

TEXTURE

*& Taste*



**INGREDIENTS FOR**

*the Ice Cream Industry*

**DANISCO**



## **INTRODUCTION**

Ice cream with superb organoleptic properties is a matter of course when Danisco has had a hand in the recipe. Using our detailed knowledge and understanding of emulsifiers, stabilisers, flavours, sugar substitutes and fat replacers, we are equipped to supply the best possible solutions for all types of ice cream and frozen desserts.

Our top quality ingredients are accompanied by a high level of technical backup, ensuring their smooth incorporation in manufacturing processes. Supported by extensive application know-how, regional laboratory facilities and sales and production companies in more than 30 countries, Danisco can provide the same excellent standard of service to customers round the globe, always with the guarantee of total confidentiality.

## **INTEGRATED EMULSIFIER AND STABILISER SYSTEMS FOR ICE CREAM**

CREMODAN® Emulsifier & Stabiliser Systems meet the needs of the many different types of ice cream. Each product has been carefully developed to take advantage of the components' ability to improve creaminess, shape stability, dryness, meltdown, texture, consistency, overrun control and heat shock resistance. The fully integrated systems comprise stabiliser components which have been integrated in the emulsifier phase, producing small emulsifier beads which encapsulate the stabiliser components.

CREMODAN® blends are designed to satisfy particular customer needs. The CREMODAN® SE 700 range, for example, is ideal for ice cream requiring improved extrusion properties or for economy recipes, while the CREMODAN® 800 CREAMLINE range meets demands for extra creaminess.

## **STABILISER BLENDS FOR SORBET AND WATER ICE**

The CREMODAN® range for sorbet and water ice consists of a range of dry-blended products, each designed to satisfy customer expectations regarding processing, product texture and storage stability. Gelatine-free CREMODAN® SORBETLINE is the preferred choice when producing sorbets with a high overrun – even at very low pH values.



## ADVANTAGES OF CREMODAN®

In many cases, the use of blended products enables ice cream producers to reduce the number of functional ingredients requiring storage and quality control and minimise the risk of error when dosing. Manufacturers are then assured more consistent product quality and a higher degree of product safety.

*Additional advantages include:*

- Several functional ingredients can be added in a single step
- High efficiency due to the correctly balanced components
- Full dispersion in cold-mix processes
- Free-flowing properties
- Easy handling
- Low mix viscosity during mixing
- Elimination of dust during mix processing
- Prevention of lump formation during processing
- High bacteriological standards
- Synergy created by the interaction of stabiliser components
- Tailor-made for specific applications

## SINGLE EMULSIFIERS AND STABILISERS

As the world's largest supplier of emulsifiers, Danisco also supplies a comprehensive emulsifier assortment for the ice cream industry, including distilled monoglycerides and mono-diglycerides, along with a full range of stabilising hydrocolloids. The hydrocolloid range comprises locust bean gum, guar gum, carrageenan, alginate and pectin. Our extensive knowledge of these individual ingredients and how they interact with the other components in a recipe makes us amply equipped to come up with the optimum solution to satisfy customer needs.

## TASTY FLAVOURINGS WITH GLOBAL APPEAL

Working in close co-operation with customers, our experienced flavour team uses advanced analysis equipment to tailor flavourings that satisfy individual customer requirements and provide the taste consumers prefer. This and our understanding of global taste preferences and market trends are central to our flavour recommendations.

In relation to ice cream, our core flavour expertise lies in vanilla, fruit and brown flavourings and compounds for water ice.

### Vanilla

Drawing on vanilla beans from Madagascar, Indonesia, Tahiti and Mexico, we use advanced extraction techniques to bring the true taste of vanilla to indulgent products, such as premium ice cream. In addition to these natural extracts, the other products in our extensive vanilla range are designed to give any kind of frozen dessert the specific vanilla taste required.

### Fruit

DANISCO NATUROME™ Extracts, natural, nature identical and freshly picked fruit flavours and PERFORMAROME Flavourings provide a broad spectrum of fruity opportunities that can be tailor-made to each frozen dessert formulation.

### Brown

Chocolate, coffee, nut, caramel, fudge, toffee, butterscotch and other Danisco brown flavours contribute an air of luxury to any recipe.

### Compounds

For water ice and related products, we supply a wide range of flavour compounds, containing fruit juices, flavours and stabilisers, either as a specific fruit type, a mixture of various fruits or even fruits combined with a vegetable taste. Whether choosing a different stabiliser or emulsifier system or substituting various ingredients with others, it is important to remember the effect this may have on a flavouring's ability to give its best. We can help adjust the flavouring to match alterations made to a specific recipe or process, ensuring the optimum taste in the final product.



## SUGAR SUBSTITUTES AND FAT REPLACERS

Reduced calorie ice cream is produced by reducing fat and sugar content. But this raises the need to compensate with other ingredients. The technical challenge when making ice cream with a low fat or sugar content is to maintain a good texture and taste.

Litesse<sup>®</sup>, a polydextrose bulking agent is ideal for calorie reduction, sugar replacement and fat reduction in ice cream. As it is only partially metabolised, just 1 kcal/g of the calories in Litesse<sup>®</sup> are absorbed. When used to replace sugar and reduce fat content, this means it contributes a mere 25% of the calories of sugar (4 kcal/g) and 11% of the calories of fat (9 kcal/g).

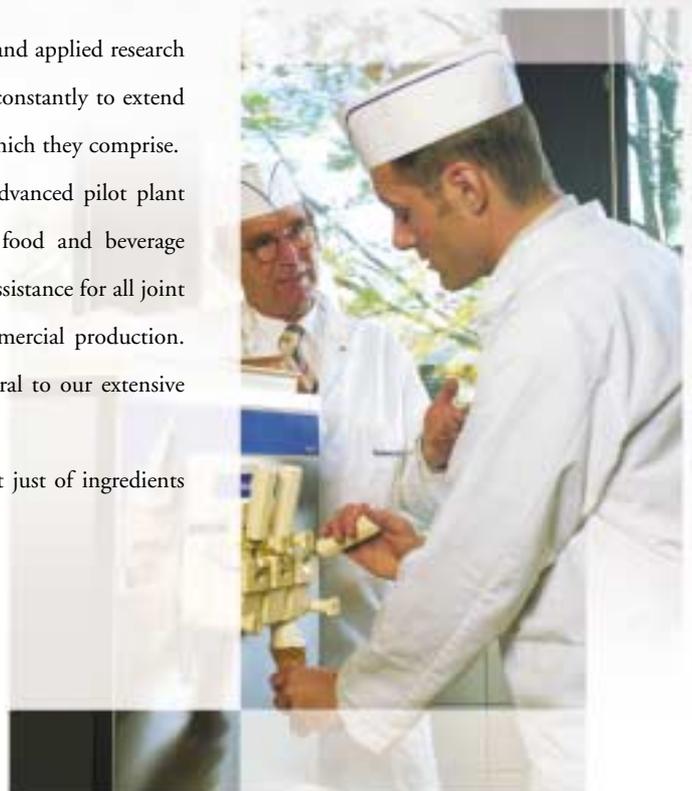
Fructofin<sup>®</sup> Fructose has a sweetening power around 1.7 times that of sucrose, which means little more than half the amount is required to replace sucrose in ice cream and frozen desserts. As fructose has the same nutritional value as sucrose (4 kcal/kg), this replacement will noticeably reduce the calorie content of the final products. Fructose also offers the advantage of a greater depressing effect on the freezing point than sucrose, making ice cream and frozen desserts softer and easier to scoop straight from the freezer.

## DECADES OF SERVICE

Danisco's 75 years in the field have created a solid foundation of knowledge and experience. Today we are the top technological partner for the global ice cream industry.

Using our international research and development resources and applied research centre for chemical, physical and sensory analysis, we work constantly to extend our understanding of food products and the ingredients of which they comprise. Our worldwide network of innovation centres backed by advanced pilot plant facilities mean our expertise is always close at hand for food and beverage manufacturers round the globe – providing highly qualified assistance for all joint product development projects right up to the start of commercial production. Customer visits, seminars and training courses are also central to our extensive service range.

We strive to become our customers' preferred supplier – not just of ingredients but technical service and product development too.



# Ice Cream & Frozen Desserts

APPLICATION	PRODUCTS	DESCRIPTION	FUNCTIONS
<i>Ice Cream and Soft Serve</i>	CREMODAN® CREAMLINE	Emulsifier & Stabiliser Systems	Facilitate air incorporation Improve dryness on extrusion Improve melting resistance Impart smooth body and texture Increase resistance to shrinkage Retard ice crystal growth Increase creaminess
	CREMODAN® SE	Emulsifier & Stabiliser Systems	
	DIMODAN®	Distilled Monoglycerides	
	GRINDSTED® MONO-DI	Mono-diglycerides	
	CREMODAN® SUPER	Mono-diglycerides	
	GRINDSTED® LBG	Locust Bean Gum	
	GRINDSTED® Guar	Guar Gum	
GRINDSTED® Carrageenan	Carrageenan		
GRINDSTED® Alginate	Sodium Alginate		
Flavours	Vanilla, fruit, chocolate, cream, caramel, nut, etc.	Flavour profiling	
Litesse®	Polydextrose	Bulking	
Fructofin®	Fructose	Sweetening	
<i>Sorbet and Sherbet</i>	CREMODAN® SORBETLINE	Stabiliser Systems	Facilitate air incorporation Retard ice crystal growth Improve melting resistance Impart smooth body and texture Increase resistance to shrinkage
	CREMODAN® SL	Emulsifier & Stabiliser Systems	
	DIMODAN®	Distilled Monoglycerides	
	GRINDSTED® MONO-DI	Mono-diglycerides	
	CREMODAN® SUPER	Mono-diglycerides	
	GRINDSTED® LBG	Locust Bean Gum	
	GRINDSTED® Guar	Guar Gum	
GRINDSTED® Carrageenan	Carrageenan		
GRINDSTED® Pectin	Pectin		
GRINDSTED® Alginate	Sodium Alginate		
Flavours	Soft fruit, citrus, exotic, tropical, etc.	Flavour profiling	
Litesse®	Polydextrose	Bulking	
Fructofin®	Fructose	Sweetening	
<i>Water Ice</i>	CREMODAN® DC	Stabiliser Systems	Improve body and texture Bind colour Improve melting resistance Control ice crystal growth
	GRINDSTED® LBG	Locust Bean Gum	
	GRINDSTED® Guar	Guar Gum	
	GRINDSTED® Pectin	Pectin	
	GRINDSTED® Carrageenan	Carrageenan	
GRINDSTED® Alginate	Sodium Alginate		
Flavours	Soft fruit, citrus, exotic, tropical, etc.	Flavour profiling	
Litesse®	Polydextrose	Bulking	
Fructofin®	Fructose	Sweetening	
<i>Frozen Mousse</i>	CREMODAN® MOUSSE	Emulsifier & Stabiliser Systems	Impart smooth body and texture Increase resistance to shrinkage Improve melting resistance Facilitate air incorporation
	GRINDSTED® MONO-DI	Mono-diglycerides	
	CREMODAN® SUPER	Mono-diglycerides	
	GRINDSTED® LBG	Locust Bean Gum	
	GRINDSTED® Guar	Guar Gum	
	GRINDSTED® Carrageenan	Carrageenan	
	GRINDSTED® Pectin	Pectin	
GRINDSTED® Alginate	Sodium Alginate		
Flavours	Vanilla, fruit, chocolate, cream, caramel, nut, etc.	Flavour profiling	
Litesse®	Polydextrose	Bulking	
Fructofin®	Fructose	Sweetening	

### *Supplying the world*

Danisco is a major supplier to all branches of the international food industry, manufacturing emulsifiers, emulsifier/stabiliser blends, flavours, starter cultures and media, speciality fats, antimicrobials, antioxidants, enzymes and the textural ingredients pectin, locust bean gum, guar gum, alginate and carrageenan for a diversity of applications.

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