Applications :

Food Industry

Liquid glucose is used as an additive in sweets, ice creams, jams, jellies, biscuits, liquors because it does not crystallize and has moderate sweetness and nutritive value. It also forms the base of artificial honey.

Pharmaceutical Industry

Glucose is used in cough syrups and other vitamin based tonics. It is used as granulating agent in tablet coating.

Leather Industry

It is used in the manufacturing of shoe polish and in leather industries during tanning process. It is used as a raw material for gluconic acid, citric acid and kojic acid.

Category: Gelling Agent

Maltodextrin

Maltodextrin is a polysaccharide used as a food additive. It is produced from starch by partial hydrolysis and is usually found as a white hygroscopic spray-dried powder. Maltodextrin is easily digestible, being absorbed as rapidly as glucose. It might be either moderately sweet or almost flavourless. Starch is a polymer consisting of long chains of glucose molecules and one single fructose molecule. Maltodextrin derived by hydrolysing starch using either acid or enzymes.

HS Code	: 1702.90.90
CAS No.	: 9050-36-6
Origin	: China
Packaging	: 25 kg/bag

Specifications:

Property	Unit	Value
Appearance		White crystalline powder
Purity	%	≥99
pH		4 - 6
Solubility	ppm	≥98
Arsenic	ppm	≤5
Lead	ppm	≤5
Sulphated Ash	%	≥0.6
Moisture	%	≥6

Applications :

Food Industry

Maltodextrin is used in beer brewing to increase the specific gravity of the final product. This improves the mouth-feel of the beer, increases head retention and reduces the dryness of the drink. Maltodextrin has no flavor and is not fermented by the yeast, so it does not increase the alcohol content of the brew. It is also used in snacks and "light" peanut butter to reduce the fat content but keep the texture.

Cosmetics Industry

Maltodextrin is used in cosmetics and beauty products for its ability to bind other compounds and stabilize formulas. It may increase anti-aging properties of other ingredients when used in combination with them.

Category: Gelling Agent

Dextrin

Dextrins are a group of low-molecular-weight carbohydrates produced by the hydrolysis of starch or glycogen. Dextrins are mixtures of polymers of D-glucose units linked by glycosidic bonds. Dextrin is usually defined as a soluble gummy substance, formed from starch by the action of heat, acid, or fermentation. Having dextrorotatory properties, dextrin is used mainly as a thickening agent, as mucilage and as a substitute for gum arabic and other natural substances.

HS Code : 3505.10.10
CAS No. : 9004-53-9
Origin : China, India
Packaging : 660 @ 25kg per PP bag, 16.5 MT/20'FCL

Specifications:

Property	Unit	Value
Appearance		White to yellow-white, odorless powder
Purity	%	98 (min)
DE Equivalent	%	15 - 20
pH		4.5 - 6.5
Moisture	%	≤6
Solubility	%	≤100
Sulphated Ash	%	0.6 (max)
Iodine Test		No blue reaction

Applications :

Food Industry

Dextrin is useful to food manufacturing as a substitute for fat. Due to its gluey texture, dextrin can mimic fat while contributing less calories to a product. It is also less expensive and will not spoil like fat.

Adhesive Industry

Dextrin is used to make many types of glue and adhesive, including glue and paste for children's use as it is non-toxic if consumed. The adhesive industry uses large amount of yellow dextrin in the preparation of liquid and dry adhesives.

Textile Industry

In textile printing, dextrin is used as thickener. Higher grade starch which are free of grit and other impurities ensures that the copper rolls used in printing do not suffer from abrasion.

Other Applications

Dextrin is used in dry distemper where 5 - 10% of dextrin, mixed with chalk and pigment, acts as carrier and impact good adhesion of the color of the wall. It is used in the dye stuff industries as diluents to standardize the dye with respect to the range of the color.

Category: Artificial Sweetener

Xylitol

Xylitol appears as a white crystalline powder that is water soluble. It is a sugar alcohol that is widely used in the food industry as sweeteners and thickeners. Xylitol is manufactured through the reduction of D-xylose with Hydrogen using Raney nickel as a catalyst in the process.

HS Code	: 2905.49.00
CAS No.	: 87-99-0
Origin	: China
Packaging	: 800 @ 25 kg bag, 20 MT/ 20'FCL

Specifications:

Property	Unit	Value
Appearance		White crystalline powder, no visible & dark impurities
Content of Xylitol	%	98.5 - 101.0
Ash	%	≤0.5
Loss on Drying	%	≤0.5
Reducing Sugar (as glucose)	%	≤0.2
Other Polyols	%	≤2.0
Melting Point	°C	92 - 96
Heavy Metal (Pb)	%	≤0.0010
Lead (Pb)	%	≤0.0001
Arsenic (As)	%	≤0.0003
Nickel (Ni)	%	≤0.0002

Applications :

Xylitol is widely used in the food industry as artificial sweeteners and thickeners. However, it does not influence insulin and blood sugar levels as it is absorbed at a slower rate compared to sugar.

Food Industry

Xylitol is used in the manufacturing of dental care products due to its anti-cavity properties.

Dental Industry

Category: Artificial Sweetener

Sorbitol

Sorbitol is organic compound that contain six carbons chain and has "OH" group classified as hydroxyl groups. $C_6H_{14}O_6$ is sorbitol's molecular formula. Sorbitol is a sugar alcohol that metabolizes slowly by living organism. Most of sorbitol production comes from corn syrup. It can be produced by reducing the glucose. The process converts the aldehyde group to the hydroxyl group.

HS Code	: 1108.12.00
CAS No.	: 9005-25-8
Origin	: China
Packaging	: 25kg kraft paper or plastic woven bag

Specifications:

Property	Unit	Value
Appearance		Colorless liquid
Purity	%	70 (min)
Water Content	%	30 (max)
pH		5.0 - 7.5
Sorbitol	%	64 (max)
Reducing Sugars	%	0.15 (max)
Nickel	mg/kg	1.0 (max)
Iron	mg/kg	1.0 (max)
Chloride	mg/kg	10.0 (max)
Sulphate	mg/kg	11.0 (max)
Heavy Metal	mg/kg	0.7 (max)
Arsenic	mg/kg	1.0 (max)

Applications :

Food Industry

Sorbitol is important substance that used in this industry as a sweetener. It can substitute sugar that contains more calories. It is often utilized in cough syrup, mints, diet foods, candies, and sugarless chewing gum.

Toothpaste Production

Sorbitol is important ingredients for toothpastes, especially for children's toothpastes. Sorbitol also makes toothpaste more moist that called as a humectant.

Pharmaceutical Industry

Sorbitol is used for constipation treatment as laxatives. Laxatives can increase the feces movement. It is also utilized as bacterial culture media to breed Escherichia coli that can also ferment sorbitol.

Category: Artificial Sweetener

Stevia

Stevia sugar is obtained from Stevia rebaudiuna (leaf). It is almost 250 – 400 times sweeter than normal sugar. Raw stevia has a somewhat bitter or licorice-like aftertaste, although Rebaudioside A component has very little aftertaste. It has 0 calories and hence widely used as dietary supplement. Stevia is used for a variety of research purposes. It has been found that stevia sugar contains a lot of antioxidants, and these antioxidants help in reducing the risk of pancreatic cancer by 23%.

HS Code	: 1211.90.99
CAS No.	: 57817-89-7
Origin	: China
Packaging	: • 100g in Plastic bottle • 500g in Plastic bottle

Specifications:

Property	Unit	Value
Appearance		Solid
Purity	%	99
Odor		Odorless
Melting Point	°C	238 - 239
Boiling Point	°C	315 (approx.)
Solubility	mg/mL	1.25
Density	g/cm^3	3.10

Applications :

Food Industry

Stevia is marketed as dietary supplement and for skin nourishing. It is economical as very less amount of stevia sugar can be used to achieve the same sweetness as that of regular sugar.

Health Industry

Stevia is said to lower hypertension, aids digestion, reduces stomach acidity, relieves nausea. Stevia inhibits the growth of bacteria that cause tooth decay and mouth odour. Stevia heals cut wounds rapidly and any mark or blemish on the skin, when stevia leaves are applied, is reduced.

Category: Preservative

Monocalcium Phosphate

Monocalcium phosphate, also known as acid calcium phosphate, is an inorganic compound and is commonly found in monohydrate form. Monocalcium phosphate is colourless and it can appear in both granular and powder form. Monocalcium phosphate is produced by a reaction between calcium carbonate and wet processed defluorinated phosphoric acid. High purity Monocalcium phosphate is produced by treatment of calcium phosphate with concentrated phosphoric acid.

HS Code	: 2309.90.90
CAS No.	: 7758-23-8
Origin	: China
Packaging	: 25kg / Drum & 1kg/Drum

Specifications:

Property	Unit	Value
Appearance		Water crystals
Purity	%	≥90
Phosphorus	%	≥22
Calcium	%	≥13
Flourine	%	≥0.18
Arsenic	ppm	≤30
Lead	ppm	≤30
Cadmium	ppm	≤10

Applications :

Food Industry

Monocalcium phosphate is used as leavening agent in bakery for cakes, bread and other baked foods for improved texture. It can also be used as an emusifier and flavor enhancer in beverages.

Cosmetics Industry

Monocalcium Phosphate used as abrasive; buffering agent; bulking agent; oral care agent in cosmetics and personal care products.

Animal Feed Industry

Monocalcium Phosphate is used as a food supplement for livestock and poultry. It restores phosphorous and calcium minerals to the mineral deficiency cattle diet.

Other Applications

Monocalcium Phosphate is widely used as stabilizer and emulsifier in many other industries like glass and plastic manufacturing industries etc.

Category: Preservative

Dicalcium Phosphate

Dicalcium phosphate is the calcium phosphate with the formula $CaHPO_4$ and its dihydrate. The "di" prefix in the common name arises because the formation of the HPO_{42}– anion involves the removal of two protons from phosphoric acid, H_3PO_4. It is also known as dibasic calcium phosphate or calcium monohydrogen phosphate. Dicalcium phosphate is used as a food additive, it is found in some toothpastes as a polishing agent and is a biomaterial.

HS Code	: 2835.25.00
CAS No.	: 7757-93-9
Origin	: China
Packaging	: As per customers requirements

Specifications:

Property	Unit	Value
Appearance		White powder
Purity	%	98
Odor		Odorless
Melting Point	°K	1943
Boiling Point	°K	Decomposes
Solubility		Insoluble in water and alcohol, soluble in most acids
Density	g/cm^3	2.929

Applications :

Medication

This medication is used to prevent or treat low blood calcium levels also treat conditions caused by low calcium levels such as bone loss (osteoporosis), weak bones (osteomalacia/rickets), etc

Oral Health

Oral surgeons use dicalcium phosphate to aid in the healing process. It can also replace fluoride as the best way to prevent tooth decay. Manufacturers often add it to teeth whiteners as an abrasive to gently polish your teeth.

Agricultural Supplement

Farmers often supplement their livestock feed with inorganic phosphorus. This technique compensates for the low availability and poor digestibility of food-related phosphorus.

Category: Emulsifier

Lecithin

Lecithin is a generic term to designate any group of yellow-brownish fatty substances occurring in animal and plant tissues composed of phosphoric acid, choline, fatty acids, glycerol, glycolipids, triglycerides, and phospholipids. It has low solubility in water but is an excellent emulsifier. Lecithin is sold as a food supplement and for medical uses.

HS Code	: 2923.20.10
CAS No.	: 8002-43-5
Origin	: China
Packaging	: 1052 @ 20 kg Cartoon with inner layer plastic lining, 21.04 MT / 20'FCL

Specifications:

Property	Unit	Value
Appearance		Dark yellow or light yellow powder
Purity	%	95
Moisture	%	≤2
Acetone Insoluble	%	95
As	mg/kg	≤0.1
Acid	mg of KOH/g	30

Applications :

Food Industry

In confectionery, lecithin reduces viscosity, replaces more expensive ingredients, controls sugar crystallization and the flow properties of chocolate,improves shelf life for some products, and can be used as a coating.

Pharmaceutical Industry

In the pharmaceutical industry, lecithin acts as a wetting, stabilizing agent and a choline enrichment carrier. It also helps in emulsification, encapsulation and is a good dispersing agent. It can be used in manufacture of intravenous fat infusions and for therapeutic use.

Paint & Coating Industry

Lecithin forms protective coatings for surfaces with painting and printing ink. It has antioxidant properties and acts as a rust inhibitor. It is also a wetting, emulsifier, colour-intensifying agent, catalyst and conditioning aid modifier.

Other Applications

Lecithin is used in animal feed as it enriches fat, protein and improves palletization. Lecithin also may be used as a release agent for plastics, an emulsifier, spreading agent, and antioxidant in textile, rubber and other industries.

Category: Sweetener

Crystalline Fructose

Crystalline fructose is used as a sweetener incanned fruit, fruit preserves, bread, cakes, creams, marmalade, chocolate. It can be used as a replace of high-fructose corn syrup (HFCS) and table sugar. Crystalline fructose is about 20 percent sweeter than table sugar, and 5% sweeter than high fructose corn syrup.

HS Code	: 1702.50.00
CAS No.	: 57-48-7
Origin	: Turkey
Packaging	: 5 MT/FCL 20ft @ 25 kg bags

Specifications:

Property	Unit	Value
Fructose	%	>99.5
Foreign Sugar	%	<0.5
pH		5.0 - 7.0
Moisture	%	<0.2
Specific Rotation		(-91.0) – (-93.5)
Sulphated Ash	%	<0.1
HMF	ppm	<40
Color of Solution	lucmsa	<20
Acidity	mL	<0.5
SO_2	ppm	<10
Bulk Density	gr/lit	800 - 900
Calcium	ppm	<5
Sulphate	ppm	<50
Chloride	ppm	<40

Applications :

Food Industry

Crystalline fructose helps improve product texture, taste and stability. When combined with other sweeteners and starches, crystalline fructose boosts sweetness, cake height and texture of foods and beverages. In addition, it produces a pleasing brown surface colour and pleasant aroma when baking.

Pharmaceutical Industry

High fructose corn syrup can function as a sweetener in various types of medicines. Fructose can be found in cough suppressants, decongestant drops and liquids for both children and adults. High fructose corn syrup can also be found in decongestant rubs that are applied to the chest and under the nose.

CONTACT US

133 Cecil Street, #12-03 Keck Seng Tower,
Republic of Singapore - 069535

Tel : +65-62276365
Fax : +65-62256286
Email : contact@chemtradeasia.com