



Your Global Partner for Ingredient Solutions



Sunar Misir is a subsidiary of SUNAR Group Companies

www.sunarmisir.com



SUNAR

Sunar founded in 1974 has a distinctive position in agro-industrial sector with its competitive infrastructure. As being one of Türkiye's leading industrial group, Sunar operates in 6 different agriculture based sectors. Group companies are the pioneer in their respective sectors that include starch and starch derivatives, edible oil, flour, animal feed, fresh and dried fruits, and thermoplastic starch and bio-polymers. Elita Gıda has one of the "fully integrated" edible oil production plant in Türkiye with its high technology infrastructure. Sunar Mısır succeeded many innovations, produces starch and starch derivatives. Sunar Özlem offers specialized flours and animal feeds for diversified needs of the market thanks to its experienced staff. NÇS started its operation in 2006, transforms agriculture into engineering to harvest high yield certified fresh fruits and market dried fruits as well. In addition to manufacturing Sunar also has an international trade business unit under the name of Sunar Pazarlama. In 2014, Sunar NP, the youngest company of the group was founded to produce Türkiye's first certified thermoplastic starch and bio-polymers.



Sunar exports to more than 100 countries on 5 continents with its own brand and it is a rising value of Türkiye with more than 40 years of experience and over 900 employees. Sunar targets to become one of the biggest groups of Europe, Middle East and North Africa in agro - industrial sector. Elita Gıda has been ranked as one of Türkiye's "Top 500 Industrial Enterprises List" prepared by Istanbul Chamber of Industry. Besides, Sunar Özlem is also listed one of "Türkiye's Second Top 500 Industrial Enterprises" list. Since its foundation, Sunar Mısır has been a key player and innovation leader. All group companies are prestigious in their own sector and Sunar is a pillar of the Turkish economy. Sunar's strategy is to develop the right products in response to evolving market trends, changing needs of consumer and to maintain its systematic approach to produce and serve at the highest quality level.

Sunar Group Companies



Sunar; has non-GMO production on the basis of IP System Certificate.

has a big share in Türkiye's corn oil, starch and glucose export.

has one of the "fully integrated" edible oil production plants in Türkiye.

has been a strong player in Turkish starch based ingredients markets.

has Türkiye's first sorbitol and maltitol manufacturing plant.

Awards and recognition



RIO Medal

EBA

International Taste & Quality Institute Superior Taste Awards

European Business Awards RSM

European Business Awards RSM

European Business Awards RSM

European Business Awards National Champion Ruban D'Or Honneur (Growth Strategy / Elita Gıda Sustainability Social Responsibility / Sunar Mısır)

International Business Awards Sterne Awards Chemical Company of the Year (Sunar NP)

International Business Awards Sterne Awards Achievement in Product Innovation (Sunar NP)

European Business Awards Ones to Watch List (Elita Gıda / Growth Strategy 2017-2018)

Turkish Standards Institution Golden Packaging Award (Sunar Slim Packaging)

International Food Summit Most Reliable Brand Award (Elita Gıda)

kariyer.net Respect For Human Award

CSRTürkiye9th Marketplace Sustainable Development Goals Contribution to 'Life on Land' (Elita Gıda / Sustainable Sunflower Agriculture 2017)



Your Global Partner for Ingredient Solutions

Sunar Mısır has started its operations in 1985. Staying one step ahead throughout its journey, the company has become the driving force of Turkish starch and starch derivatives industry.

The product portfolio of the company has been extended regularly. Sunar Mısır now offers a wide range of products for food, textile, paper, chemical, pharmaceutical-personal care industries and specialized industrial application areas.

Leading corn based ingredient manufacturer Sunar Mısır produces **glucose syrup and glucose-fructose syrup, native corn starch, modified starches, dextrans, sorbitol, maltitol, corn gluten feed, corn gluten meal and corn germ** with high quality and international standards.

Sunar Mısır is the leading Sorbitol and Maltitol manufacturer in Türkiye.

Providing innovative and customized solutions, Sunar Mısır supports its clients around the world with optimizing product formulation and with adding value to their business as part of corporate strategy.





Product Portfolio




Polyols

Sorbitol

Sunsorb 70/70 (NC Grade Sorbitol Syrup)
Sunsorb C+ 98 (C Grade Sorbitol Syrup)
Sunsorb C+ 92 (C Grade Sorbitol Syrup)
Sunsorb Sorbitol Powder

Maltitol Syrup

Maltitaste 75/55
Maltitaste 80/55
Maltitaste 85/55
Maltitaste 75/75
Maltitaste 85/75



Glucose&Glucose Fructose Syrups

Glucose Syrup

Maltose Syrup SM 40 / SM 45 D / SMJ 45
High Maltose Syrup SM 50 / SM 55 / SM 60
Glucose Syrup SCG 38/ SCG 40 / SCG 60
SM BISCOSE
SM BVG-52

Glucose Fructose Syrup

Glucose-Fructose Syrup SBF 10
Glucose-Fructose Syrup SRF 30
Glucose-Fructose Syrup SMF 42

Oligodex Low DE Glucose Syrup

Oligodex-21
Oligodex-24
Oligodex-28

Maltodextrin Syrups

Oligodex-18
Oligodex-18L

Starches & Derivatives

Native Corn Starch

Corn Starch
Baklava Starch

Food Grade Modified Starch

Moulding Starch SM M003/ M006/ M009
SMT Gum 0515/ 70100

Modified Industrial Starch

Thin Boiled Modified Starch SMT 2216/
2226/2236/2246/ 2246H/ SMT 2260
Cationic Starch SMC 3000H/ 3000S/
3000HH/3000 SMC HC 3065/3075/3085
Oxidized Starch SMO C20/ SMO C50/
SMO C80/ SMO C110
Cross-linked Modified Starch SMBOND

Dextrin

M-90 Industrial Grade Dextrin
S-2 Industrial Grade Dextrin
Food Grade Dextrin SMFDEX 80100

Sodium Gluconate

Liquid Sodium Gluconate(%40)
Powder Sodium Gluconate



Polyols

Sorbitol

Sunsorb 70/70 (NC Grade Sorbitol Syrup)

Sunsorb C+92 / C+98 (C Grade Sorbitol Syrup)

Sunsorb Sorbitol Powder



Sunsorb 70/70 Sorbitol

Sunsorb Sorbitol is used in chewing gum, jams, cakes & pastries, biscuits, fruit filling, cereal bar, ice-cream, dairy dessert, dried fruit, creams & lotions, shampoos, dental hygiene, pharmaceutical creams and lotions, medical syrup, textile applications and construction chemicals.

Characteristics

- Low calorie natural sweetener / low glycemic index
- Retains moisture as a humectant / prevents crystallisation
- An effective stabilizer for food and industrial chemicals
- Acts as a plasticiser / bulking agent / texturizing agent
- Cooling effect in mouth
- Improves viscosity in the end product
- High thermal and alkaline stability
- Excellent performance in bakery products
- Non cariogenic
- It does not participate in the maillard reaction
- Meets the requirements of USP/EP/BP

Packaging Type: Tin Can, Plastic Barrel, IBC, Flexitank, Bulk

Shelf Life: 24 months

Physical and Chemical Properties	Min	Max
Water Content	29	30,5
Sorbitol % (On Dry Substance)	72	92
Reducing Sugars	-	0,3



Tin Can



Plastic Barrel



Metal Barrel



IBC



Flexitank



Bulk



Sunorb C+ Crystallising Sorbitol

Sunorb C+ Sorbitol is used in hard candies, coating, cakes&pastries, biscuits, fat filling, cream filling. Sunorb C+ Sorbitol is also used in creams & lotions, shampoos, dental hygiene, pharmaceutical applications, pharmaceutical tablets, medical syrups, printing, dressing, agents, finishing, leather applications, chemical mixes, polyurethane applications, sorbitan esters, isosorbide, polyether polyols, sorbitan stearates, alkyd resins, anodising chemicals for metals.

Characteristics

- Bulking agent / Suspending agent
- Reduced browning effect / Microbiological stability
- Sweetening agent / Sugar-free
- Low-calorie / Cooling effect
- Coating agent / Lyophilic
- Non toxic, non irritant and non cariogenic

Packaging Type: Tin Can, Plastic Barrel, IBC
Shelf-Life: 24 months

Physical and Chemical Properties:

	Min	Max
C+92		
Water Content	28	30
Sorbitol	91	94
Reducing Sugar	-	0,2
C+98		
Water Content	28	30
Sorbitol	97	100
Reducing Sugar	-	0,2



Sunorb Sorbitol Powder

Chewing gum, confectionery, hard candy, bakery products, chewable tablets, effervescent tablets, swallowable tablets, granules, pellets, polylurethane foam, aluminum etching, isosorbide production, used as plasticizing agent in coating/film forming applications, used as set retarder in construction sector, enzyme stabiliser, alkyd resin production

Characteristics

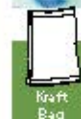
- Sugar free
- Excellent tableting properties
- Non cariogenic

Packaging Type: Kraft Bag

Shelf-Life: 24 months

Physical and Chemical Properties

	Min	Max
Water Content	-	1 %
Sorbitol	97 %	-
Reducing Sugars	-	0,2 %
Melting Point	95 - 98 °C	





SORSORB POWDER

SUNSORB POWDER IS WHITE, CRYSTALLINE POWDER OF PURE SORSORBOL.



Application Areas



Food Applications

Chewing gum, confectionery, hard candy, bakery products

Pharmaceutical Application

Chewable tablets, effervescent tablets, swallowable tablets, granules, pellets

Industrial Applications

Polyurethane foam, aluminum etching, isosorbide production, used as plasticizing agent in coating/film forming applications, used as setretarder in construction sector, enzyme stabiliser, alkyd resin production



Polyols

Maltitol Syrup

Maltitaste 75/55

Maltitaste 80/55

Maltitaste 85/55

Maltitaste 75/75

Maltitaste 85/75

Maltitaste 75/55 - 80/55 - 85/55 - 75/75 - 85/75

Maltitol

Maltitaste Maltitol used for hard candies, chewing gum, confectionery tablet, marshmallow, chocolate, jam, cakes & pastries, biscuits, cereal bar, ice cream, diary dessert, dried fruit, diet products, beverages, halvah, medical syrup, and construction chemicals.

Characteristics

- Low glycemic index / Low calorie natural sweetener
- No aftertaste / Low fermentability / Excellent heat stability
- Excellent crunch for coated chewing gum
- Controls texture, viscosity, crystallisation
- Non cariogenic
- Meets the requirements of USP/EP/BP
- It does not participate in the maillard reaction
- Extensive sweetness for 75/75



Packaging Type: Tin Can, Plastic Barrel, Metal Barrel, IBC, Flexitank, Bulk.
Shelf Life: 24 months

Maltitaste	75/55		80/55		85/55		75/75		85/75	
	min	max	min	max	min	max	min	max	min	max
Water Content	34	25	34	22	14.5	15.5	24.5	25	11.2	12.7
Maltitol	85	-	85	-	85	-	72	76	71	74
Reducing Sugar	-	0.2	-	0.2	-	0.2	-	0.2	-	0.2



Tin Can



Plastic Barrel



Metal Barrel



IBC



Flexitank



Bulk

Glucose & Glucose- Fructose Syrups

Glucose Syrup

Maltose Syrup SM 40 / SM 45D

High Maltose Syrup SM 50/ SM 55 / SM 60

Glucose Syrup SCG 38 / SCG 40 / SCG 60 / SM BISCOSE / SM BVG 52



SM 40 / SM 45D Maltose Syrup

SM 40 and SM 45D is used for making hard candies, toffee, jam, jellies, ice cream, marshmallow, confectionery, dressings, beverages, breakfast cereals, nutritional bars.

Characteristics

- Has a clear and viscous texture with lightly sweetened taste
- Provides microbial durability due to high osmotic pressure
- Provides crystallisation control in food products
- Controls viscosity, humidity, sweetness and color enhancement
- Provides desired stability of finished products
- Provides transparency and brightness in final products



Packaging Type: Tin Can, Plastic Barrel, IBC
Shelf-Life: 24 months

Physical and Chemical Properties:

	Min	Max
SM 40		
Brix (20° C)	82,5	84
DE	38	48
SM 45D		
Brix (20° C)	82,3	83,4
DE	46	52



SM 50 / SM 55 / SM 60 High Maltose Syrup

SM 50, SM 55 and SM 60 is used for making hard candies, toffee, jam, jellies, ice cream, caramel, confectionery, nougat, fondant, marshmallow, and sauces.

Characteristics

- Provides texture, viscosity, volume, glossiness
- A clear and colorless syrup with lightly sweetened taste
- Has low moisture absorption and high moisture retention
- Moderates sweetness
- Provides crystallization control and consistency

Packaging Type: Tin Can, Plastic Barrel, IBC
Shelf-Life: 24 months

Physical and Chemical Properties:

	Min	Max
SM 50		
Brix (20° C)	82,5	84
DE	40	48
SM 55		
Brix (20° C)	81	83
DE	40	45





SCG 38 / SCG 40 Glucose Syrup

SCG 38 and SCG 40 are used for making cakes, hard candies, confectionery, toffee, jellies, ice cream, fondant, chewing gum, nougat, bakery products, biscuits, caramel, Turkish delight, halvah, jam fillings, marshmallow, breakfast cereals, snacks.

Characteristics

- Provides glossiness
- Has low to moderate sweetness
- Provides desired stability of finished products
- Increases chewiness by decreasing the hardness of the products
- Preserves the shape of the products during cutting, packaging and storing processes
- Provides high transparency and brightness in final product

Packaging Type: Tin Can, Plastic Barrel, IBC

Shelf-Life: 24 months

Physical and Chemical Properties:

	Min	Max
SCG 38		
Brix (20° C)	82	84
DE	35	38
SCG 40		
Brix (20° C)	82	84
DE	38	44



Tin Can



Plastic barrel



Metal barrel



IBC



Flexitank



bulk

SCG 60 Glucose Syrup

SCG 60 is used for making cakes, confectionery, jam, ice cream, bakery products, biscuits, halvah, marshmallow, and ketchup.

Characteristics

- Provides glossiness
- Provides desired stability of the finished products
- Preserves the shape for further processing
- Provides transparency and brightness in final product



Packaging Type: Tin Can, Plastic Barrel, IBC

Shelf-Life: 24 months

Physical and Chemical Properties:

	Min	Max
SCG 60		
Brix (20° C)	80,5	83
DE	57	64



Tin Can



Plastic barrel



Metal barrel



IBC



Flexitank



bulk

SM BISCOSE Glucose Syrup

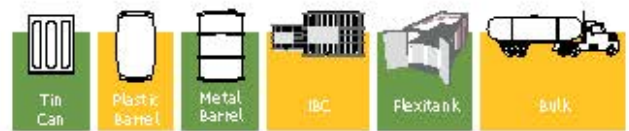
SM Biscose is special for biscuit applications.

Characteristics

- Provides unifying and homogeneous feature in biscuit receipt
- Provides the desired sweetness and crispness in the biscuit, extends the shelf life of the product



Packaging Type: Tin Can, Plastic Barrel, IBC		
Shelf-Life: 24 months		
Physical and Chemical Properties:	Min	Max
SM BISCOSE		
Brix (20° C)	82	84
DE	80,7	81,7



SM BVG-52 Glucose Syrup

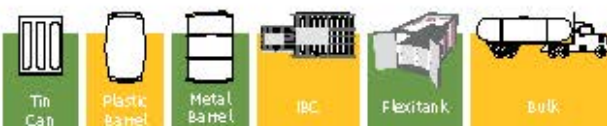
SM BVG-52 is colourless, liquid and viscous glucose syrup.

Characteristics

- Has special sugar profile
- Enhances shelf life
- Provides stability of the finished products
- Provides high transparency and brightness in final product

Packaging Type:
Shelf-Life: 24 months

Physical and Chemical Properties:	Min	Max
SM BVG 52		
Brix (20° C)	78,5	79,5
DE	50	55



Glucose & Glucose-Fructose Syrups

Glucose-Fructose Syrup

Glucose-Fructose Syrup SBF 10 / SRF 30 / SMF 42



SBF 10 Glucose-Fructose Syrup

SBF 10 Glucose-Fructose Syrup is used in sherbet of baklava which is a dough based dessert.

Characteristics

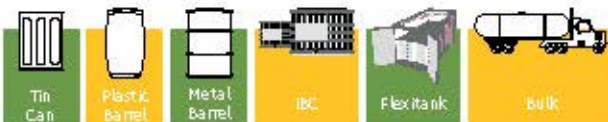
- Provides desired stability of the finished products
- Prevents sugar crystallisation in baklava
- Increases brightness in final products
- Prolongs the shelf life
- Provides easy application
- Provides crispy and crunchy texture

Packaging Type: Bucket

Shelf-Life: 24 months

Physical and Chemical Properties:

	Min	Max
Brix (20° C)	78	80
DE	68	0





SRF 30 Glucose - Fructose Syrup

SRF 30 Glucose-Fructose Syrup is used in making jam, halvah, Turkish delight, confectionery, ice cream, jellies, bakery products, marmelade.

Characteristics

- Has a clear, colorless texture
- Provides desired stability of the finished products
- Increases brightness in final products
- Improves texture



Packaging Type: Tin Can

Shelf-Life: 24 months

Physical and Chemical Properties:

	Min	Max
Brix (20° C)	78	81
DE	65	0

SMF 42 Glucose-Fructose Syrup

SMF 42 Glucose-Fructose Syrup is used in making fruit juices, soft drinks, biscuits, bakery products, cakes, caramel, sauce, ketchup, margarine, and tobacco.

Characteristics

- Has a clear and colorless texture
- Increases brightness in final product
- Prevents microbiological activity
- Prolongs shelf life
- Has a non-masking effect
- Improves mouth-feel and sweetness, helps to achieve varying levels of caramelized color



Packaging Type: Tin Can

Shelf-Life: 24 months

Physical and Chemical Properties:

	Min	Max
Brix (20° C)	69	71
DE	-	-



oligodex

Low DE Glucose Syrups

Oligodex Low DE Glucose Syrup

Oligodex-18 (Maltodextrin Syrup)

Oligodex-18L (Low Brix Maltodextrin Syrup)

Oligodex-21 (Low DE Glucose Syrup)

Oligodex-24 (Low DE Glucose Syrup)

Oligodex-28 (Low DE Glucose Syrup)

Oligodex® is a low DE (Dextrose Equivalent), thickened syrup (%80 dry substance) developed by modulating the «Dextrose Equivalent» and sugar profile of starch hydrolizate.



Oligodex 18 / Oligodex 18L Maltodextrin Syrups

OLIGODEX-18® shows application-specific superior properties in almost every application where glucose syrups and sugar are used.

It has low Maillard reactivity and is resistant to heat and acidic conditions. Its relative sweetness is 25% versus sucrose in 10% solution.

It provides same caloric value like other carbohydrates but gives less osmotic pressure after ingestion.

It also provides a sense of refreshment due to the low sweetness.

It offers new functions and its benefits have been tested and proven in different food products.

OLIGODEX-18®, which is considered to be a partially undigested and absorbed substrate in the small intestine, has a prebiotic effect by selectively encouraging the growth of useful bacteria and/or the activity when it reaches the colon.

It has the ability to improve intestinal flora.



Functional Properties

- It is a bulking agent, provides texture optimization and stability.
- Prevents crystallization.
- Has neutral taste, does not mask other tastes with its low sweetness feature.
- Due to its neutral taste, it helps sugar and aromas to come to the fore.
- Provides superior texture properties in the gum.
- Has low moisture absorption.
- Suitable for spray drying process.
- Suitable for hard candies and jellies.
- Has the effect of lowering the freezing point of frozen desserts / ice cream.

Applications

- Bakery products •Caramels, hard candies, and jelly like confectionery products
- Coffee creams •Frozen desserts •Chewing gum •Ice cream •Jelly •Bars

Packaging Type: Tin Can, Plastic Barrel, IBC		
Shelf-Life: 24 months		
Physical and Chemical Properties:	Min	Max
Oligodex 18		
Brix (20° C)	75	78
DE	-	20
Oligodex 18L		
Brix (20° C)	68	72
DE	-	20





Oligodex 21 / Oligodex 24 / Oligodex 28 Glucose Syrups

OLIGODEX® shows specific and superior properties in almost every application where glucose syrup and sugar are used.

Oligodex 21-24-28 products are low DE liquid glucose syrups. SUNAR has designed an innovative product called **Oligodex®**.

The product contains,

- Unique and controlled carbohydrate spectrum.
- Low levels of mono and disaccharides. (below %10)
- High levels of oligosaccharides that accumulate about moderated polymerization degree (Dp).
- ✓ This carbohydrate spectrum allows more comfortable control of overall sweetness, superior texture and browning control in cake formulations.

It has the ability to improve in testinal flora.

Nutritional and Sweetness Properties

- ✓ Oligodex has low Maillard reactivity, high temperature and acid stability.
- ✓ Relative sweetness is %25 against sucrose in a %10 solution.
- ✓ Like other carbohydrates, it provides 4 kcal/g. However it gives less osmotic pressure after ingestion.
- ✓ It also provides a feeling of freshness due to low sweetness.
- ✓ Oligodex offers new functions and its benefits have been tested in different food products.

Functional Properties

- Bulking agent, texture/mouth feeling optimization
- Anti-crystallization agent
- Emphasizes the taste of sugar and aroma due to its neutral taste
- Texture stability
- Gelatine replacer for jelly applications
- Good workability
- High hygroscopicity and good texture properties in chewing gum applications
- Low Maillard reactivity
- Suitable for spray drying applications
- Suitable for hard candy applications
- Gives lower freezing point in frozen desserts and ice creams
- High color stability



Applications

- Sweet baking products • Caramel, hard candy and jelly type confectionery products
- Coffee creamers • Frozen desserts • Chewing gum • Ice cream • Jelly

Packaging Type: Tin Can, Plastic Barrel, IBC		
Shelf-Life: 24 months		
Physical and Chemical Properties:	Min	Max
Oligodex-24		
Brix (20° C)	77	80
DE	22	24
Oligodex-28		
Brix (20° C)	76	81
DE	25	30





What provides Oligodex?

- **Oligodex**® is an ideal source of energy in sport nutrition and sport drinks as well as in clinical nutrition with its low sweetness and low osmotic pressure.
- It can be used in cakes to modulate the sugar spectrum and support the soft texture.
- **Oligodex**® provides lower hygroscopicity and less cold flow in confectionery applications.
- It can also affect the tissue positively with allowing the reduction in hydrocolloids.
- It reduces formulation costs.
- In spray drying, with low DE, low levels of DP1 and DP2, **Oligodex**® is enable for spray drying at high dry matter values and increases efficiency.



Starches & Derivatives

Native Corn Starch

Corn Starch

Baklava Starch



Native Corn Starch

Corn Starch is used for making instant soups, puddings, Turkish delight, baklava, bakery products, dough based dessert, sauce, custard powder and meat products.

Characteristics

- White native and odorless corn starch
- Provides easy rolling of pastry and baklava dough and prevents tear in the dough
- Increases brightness of final products
- Prevents cracking on the surface of pudding
- Has a high performance in different temperature

Packaging Type: Kraft Bag and Big Bag

Shelf-Life: 24 months

Physical and Chemical Properties	Min	Max
Moisture	-	13
Ash(% on dry basis)	-	0,3
pH	5	7
SO2(ppm)	-	10
Protein(%)	-	0,5



Baklava Starch

Characteristics

- Due to the perfect dusting behavior, Sunar Baklava Starch spreads homogeneously over phyllo dough
- Sunar Baklava Starch stabilizes the humidity level of phyllo dough and prevents it from tearing
- Crispy feeling for every piece of baklava is the same after cooking, thanks to the uniform spread of Sunar Baklava Starch

Packaging Type: Kraft Bag and Big Bag

Shelf-Life: 24 months

Physical and Chemical Properties	Min	Max
pH	5	7
Moisture	-	13



Starches & Derivatives

Food Grade Modified Starch

Moulding Starch SM M003/ M006/ M009

SMT Gum 0515/ 70100



SM M003/ M006/ M009 Moulding Starch

Moulding starch is obtained from native corn starch. It is odorless and tasteless and used to form a mold in the confectioner.

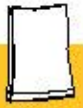
Characteristics

- The mold formed during the production of jelly has a very low tendency to disperse and keep its shape
- Moulding starch has low moisture content, so it absorbs the moisture of jelly and helps jelly to be ready in a short time
- Because of being tasteless, it has no tendency to give taste to the jelly
- The molding formation performances differentiate according to the oil content to provide better shape and the application conditions

Packaging Type: Kraft Bag

Shelf-Life: 24 months

Physical and Chemical Properties	Min	Max
Moisture	8,5	10,5
pH	5	7



Kraft Bag

SMT GUM 0515/70100 Thin Boiling Starch

Modified starch widely used in soft candies, chewing gums and jellies as gelatin substitute.

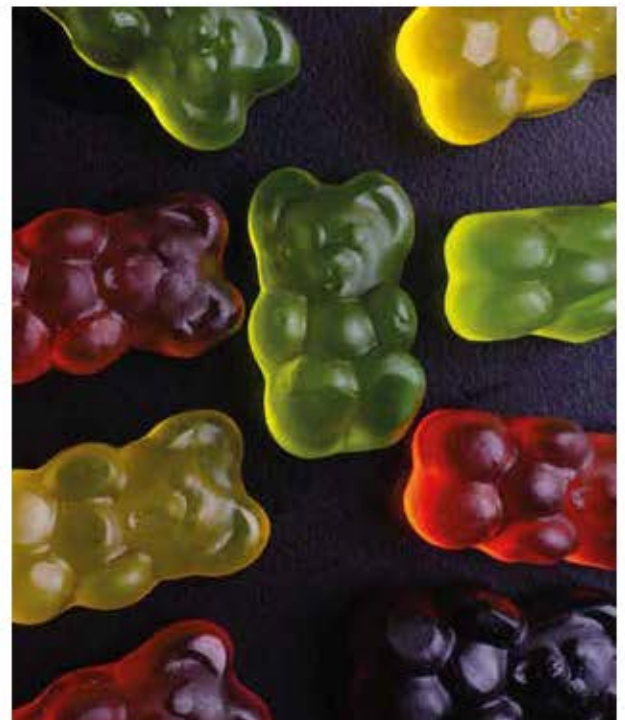
Characteristics

- Improves gelling structure
- Supply soft and low viscous gel
- Gives hardness and opacity without affecting elasticity and brittleness
- The molding formation performances differentiate according to their modification level to provide better shape and the application conditions

Packaging Type: Kraft Bag and Big Bag

Shelf-Life: 24 months

SMT GUM	70100		0515	
	min	max	min	max
Moisture	10	13	10	13
Protein (%)	-	0.4	-	0.4
pH	5	7	5	7
Viscosity (cp)	70	100	5	15



Kraft Bag



Big Bag

Starches & Derivatives

Modified Industrial Starch

Thin Boiled Modified Starch SMT 2216/ 2226/2236/2246/ 2246H/ 2260

Cationic Starch SMC 3000H/ 3000S/ 3000HH/ 3000 Yüksek DS

Oxidized Starch SMO C20/ SMO C50/ SMO C80/ SMO C110

Cross-linked Modified Starch SMBOND



SMT 2216 / 2226 / 2236 / 2246 / 2246H / 2260

Thin-Boiled Starch

Modified starches widely used in textile and paper industries.

Characteristics

- Provides strength to yarn during sizing
- Can be removed with enzymes after weaving
- Decreases the loss of paper filling in the paper industry
- Improves paper strength and surface quality
- Provides high cohesiveness in plaster board production
- Extends the life of production machine
- Can be provided alternative viscosities according to customer needs

Packaging Type: Kraft Bag and Big Bag

Shelf-Life: 24 months

Physical and Chemical Properties	Min	Max
pH	5	7
Moisture	10	13
Viscosity (cp)		
2216	900	1100
2226	500	700
2236	80	110
2246	5	15
2246H	15	25
2260	70	100



SMC 3000H/ SMC 3000S/ SMC 3000HH SMC HC 3065/3075/3085

Cationic Starch

SMC-3000 Cationic Starch is primarily used in paper industry.

- Characteristics
- Provides formation of a strong link connection by laying bridges between cellulose strings as a result of cationic charge
- Increases the strength and durability of paper
- Provides quick drying and high filling performance when applied
- Compatible with synthetic resins and other chemical supplements
- widely used in paper industries
- Serves special customer demands with changing cationic charges

The water retention is supported by the cationic starch

Packaging Type: Kraft Bag and Big Bag

Shelf-Life: 24 months

Physical and Chemical Properties	Min	Max
pH	5	7,5
Moisture	-	13
DS		
SMC 3000 S	0,041	0,047
SMC 3000 H	0,048	0,059
SMC 3000 HH	0,060	0,068
SMC HC 3065 DS	0,069	0,081
SMC HC 3075 DS	0,082	0,094
SMC HC 3085 DS	0,096	0,108



SMO SMO C20/ SMO C50/ SMO C80/ SMO C110 Oxidized Starch

SMO Oxidized Starch is primarily used in paper and textile industry.

Characteristics

- At print-press applications, it provides perfect binding between the paint and surface
- Improves performance of paper quality tests. Increases tensile strength of paper (bursting strength, tearing and torsion tests)
- For textile industry, Sunar Oxidized starch penetrates between fibers and increases elasticity. Due to the increased strength, the fibers have a lower tendency to break off. Thus the weaving speed can be increased
- Unlike normal starches, oxidized starch forms a film on fiber surface. Due to this film layer, oxidized starch provides minimum dusting
- Extends production machine life

Packaging Type: Kraft Bag and Big Bag
Shelf-Life: 24 months

Physical and Chemical Properties	Min	Max
pH	5	7
Moisture	-	13
Viscosity (cp)	SMO-C20	20
	SMO-C50	50
	SMO-C80	80
	SMO-C110	110
	200	



SM BOND Cross-linked Starch

SMBOND Cross-linked Modified Starch is used in making glue for corrugated board sector.

Characteristics

- Provides resistance against mechanical stress due to viscosity stability in corrugated boards
- Provides the glue to be prorated and transferred homogeneously on the paper
- Enhances the viscoelastic structure of the glue which prevents overspill and eventually decreases the amount of consumption
- Provides quality improvement and high speed production due to its superior bonding power
- Provides to attain moisture balance quickly which leads to manufacture of flat layers of corrugated carton with less production lost

Packaging Type: Kraft Bag and Big Bag
Shelf-Life: 24 months

Physical and Chemical Properties	Min	Max
pH	5	7,5
Moisture	-	13



Starches & Derivatives

Dextrin

Industrial Grade Dextrin M-90 / S-2

Food Grade Dextrin



M90/ S2 Industrial Grade Dextrin

Dextrin's application areas are coal, gypsum, textile, bracket, tube winding, lamination, wood pellet, charcoal pellet, paper bag banding, side gluing of corrugated cardboard, bonding agent in the preparation of sand molding and envelop production.

Characteristics

- Having a high adhesive quality
- Water soluble
- Having a low viscosity
- Can be used at higher solid levels than native or modified starch
- Create stronger bonds, more tack and faster-drying properties than pastes made from unmodified starch



Packaging Type: Kraft Bag and Big Bag
Shelf-Life: 24 months

Physical and Chemical Properties	Min	Max
pH	-	4
Moisture	-	7
Solubility (%)	M-90	100
	S-2	100



SM FDEX 80100 Food Grade Dextrin

Characteristics

- Water soluble
- Alternative source of soluble fiber
- Sugar reducer
- Replace sugar by offering option to reduce sugar and to achieve caloric reduction
- Fat replacer
- Thickener
- Binder
- Used as adhesive in food
- Used to increase consistency
- Low and stable viscosity
- Improves mouthfeel
- Masks metallic flavors
- Bright appearance and color

Packaging Type: Kraft Bag and Big Bag
Shelf-Life: 24 months

Physical and Chemical Properties	Min	Max
pH	3	4,5
Moisture	-	7
Solubility (%)	90	-
Protein (%)	-	0,6
Viscosity(cP)	800	1500
SO2(ppm)	-	10
Above 150 micron sieve(%)	-	10



Sodium Gluconate

Sodium Gluconate

Liquid Sodium Gluconate(%40)

Powder Sodium Gluconate



Liquid Sodium Gluconate(%40) Powder Sodium Gluconate Sodium Gluconate

Characteristics

- Good solubility in water
- Odorless, yellowish powder
- Non-corrosive and non-toxic
- Biodegradable and environment friendly
- Heat stable
- Has a retarding effect on concrete
- Forms stable complexes with metals at wide pH ranges
- It is an alternative to synthetic complexing (chelating) agents
- Prevents corrosion and lime formation



Applications

- It increases the workability and strength of concrete with its setting retardant and plasticizer properties.
- It preserves the workability of concrete even during long distance transports with concrete mixers and prevents water loss.
- It is a suitable cleaner for metal and glass surfaces with its chelating (binding metal ions) and noncorrosive properties.
- It is an environmentally friendly alternative to synthetic chelating agents such as EDTA, NTA and THPS.
- It acts as a softener in water treatment.
- It prevents the reaction of hard water ions with alkali in alkaline detergents. This feature increases the effectiveness of the cleaning product.
- It can be used in many industrial applications such as agricultural chemicals, construction chemicals, textile chemicals, paints, inks.

Packaging Type: 25 kgs PE Bag, 1000 kg Big Bag

Shelf Life: 2 years

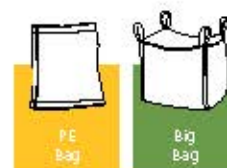
Physical and Chemical Properties:

Liquid Sodium Gluconat 40

	Min	Max
Brix (20° C)	43	46
pH	5	7,5

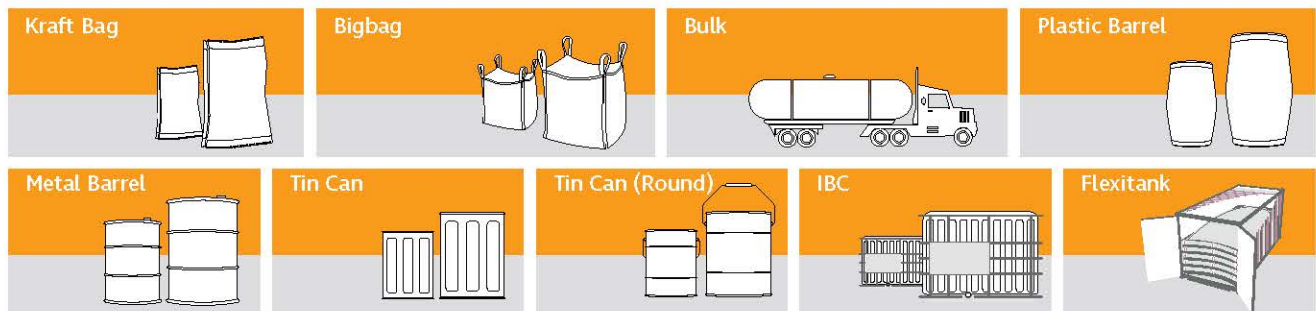
Powder Sodyum Gluconata

	Min	Max
Moisture (%)	-	1,0
Sodium Gluconate (%)	99,8	-
Reducing Sugar (As D-BITAC-EIN-001-14178) (%)	-	0,7
pH	5,5	7,5



Packaging

Packaging Type	Product Type	Weight(kg)	Weight Per Pallet (kg)
Kraft Bag	Starches, Modified Starches, Dextrins	25	25*60 =1.500
Polypropylene Bag	Corn Gluten Meal	50	
Bulk	Glucose-Fructose Syrups, Glucose Syrups	25.000	
Bulk	Sorbitol, Maltitol	25.500	
Bigbag	Starch	1000	1.000
Bigbag	Starch	850	850
Plastic Barrel	Glucose Syrup	300	300*4=1.200
Plastic Barrel	Glucose Syrup	320	320*4=1.280
Plastic Barrel	Glucose-Frucose Syrup	280	280*4=1.120
Plastic Barrel	Sorbitol, Maltitol	300	300*4=1.200
Metal Barrel	Glucose Syrup	300	300*4=1.200
Metal Barrel	Glucose - Fructose Syrup	280	280*4=1.120
Tin Can	Glucose-Fructose Syrup	24	24*60=1.440
Tin Can	Glucose Syrup, Maltitol	25	25*60=1.500
Tin Can	Sorbitol	23	23*60=1.380
Tin Can (Round)	Glucose Syrup	25	25*36=900
IBC	Glucose Syrup	1.300	1.300
IBC	Sorbitol	1.300	1.300
IBC	Maltitol	1.400	1.400
Flexitank	Glucose-Fructose, Glucose, Maltitol	22.500	
Flexitank	Sorbitol	23.000	



Container

Product			Bulk/Pallet	Packaging Type	Weight(Kg)	Quantity	Total Weight(Kg)
20 DC Container	STARCH AND DERIVATIVES	Starch	Pallet	Kraft Bag	25	540	13.500
		Starch	Bulk	Kraft Bag	25	840	21.000
		Thin Boiled Modified Starch	Bulk	Kraft Bag	25	800	20.000
		Cationic Starch Cross Linked Starch	Bulk	Kraft Bag	25	760	19.000
		Oxidized Starch	Bulk	Kraft Bag	25	780	19.500
		Dextrin	Pallet	Kraft Bag	25	540	13.500
		Dextrin	Bulk	Kraft Bag	25	840	21.000
	GLUCOSE SYRUPS	Glucose Syrups	Bulk	Tin can	25	864	21.600
		Glucose Syrups	Pallet	Tin can	25	600	15.000
		Glucose Syrups	Pallet	Metal Barrel	300	80	24.000
		Glucose Syrups	Pallet	Closed-Head Drum	300	80	24.000
		Glucose Syrups	Pallet	Closed-Head Drum	320	80	25.600
		Glucose Syrups	Bulk	FlexiTank	22.500	1	22.500
		Glucose-Fructose Syrup (Smf42)	Pallet	Metal Barrel	280	80	22.400
	Maltose Syrups	Bulk	FlexiTank	22.500	1	22.500	
	POLYOLS	Sorbitol	Pallet	Tin can	23	600	13.800
		Maltitol	Pallet	Tin can	25	600	15.000
		Sorbitol/Maltitol	Pallet	Closed-Head Drum	300	80	24.000
		Sorbitol	Bulk	Tin can	23	864	19.872
		Maltitol	Bulk	Tin can	25	864	21.600
		Sorbitol	Bulk	FlexiTank	23.000	1	23.000
Maltitol		Bulk	FlexiTank	22.500	1	22.500	
40 DC Container	STARCH AND DERIVATIVES	Cross Linked Starch	Pallet	Kraft Bag	25	1.080	27.000
		Starch Cationic Starch Oxidized Starch Dextrin Thin Boiled Modified Starch	Pallet	Kraft Bag	25	1.100	27.500
		Starch	Pallet	Big Bag	850	32	27.200
		Cationic Starch	Pallet	Big Bag	1.000	21	21.000
		Cationic Starch Oxidized Starch Thin Boiled Modified Starch	Pallet	Big Bag	850	32	27.200
		Glucose Syrups	Pallet	Tin Can	25	1.060	26.500
	GLUCOSE SYRUPS	Glucose Syrups	Pallet	Round	25	792	19.800
		Glucose Syrups	Pallet	Round	25	1.056	26.400
		Glucose Syrups	Pallet	Open Top Drums	300	80	24.000
		Glucose Syrups	Pallet	Open Top Drums	300	80	24.000
	POLYOLS	Sorbitol	Pallet	Tin Can	23	1.080	24.840
		Maltitol	Pallet	Tin Can	25	1.080	27.000
		Sorbitol	Pallet	Ibc Tank	1.300	20	26.000
		Maltitol	Pallet	Ibc Tank	1.400	19	26.600
Corn Gluten Meal	Bulk	Polypropylene Bag	50	540	27.000		



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