Solutions for sweet SUCCESS

Sugar confectionery solutions



Cargill, your partner for co-creating growth in Sugar Confectionery

Leverage our passionate sugar confectionery experts with deep ingredient, application and category knowledge. We're here to support you by developing and testing fully integrated solutions that deliver consumer-pleasing treats.

Our secrets to your sugar confectionery success:



Insights-driven innovation:

Complement your insights with our research into market trends and consumer needs to develop consumer-pleasing products



Broad solutions portfolio:

Leverage our broad Cargill ingredient portfolio and our partnership to deliver fully integrated solutions



Enhanced expertise:

Tap into reliable, knowledgeable and highly skilled sugar confectionery experts and stateof-the-art facilities that are close at hand

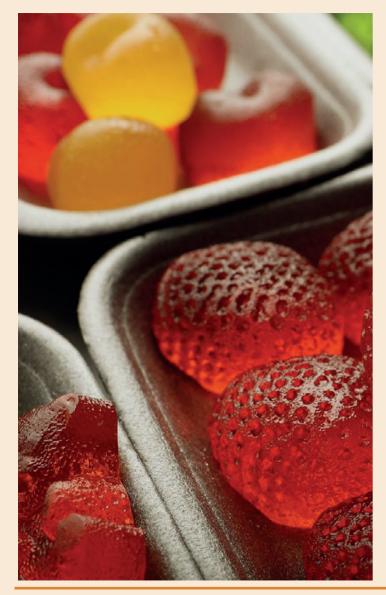


Accelerated sustainability:

Advance your sustainability goals by leveraging our sustainability actions and commitments across the supply chain

Trusted supplier:

Scale, grow and thrive thanks to global supply chains and alternative solutions to help manage your costs



Sweeteners

Cargill offers one of the broadest sweetness portfolios, ranging from full- to no-calorie options, and high intensity sweeteners to offer choice to customers and consumers. Whether you're creating a new, full-sugar product or (re-)formulating for balanced nutrition, we offer a complete toolbox of solutions for sweet success.

Product Type/Name Features & Benefits **Full-calorie sweeteners** 4 kcal/q. Bulk sweeteners **Glucose syrups** · Low to moderate relative sweetness C☆Sweet® · Medium to high viscosity, body and mouthfeel · Helps to adjust sugar recrystallization · Moderate to high relative sweetness Glucosefructose svrup · Cost-effective sugar replacement C☆TruSweet® · Non crystallizing at ambient temperature · High relative sweetness, typical sweet taste **Dextrose** C☆Dex® · Flavor enhancement · Monohydrate or anhydrous powder, variety of

- Monohydrate or anhydrous powder, variety of particle size distributions
- · Quick energy release
- · Good solubility

Silver level applicable to Europe only. FSA is a standardized reference developed by SAI Platform, a food-industry organization dedicated to advancing sustainable agriculture in the food chain. It's designed to help producers assess their sustainable practices and support manufacturers in sourcing sustainably grown products. ISO/TS 19657:2017 (https://www.iso.org/news/ref2254.html)

C * Sweet[®] & C * TruSweet[®]

Glucose-, fructose and glucosefructose syrups

Cargill offers an extensive range of high-quality, full-calorie sweeteners based on a unique blending concept. Our flexible processes enable us to produce tailor-made glucose syrups and glucose-fructose blends, with functional and sweetness properties customized to suit individual customer needs. Our syrups are ready to use, can help regulate texture along shelf life and can offer cost-competitive sucrose replacement opportunities.

Cargill can offer sweeteners produced from sustainably sourced corn and wheat, benchmarked at Silver level.¹



Product Type/Name Features & Benefits

Low- and no-calorie sweeteners¹

2.4 to 0 kcal/g, Bulk sweeteners, Sugar and calorie reduction, Tooth-friendly

Isomalt	 Mild relative sweetness
lsoMaltidex®	· Clean, sucrose-like taste profile
	· Reduced stickiness – unique for use in unwrapped candy
Maltitol	· Similar sweetness, cooling effect and behavior to sucrose
Maltidex®	Boosts fruity flavors
	Good humidity and crystallization control
	· Higher viscosity leading to better processability
Mannitol	Milder relative sweetness
C☆Mannidex®	· Clean, cool and refreshing taste
	Reduces stickiness in candy
	Improves elasticity
Sorbitol	Milder relative sweetness
C☆Sorbidex®	· Cost-effective
	 Good humidity and moisture control properties
	· Balances and stabilizes plasticity and mouthfeel
Erythritol	· Zero calories
Zerose®	Sweetness and taste profile close to sucrose
	· Synergistic with high-intensity sweeteners, masks off-flavors
	 Strong cooling effect and fast crystallization
	 Adds smoothness and body
High-intensity sweetene	ers
0 kcal/g, Enables sugar	and calorie reduction/ replacement

Stevia1	High Purity Reb A from the stevia leaf	
Truvia®	Cost-effective sugar reduction	
	· Clean, sweet taste	
ViaTech®	 Proprietary, synergistic blends of Steviol Glycosides designed for optimal taste and sweetness 	
	Clean taste allows for deeper sugar reduction	
	Reduces bitterness and licorice off-note	
	 Reduces bitterness and licorice off-note 	

Stevia

Cargill scientists have spent over 300,000 hours studying the unique properties of the stevia leaf.

Our broad portfolio of stevia sweeteners, proven formulation expertise and deep market insights translate into your competitive advantage. A rigorous specification process helps to ensure consistent product quality – regardless of growing season– for your end-products. Cargill's agricultural stevia program has been benchmarked at Silver level by Farm Sustainability Assessment (FSA) 3.0^2 – becoming the first stevia producer in the industry with our entire grower network evaluated that achieved this distinction.

Cargill.com/food-bev/emea/sweeteners/stevia





1Polyols and steviol glycosides are permitted in most energy reduced foods or foods with no added sugars under "quantum satis" or under conditions of use. Foods with over 10% polyol content must carry a label "Excessive consumption may cause laxative effects" (EU Reg. 1333/2008 on food additives).

2 FSA is a standardized reference developed by SAI Platform, a foodindustry organization dedicated to advancing sustainable agriculture in the food chain. It's designed to help producers assess their sustainable practices and support manufacturers in sourcing sustainably grown products. ISO/TS 19657:2017 (https://www.iso.org/news/ref2254.html) fsa





Texturizers

Second only to taste is sensory enjoyment. At Cargill, we couple our texture and emulsification solutions with our in-depth application and technical expertise, to help address your most challenging formulation needs. Whether you're rebuilding body and mouthfeel while reducing sugars or designing palate-pleasing textures, we offer a complete toolbox of solutions for sweet success.

Product Type/Name Features & Benefits

Starch		
Native Moulding	ng ·	Enables clean release from depositing moulds
Starches Corn C☆CleanSet®		Enhances tray printing by reducing starch adhesion to the mould
		Ensures that shape is retained prior to depositing
		Premium and stabilized quality, mogul line manufacture reliable
Native and Modified Gelling Starches Corn, Tapioca C☆Set®, C☆ClearSet®,		Creates opaque gels, with a variety of textures from soft/ flexible to hard, depending on the dosage rate an the exact starch
C☆AraSet®, C☆ClearSet®, C☆AraSet®, C☆	•	Easy to deposit – low hot viscosity
Stretch®		Low setting temperature
Modified Coating Starch Tapioca	•	Specifically designed for replacing gum Arabic when used as a pre-coating agent or in fat-based fillings before coating
C☆AraSet®		Facilitates cooking and depositing of confectionery jellies and gums: easy dispersion, neutral taste, lower viscosity, high clarity
		Supports the creation of a wide range of textures (i.e., from strong to soft)

· Sugar-free compatible

Moulding starches

Cargill is uniquely positioned to help you optimize your starch gum production:

- Make use of our moulding starch service analysis for our customers and industrial partners, to help you understand different starch structures and behaviors and help detect and prevent problems
- Be advised on the suitable grade of moulding starch to be used as processing aid

The Cargill **CleanSet® series** is a premium-quality moulding processing aid with superior performance compared to native corn starch which helps to develop the different shapes and sizes of the confectionery products according to your requirements.





Product Type/Name	Features & Benefits		
Pectin			
Pectin UniPECTINE®	Label-friendly, familiar thickening and gelling agent, sourced from citrus peels or apple pomace		
	\cdot Can be used as an alternative to gelatin, to formulate plant-based solutions		
	· Characteristic short bite and clean flavor release		
	\cdot Higher melting point helps prevent them from sticking or melting		
	 Supports sugar reduction by adding back the mouthfeel and richness that are lost when sugar is removed 		
Carrageenan Satiagel®	 Water soluble polysaccharides extracted from red seaweeds with thickening, stabilizing and gelling properties 		
	\cdot Variety of textures can be created, from very soft and elastic to firm and brittle		
	Fast gelling as soon as the temperature decreases		
Lecithin			
Fluid Lecithin	Label-friendly emulsifier		
Soy Rapeseed (GM/NGM) and Sunflower	Provides excellent emulsifying properties		
Rapeseed	Reduces surface tension		
Organic Soy Topcithin®	Promotes even blending		
Leciprime Emulfluid®	Improves texture & mouthfeel		
	Reduces stickiness		
	Improves chewability		

UniPECTINE®

Cargill's broad range of high-quality pectin solutions is designed to meet texture and functional needs in your target applications.

Our solutions include options that offer functionality in both acid and neutral environments, lower and higher sugar concentrations, as well as high-temperature processing. Our technical experts are right there with you to unlock the optimal level of gel strength and viscosity needed to deliver creative confectionery products.

The right pectin to meet your specific needs — a one-stop pectin shop for formulation success

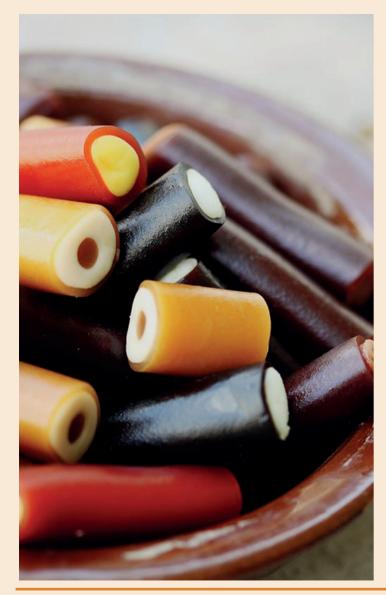
Consistent product quality and full controllability for the targeted (sub) application, giving you peace of mind

Reliable pectin supply allowing you to expand and plan for the future Dedicated application and technical experts to help you unlock the best out of pectin's possibilities

Wide ingredient offer and formulation knowledge beyond pectin to take your final product even further

Cargill.com/emea/pectin





Sugar confectionery solutions

Plant proteins

Modern-day consumers have high expectations for sugar confectionery. Not only must these products taste great; increasingly, shoppers look to satisfy a complex array of goals around health and nutrition. Proteins are an important nutritional source supplying the body with essential amino acids that it cannot synthesize on its own. Beyond nutrition, these affordable, plantsourced proteins provide many functional benefits, while their neutral taste profile makes them easy to incorporate in a variety of proteinenriched offers or plant-based sugar confectionery.

Product Type/ Features & Benefits Name

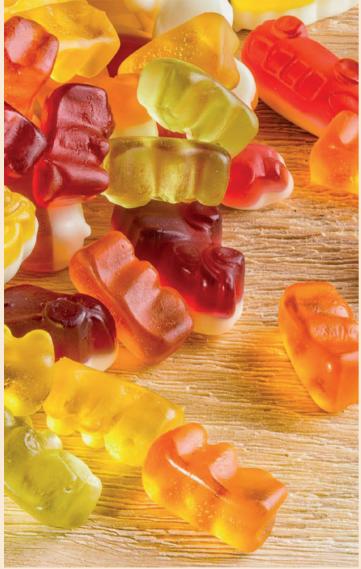
Plant proteins

Pea Protein · 80% protein content Isolates · Can enable source Hydrolysates

of/ high in protein claims

- Similar aeration properties as gelatin, enabling a softer texture
- · Can support plantbased formulation
- · Sustainability benefits





Fibers

Many consumers struggle to reach the daily recommend fiber intake levels. That is why Cargill is offering fortification options that can help support consumers to close the fiber gap, but that can also offer functional benefits on top.

Product Type/Name	Features & Benefits	
Soluble fiber		-
Soluble corn and wheat fiber	 Supports fiber enrichment thanks to its high fiber content, enabling sugar and calorie reduction and/or Nutri-Score improvement 	
	Low color and off-taste	
	 Can offer improved stability, easy handling, and scalability 	
	 Available in both powder and liquid forms 	
Functional fiber		
Citrus fiber	 Supports fiber enrichment thanks to its intrinsic balanced mix of 40% soluble fiber and 60% insoluble fiber, enabling Nutri-Score improvement Can help with texture enhancement: thickening, texturizing, binding, bulking & emulsification boosting 	

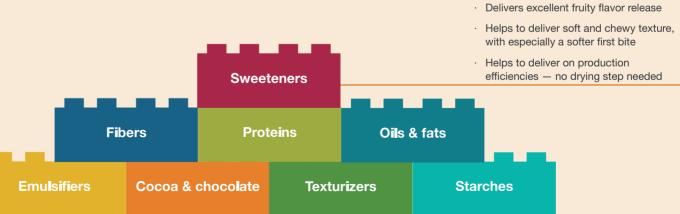
Sugar confectionery solutions



INFUSE by Cargill™ Functional systems

Blended ingredient solutions for winning on-trend products

Under our INFUSE by Cargill[™] service offering we provide blended solutions to help fast forward your product development. We bring together Cargill's extensive ingredient portfolio and our 50+ years' experience in blending functional solutions. We can tailor the exact solution to your needs. Explore some of our building blocks for your product development:



	Product Type/Name	Features & Benefits
	Gelatin replacement blend	
_	Gelogen [®] PG 352	 Ingredient blend consisting of carrageenan and dextrose
		 Plant-based solution for gelatin replacement
		Helps to deliver chewy, elastic texture with a strong first bite
		Cost-friendly solution
	Flanogen [®] PG 463	 Ingredient blend consisting of corn starch and carrageenan
		 Plant-based solution for gelatin replacement
nt		 Helps to deliver soft texture, good bite and elasticity
al		Cost-friendly solution
u -	Lygomme [®] PM 600	 Ingredient blend consisting of pectin and pea protein
		 Plant-based solution for gelatin replacement
		· Delivers excellent fruity flavor release
		Helps to deliver soft and chewy texture with especially a softer first bite
rs		 Helps to deliver on production efficiencies — no drying step needed
;	Oils & fats	





Sugar confectionery solutions

Cocoa and chocolate

Cargill's global portfolio of quality cocoa and chocolate ingredients can help you create delicious confectionery solutions

Product Type/Name Cocoa powder Gerkens® range of cocoa powders

 High-quality cocoa powders for consistently vivid color and delicious taste

Chocolate

a variety of standard and specialty chocolates for sensory excitement and on-trend claims

- · ExtraVeganZa vegan chocolate
- Bright White chocolate
 Organic chocolate

Features & Benefits

- · Sugar-reduced chocolate
- Single origin dark chocolates





Decorations and inclusions

Confectionery lovers are actively seeking enriched experiences that captivate all their senses, starting with the visual appeal and subsequently delight their palates. We offer a broad expertly crafted portfolio of decorations and inclusions to create a distinctive visual and textural allure for your products and to set the stage of what is lying ahead: an extraordinary sensorial experience.



Fats & Oils

Rely on us to help you create quality confectionery products with our broad range of liquid oils, tropical fat oils and extensive refining, blending and modifying facilities across Europe. Helping with flavor enhancement, texture and structure development, our fats and oils make your confectionery products enticing to consumers.

We have the broadest portfolio of oils and fats around the globe. Our global sourcing capabilities and in-depth control of the supply chain allow us to source high-quality raw materials tailored to the specifications of all our customers.

Our base oils typically used for sugar confectionery include coconut and palm kernel oil.





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