

# ENLARGING YOUR OPTIONS FOR HEALTHIER PEOPLE

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EXCIPIENTS & APIs FOR THE PHARMACEUTICAL INDUSTRY





## A TRUSTED PARTNER FOR RELIABLE & UNIQUE SOLUTIONS



Tereos is a French cooperative union of more than **12,000 members** and a leading producer of sugar, starch, starch derivatives and alcohol in Europe. We process plant-based and renewable raw materials, using the best available technologies and following good manufacturing practices.

We ensure high purity and controlled composition of our products, in compliance with industry's highest requirements. Our unique portfolio offers an extensive range of sucrose and starch-based pharmaceutical excipients and Active Pharmaceutical Ingredients for use in oral drug delivery, clinical nutrition, dialysis and injectable solutions.



**LONG-TERM  
EXPERTISE**



**FULLY COMPLIANT  
WITH REGULATORY  
& QUALITY STANDARDS**



**GUARANTEED  
TRACEABILITY**



**RELIABLE  
PARTNER**



**UNIQUE  
OFFER**

# EXCIPIENT SOLUTIONS

TEREOS OFFERS A UNIQUE RANGE OF HIGH-PURITY EXCIPIENTS, BASED ON SUCROSE AND STARCH, THAT PROVIDES BENEFITS IN A WIDE ARRAY OF APPLICATIONS

	LIQUID DOSAGE FORMS	SOLID DOSAGE FORMS			MEDICATED CONFECTIONERY			COATING
	Solutions, syrups, suspensions	Direct compression	Wet & dry granulation	Powder mixes	Hard boiled candies & lozenges	Gums & pastilles	Chewing-gum	Hard coating
<b>Ethanol</b> Ethanol surfin Dehydrated ethanol surfin	●							
<b>Granulated sucrose</b> Granulated sugar n°1-600 Granulated sugar n°1-600 HF	●				●	●		●
<b>Screened sucrose</b> Caster sugar n°1-400 Extra-fine caster sugar n°1-250			●					
<b>Calibrated sucrose</b> Calibrated granulated sugar n°1-600 Calibrated caster sugar n°1-400				●				
<b>Milled sucrose</b> Pure icing sugar			●	●				●
<b>Milled sucrose</b> Icing sugar with starch (confectioner's sugar)			●	●				
<b>Spray-dried sucrose</b> Compressuc®		●		●				
<b>Agglomerated sucrose</b> Pearl sugar 30 Alveosuc® fine grains				●				
<b>Sucrose solution</b>	●				●	●		●
<b>Maize starch</b> Meritena® Pharma		●	●	●		●		
<b>Dried maltodextrin</b> Maldex® Pharma		●	●	●				
<b>Dried glucose syrup</b> Glucodry® Pharma	●	●	●	●				
<b>Glucose syrup</b> Mylose® Pharma & Glucomalt® Pharma	●		●		●	●	●	
<b>Glucose monohydrate</b> Meritose® Pharma		●	●	●		●		
<b>Sorbitol syrup (non crystallising)</b> Meritol® Pharma	●				●	●	●	
<b>Sorbitol syrup (crystallising)</b> Meritol® Pharma	●				●		●	
<b>Sorbitol powder</b> Merisorb® Pharma	●	●	●	●	●	●	●	
<b>Maltitol liquid</b> Maltilite® Pharma	●				●	●	●	
<b>Maltitol powder</b> Maltilite® P Pharma		●		●	●	●		●

Sugar FREE

Tereos excipients comply with the current versions of Ph. Eur. and USP-NF monographs when applicable.

● SUGAR ● STARCH

# API SOLUTIONS

## MERIDEX® & MERIDEX® PF

As a leading producer of sucrose, starch and sweeteners, Tereos has long expertise in manufacturing plant-based carbohydrates. For years, Tereos has been a reliable partner to the pharmaceutical industry. With this experience, Tereos proposes a dextrose (glucose monohydrate) range suitable for use as Active Pharmaceutical Ingredients: Meridex® and Meridex® PF (Pyrogen Free).



### PRODUCT CHARACTERISTICS

<b>Compliance</b>	Glucose monohydrate (Ph. Eur.) Dextrose (USP-NF)
<b>Plant origin</b>	Maize
<b>Production process</b>	Hydrolysis of maize starch and subsequent crystallization of the purified high dextrose containing syrup

### APPLICATIONS

Haemodialysis (HD) - Peritoneal dialysis (PD) -  
Parenteral nutrition - Infusion solutions

### KEY BENEFITS

Purity beyond pharmacopeia requirements - Flowability -  
Filterability - Product stability during processing

### RELIABLE PRODUCTION PROCESS

- Specifically designed & dedicated production unit in Zaragoza (Spain)

### UNCOMPROMISED PRODUCT QUALITY

- Continuous controls throughout manufacturing
- Compendial testing & Certificate of Analysis for each batch, displaying all the parameters requested by the monographs

### FULL SYSTEM COMPLIANCE

- Good Manufacturing Practices certificate (EU GMP Part II)
- Supply chain operations in compliance with Good Distribution Practices

## French-origin, GMP certified ETHANOL

Our ethanol solutions stem from yeast fermentation of plant-based substrates. They are suitable for use as Active Pharmaceutical Ingredients, in applications such as, antiseptics for example.



Within our industrial network, two French sites are dedicated to the production of bulk API ethanol: Tereos Artenay and Tereos Origny.

Product name	Compendial compliance
Ethanol surfín	Ethanol, 96 per cent (Ph. Eur.)
Dehydrated ethanol surfín	Ethanol, anhydrous (Ph. Eur.)

### STRONG QUALITY GUARANTEES

- Certificates of Good Manufacturing Practices compliance for active substances at both our facilities
- Positive batch release
- Certificate of Analysis for each batch

### LONG-TERM EXPERTISE

Our dedicated teams have long experience in supporting the pharmaceutical industry. Moreover, we can assist with the complex logistics and specific customs formalities inherent to ethanol.

# EXCIPIENTS FOR MEDICATED CONFECTIONERY

Patients increasingly turning to OTC medicated confectionery to treat minor ailments means new challenges for the pharmaceutical world: **how to boost the appeal of the finished dosage form and adapt to the dietary and taste preferences of patients.**



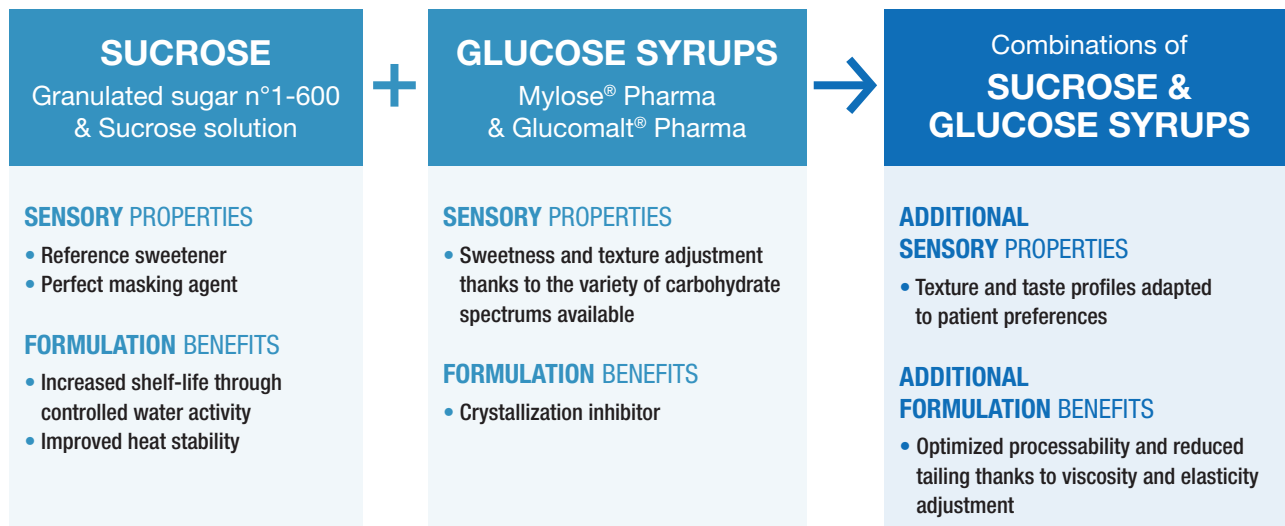
## HOW CAN TEREOS HELP YOU?

- Solutions to address the specifics of each medicated confectionery category: hard-boiled candies/ lozenges, gums/ pastilles and chewing-gums.
- A comprehensive excipient range for both full-sugar and sugar-free formulations.

# SUCROSE & GLUCOSE SYRUPS

## FOR FULL-SUGAR DOSAGE FORMS

Sucrose and glucose syrups are complementary excipients. They work synergistically to meet your requirements in terms of process and end-product sensory properties. Tereos medicated confectionery application experts can advise you on the sucrose and glucose syrup combinations best suited to your needs.

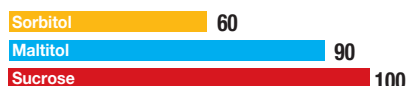


# POLYOLS

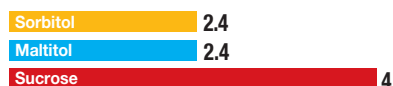
## FOR SUGAR-FREE FORMULAS

<b>LIQUID &amp; DRY MALTITOL</b> Maltilite® Pharma	<b>LIQUID SORBITOL</b> Meritol® Pharma	<b>DRY SORBITOL</b> Merisorb® Pharma
Maltilite® syrup with an adapted composition: for hard boiled-candies/lozenges.	Meritol® 160 Pharma improves the shelf-life of gums and pastilles by controlling the water activity.	The drying technology of Merisorb® 200 Pharma provides the desired texture and sensory properties to pharmaceutical chewing-gums.

SWEETENING POWER  
10% aqueous solution



CALORIC VALUE  
Kcal/g



GLYCAEMIC INDEX  
Glucose = 100



HEAT OF SOLUTION / COOLING EFFECT  
Kcal/g



<b>FORMULATION BENEFITS</b> <ul style="list-style-type: none"> <li>• Improved shelf-life through controlled water activity</li> <li>• No browning reaction</li> </ul>	<b>SENSORY PROPERTIES</b> <ul style="list-style-type: none"> <li>• Pleasant and clean sweet taste</li> <li>• Cooling effect</li> </ul>	<b>NUTRITION FACTS</b> <ul style="list-style-type: none"> <li>• Low caloric value</li> <li>• Reduced glycaemic index</li> </ul>
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# EXCIPIENTS FOR DIRECT COMPRESSION

Direct compression is a convenient and simple tableting method. However, it requires adapted **excipients to achieve optimal processability and obtain appealing tablets that will boost patient acceptability and API delivery.**

## EXCIPIENT CHARACTERISTICS

- High flowability
- Various particle size distributions available
- Different compression profiles
- Clean taste, with diverse sweet taste profiles

## PROCESS & END PRODUCT **BENEFITS**

- Improved machine feeding
- Homogeneous mixing with a wide range of APIs
- Ability to adjust tablet hardness and brittleness to the desired level
- Ability to adjust tablet sweetness to the desired level



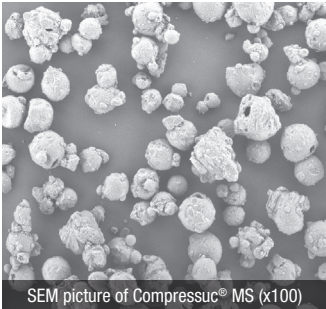
### HOW CAN TEREOS HELP YOU ?

Our comprehensive range of excipients enables you to formulate a diversity of tablets, either chewable or suckable, full-sugar or sugar-free.

Thanks to our long experience in serving the pharmaceutical industry, we can advise you on the directly compressible excipients best suited to your needs.

# COMPRESSUC® MS

## Spray-dried compressible sugar with unique morphology



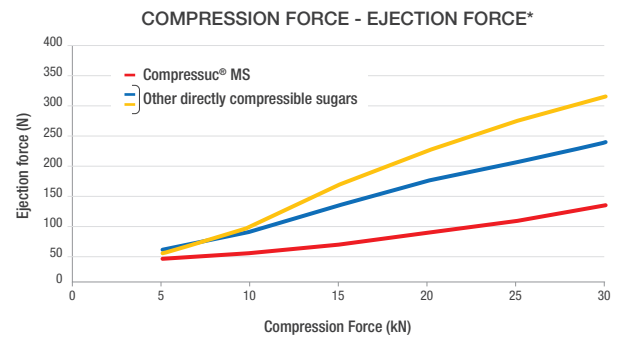
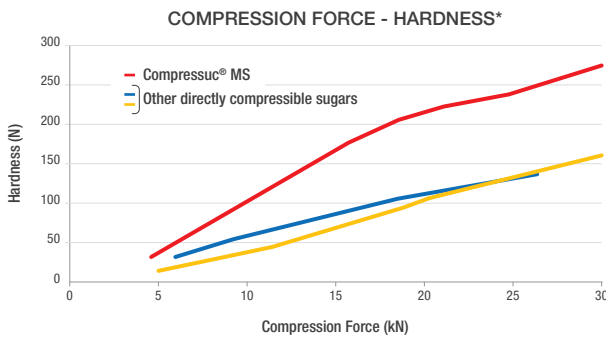
Compressuc® MS is composed of sucrose, maltodextrin and invert sugar syrup. It is obtained by spray-drying a liquid form, which creates a special particle structure. Compressuc® MS consists of microcrystals organized into hollow spheres. This porous structure gives Compressuc® MS its outstanding advantages.

### SENSORY PROPERTIES

- Pleasant sweet taste
- Taste-masking effect
- Smooth and shiny tablets

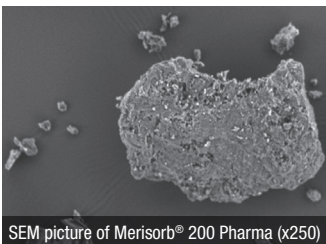
### FORMULATION BENEFITS

- High tablet strength at low compaction forces
- Easy tablet ejection with low ejection forces
- Low tablet weight variation



# MERISORB® 200 PHARMA

## Highly compressible crystalline sorbitol ideal for sugar-free formulas



Thanks to its porous structure, Merisorb® 200 Pharma exhibits good compression properties and a large absorption capacity.

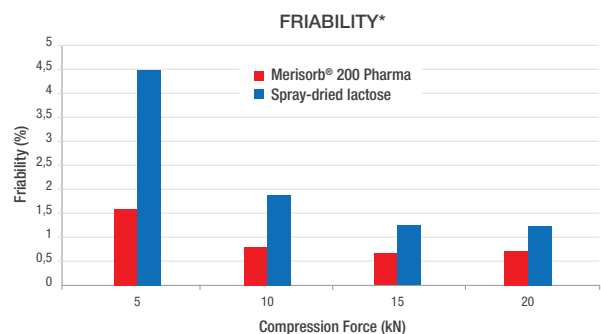
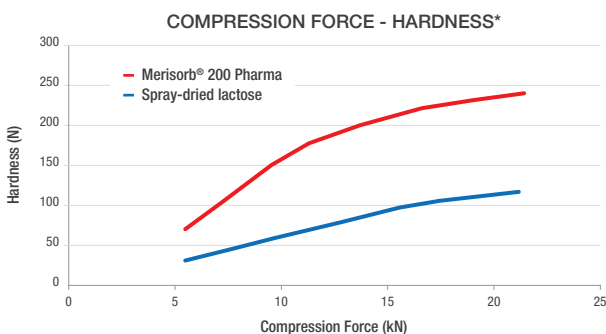
### SENSORY PROPERTIES

- Sweetening power: 60% of sucrose
- Characteristic cooling effect

### FORMULATION BENEFITS

- Excellent compressibility
- Production of quality tablets even with high contents of poorly compressible APIs

Evaluation of Merisorb® 200 Pharma performance in ascorbic acid tablets  
Tablets composed of 74% w/w excipient, 25% w/w crystalline ascorbic acid and 1% w/w magnesium stearate



\* Tereos applications laboratory data



# OUR DETAILED EXCIPIENT SOLUTIONS

Tereos offers a unique range of sucrose and starch-based excipients designed to help you tackle the specific challenges of each type of finished dosage form. Our high-purity excipients provide complementary functional benefits in a wide range of applications.

SOLID DOSAGE FORMS

Product name	Compendial compliance
Compressuc® PS	Sucrose (Ph. Eur., USP-NF)
Compressuc® MS	Compressible sugar (USP-NF)
Meritena® 141 Pharma	Maize starch (Ph. Eur.), Corn starch (USP-NF)
Maldex® 190 Pharma	Maltodextrin (Ph. Eur., USP-NF)
Maldex® G190 Pharma	
Glucodry® G210 Pharma	Glucose, spray-dried (Ph. Eur.)
Meritose® 200 Pharma	Glucose monohydrate (Ph. Eur.), Dextrose (USP-NF)
Merisorb® 200 Pharma	Sorbitol (Ph. Eur., USP-NF)
Merisorb® 300 Pharma	
Maltitite® P200 Pharma	Maltitol (Ph. Eur., USP-NF)



Sugar  
FREE

SOLID DOSAGE FORMS

Product name	Compendial compliance
Extra-fine caster sugar n°1-250	Sucrose (Ph. Eur., USP-NF)
Pure icing sugar	
Icing sugar with starch	Confectioner's sugar (USP-NF)
Meritena® 141 Pharma	Maize starch (Ph. Eur.), Corn starch (USP-NF)
Maldex® 120 Pharma	Maltodextrin (Ph. Eur., USP-NF)
Maldex® 190 Pharma	
Maldex® G120 Pharma	
Maldex® G190 Pharma	
Glucodry® G210 Pharma	Glucose, spray-dried (Ph. Eur.)
Mylose® 451 Pharma	Glucose, liquid (Ph. Eur.)
Mylose® 641 Pharma	
Mylose® 661 Pharma	Glucose, liquid (Ph. Eur.), Liquid glucose (USP-NF)
Glucomalt® 560 Pharma	
Meritose® 200 Pharma	Glucose monohydrate (Ph. Eur.), Dextrose (USP-NF)
Merisorb® 200 Pharma	Sorbitol (Ph. Eur., USP-NF)
Merisorb® 300 Pharma	



Sugar  
FREE

SOLID DOSAGE FORMS

Product name	Compendial compliance	
Caster sugar n°1-400	Sucrose (Ph. Eur., USP-NF)	
Extra-fine caster sugar n°1-250		
Calibrated granulated sugar n°1-600		
Calibrated caster sugar n°1-400		
Pure icing sugar		
Compressuc® PS		
Pearl sugar 30		
Alveosuc® fine grains		
Icing sugar with starch		Confectioner's sugar (USP-NF)
Compressuc® MS		Compressible sugar (USP-NF)
Meritena® 141 Pharma	Maize starch (Ph. Eur.), Corn starch (USP-NF)	
Maldex® 190 Pharma	Maltodextrin (Ph. Eur., USP-NF)	
Maldex® G190 Pharma		
Glucodry® G210 Pharma	Glucose, spray-dried (Ph. Eur.)	
Meritose® 200 Pharma	Glucose monohydrate (Ph. Eur.), Dextrose (USP-NF)	
Merisorb® 200 Pharma	Sorbitol (Ph. Eur., USP-NF)	
Merisorb® 300 Pharma		
Maltitite® P200 Pharma	Maltitol (Ph. Eur., USP-NF)	



Sugar  
FREE

Binders, diluents & disintegrants

Binders & diluents

Carriers & diluents



# OUR DETAILED EXCIPIENT SOLUTIONS

## MEDICATED CONFECTIONERY

### HARD-BOILED CANDIES & LOZENGES



Sugar FREE

Product name	Compendial compliance
Granulated sugar n°1-600	Sucrose (Ph. Eur., USP-NF)
Sucrose solution	Sucrose, liquid (Ph. Eur.)
Mylose® 641 Pharma	Glucose, liquid (Ph. Eur.)
Mylose® 661 Pharma Glucomalt® 560 Pharma	Glucose, liquid (Ph. Eur.), Liquid glucose (USP-NF)
Meritol® 160 Pharma	Sorbitol, liquid (non-crystallising) (Ph. Eur.), Non-crystallising sorbitol solution (USP-NF)
Meritol® 125 Pharma	Sorbitol, liquid (crystallising) (Ph. Eur.), Crystallising sorbitol solution (USP-NF)
Merisorb® 200 Pharma Merisorb® 300 Pharma	Sorbitol (Ph. Eur., USP-NF)
Maltilite® 5575 Pharma	Maltitol, liquid (Ph. Eur.), Maltitol solution (USP-NF)
Maltilite® P200 Pharma	Maltitol (Ph. Eur., USP-NF)

Bulk sweeteners

### GUMS & PASTILLES



Sugar FREE

Product name	Compendial compliance
Granulated sugar n°1-600	Sucrose (Ph. Eur., USP-NF)
Sucrose solution	Sucrose, liquid (Ph. Eur.)
Meritena® 141 Pharma	Maize starch (Ph. Eur.), Corn starch (USP-NF)
Mylose® 641 Pharma	Glucose, liquid (Ph. Eur.)
Mylose® 661 Pharma Glucomalt® 560 Pharma	Glucose, liquid (Ph. Eur.), Liquid glucose (USP-NF)
Meritose® 200 Pharma	Glucose monohydrate (Ph. Eur.), Dextrose (USP-NF)
Meritol® 160 Pharma	Sorbitol, liquid (non-crystallising) (Ph. Eur.), Non-crystallising sorbitol solution (USP-NF)
Merisorb® 200 Pharma Merisorb® 300 Pharma	Sorbitol (Ph. Eur., USP-NF)
Maltilite® 5575 Pharma	Maltitol, liquid (Ph. Eur.), Maltitol solution (USP-NF)
Maltilite® P200 Pharma	Maltitol (Ph. Eur., USP-NF)

Bulk sweeteners

### CHEWING-GUMS



Sugar FREE

Product name	Compendial compliance
Mylose® 641 Pharma	Glucose, liquid (Ph. Eur.)
Mylose® 661 Pharma Glucomalt® 560 Pharma	Glucose, liquid (Ph. Eur.), Liquid glucose (USP-NF)
Meritol® 160 Pharma	Sorbitol, liquid (non-crystallising) (Ph. Eur.) Non-crystallising sorbitol solution (USP-NF)
Meritol® 125 Pharma	Sorbitol, liquid (crystallising) (Ph. Eur.) Crystallising sorbitol solution (USP-NF)
Merisorb® 200 Pharma	Sorbitol (Ph. Eur., USP-NF)
Maltilite® 5575 Pharma	Maltitol, liquid (Ph. Eur.), Maltitol solution (USP-NF)

Bulk sweeteners

## LIQUID DOSAGE FORMS



Sugar FREE

Product name	Compendial compliance
Ethanol surfín	Ethanol, 96 per cent (Ph. Eur.)
Dehydrated ethanol surfín	Ethanol, anhydrous (Ph. Eur.)
Granulated sugar n°1-600 Granulated sugar n°1-600 HF	Sucrose (Ph. Eur., USP-NF)
Sucrose solution	Sucrose, liquid (Ph. Eur.)
Glucodry® G210 Pharma	Glucose, spray-dried (Ph. Eur.)
Mylose® 641 Pharma	Glucose, liquid (Ph. Eur.)
Mylose® 661 Pharma Glucomalt® 560 Pharma	Glucose, liquid (Ph. Eur.), Liquid glucose (USP-NF)
Meritol® 160 Pharma	Sorbitol, liquid (non-crystallising) (Ph. Eur.), Non-crystallising sorbitol solution (USP-NF)
Meritol® 125 Pharma	Sorbitol, liquid (crystallising) (Ph. Eur.), Crystallising sorbitol solution (USP-NF)
Merisorb® 200 Pharma Merisorb® 300 Pharma	Sorbitol (Ph. Eur., USP-NF)
Maltilite® 5575 Pharma	Maltitol, liquid (Ph. Eur.), Maltitol solution (USP-NF)

Solvents, bulk sweeteners and viscosity modifiers

## COATING



Sugar FREE

Product name	Compendial compliance
Granulated sugar n°1-600 Pure icing sugar	Sucrose (Ph. Eur., USP-NF)
Sucrose solution	Sucrose, liquid (Ph. Eur.)
Maltilite® P200 Pharma	Maltitol (Ph. Eur., USP-NF)

Hard coating agents

● SUGAR ● STARCH

Tereos' portfolio offers an extensive range of sucrose and starch-based pharmaceutical excipients and APIs for use in oral drug delivery, clinical solution, dialysis and injectable solutions.

We have an international footprint that supports you and delivers all over the world.

We are committed to make sustainability a real driver of value creation. To learn more about our sustainability goals, visit our website.

