



Sugar & Beyond

LIFE SCIENCE BY SÜDZUCKER

SUCROSE-BASED EXCIPIENTS FOR PHARMACEUTICAL PRODUCTS

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Life science products serve a growing but heterogeneous market that is driven by rising requirements for superior drug efficacy, technical performance, regulatory and safety compliance. This market requires high-quality sucrose-based excipients for applications like pharmaceutical drugs, non-prescription medications, food supplements and wellness and beauty products.

One Brand, One Quality – Meeting Requirements of the Life Science Industry

Südzucker is the largest producer of sucrose-based excipients for the Life Science industry. During its production, our "Ph" Sugar for pharmaceutical use is subject to rigorous qualitative monitoring, according to:

✓ **Sugar industry specific methods** validated at a global level within the framework of the ICUMSA (International Commission for Uniform Methods of Sugar Analysis)

✓ **Methods of the European Pharmacopoeia in force** (sucrose monograph)

On the basis of the results of our control plans, Südzucker guarantees that its range of sucrose references **meets the requirements of the sucrose monograph of the European Pharmacopoeia** (excluding dextrans and endotoxins).

We offer two levels of service in regards to compliance with the sucrose monograph (Eur Ph):

1. Standard service (no extra cost): Certificate of conformity of the sugar reference according to the "Sucrose" monograph of the European Pharmacopoeia (excluding dextrans and endotoxins)
2. Optional service (extra cost): Certificate of analysis of the lot of sugar delivered according to the "Sucrose" monograph of the European Pharmacopoeia (excluding dextrans and endotoxins)



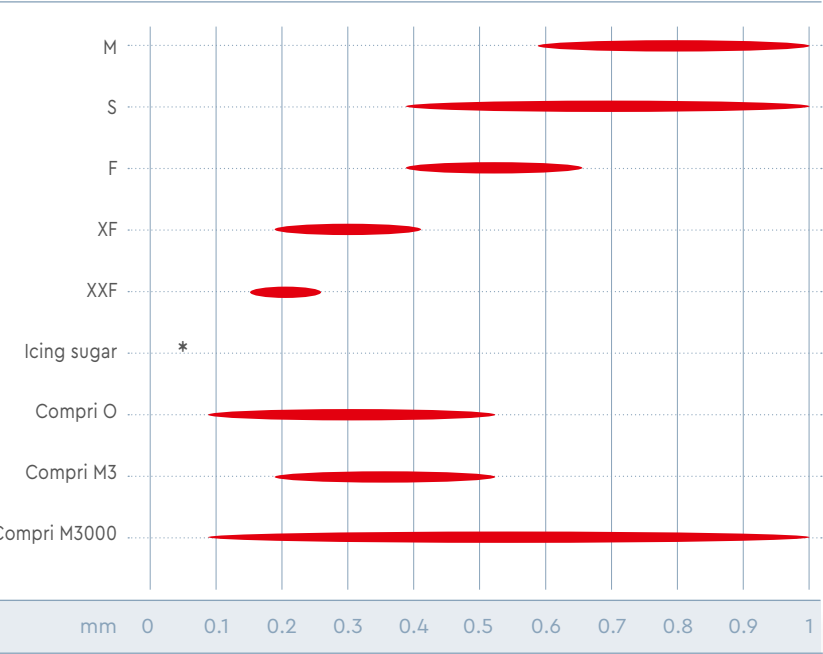
SUCROSE-BASED EXCIPIENTS FOR YOUR FORMULATION

In addition to our standard pharma-suitable, granulated, icing and liquid sugars, we offer a specialized selection of excipients in our COMPRI® range, which we have developed for the strictest requirements of the pharma industry. The following products are produced in pharma-grade quality. We supply excipients for galenic applications in various crystalline and amorphous forms, including different granulometry profiles:

01. SÜDZUCKER PRODUCT PORTFOLIO OF SUCROSE-BASED EXCIPIENTS

	CRYSTALLINE FORM			AMORPHOUS FORM
	Standard high grade granulated and refined sucrose	Calibrated sucrose	Milled sucrose	Spray-dried COMPRI® range
References	EU1/EU2 M and S	EU1/EU2 F, XF and XXF	Pure icing sugar	COMPRI® O/M3/M3000
Liquid galenic forms (syrups, drinkable ampoules...)				
Suspensions, pasty products				
Powders: single-serving sachets, dry syrups to rehydrate, effervescent powders				
Direct compression: tablets, granules				
Granulation: granules, tablets				
Coating: pastilles, tablets				
Gums				

02. RANGE OF DIFFERENT GRANULOMETRIES



*Icing sugar: crystal size for min. 80% weight in sugar < 0.1 mm.



COMPRI® FOR UNRIVALLED DIRECT COMPRESSION



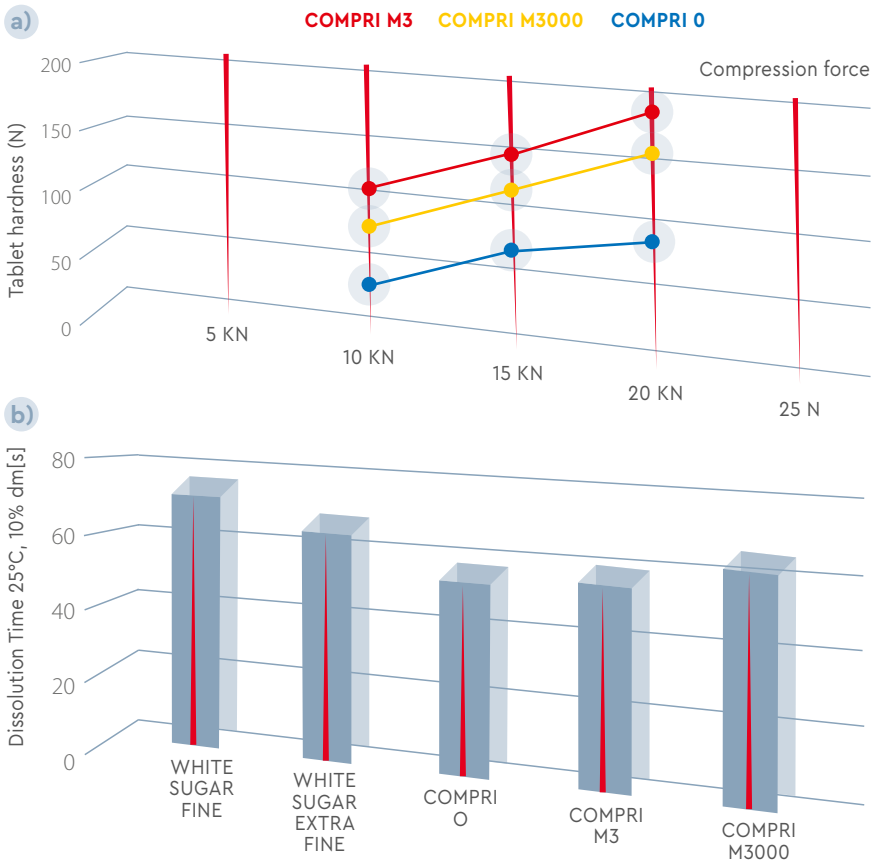
Our COMPRI® range comprises a selection of directly compressible sucrose-based excipients. The raw material is very finely ground sucrose (EU I quality), with or without binders and can be used with other ingredients such as flavourings or active ingredients, pressing agents, and dyes.

Thanks to our unique fluid bed agglomeration production technology for COMPRI®, we provide you with high-quality, sucrose-based solutions designed to be processed into compressed goods, tablets and instant products. Südzucker is the only producer who offers a fluid-bed-agglomerated sugar for direct compression without any binder.

	Product Type	Description	Properties	Ingredients	Main Applications	Particle Size in mm (min. 90%)	Bulk Density in g/l	Residual Moisture in g/l	Possible Certificates
COMPRI M3 COMPRI M3000 COMPRI O		Pure fluid-bed-agglomerated sugar	Very good instant solubility Good compressibility	Sucrose	Instant products, e.g. single-serving sachet, effervescent powders Direct compression	0.1 – 0.63	500 – 600	max. 0.1	European Pharmacopoeia (Ep/PhEur) for raw materials used
		Fluid-bed-agglomerated sugar with Maltodextrin	Very high breaking load Good solubility	Sucrose, maltodextrin	Direct compression	0.1 – 1.0	500 – 700	max 0.7	–
		Fluid-bed-agglomerated sugar with Maltodextrin in a special ratio to fulfil the USP-NF requirements	Very high breaking load Good solubility	Sucrose, maltodextrin	Direct compression	0.2 – 0.63	500 – 630	max 0.7	USP-NF



03. TECHNICAL PROPERTIES OF VARIOUS COMPRI TYPES



OUR TECHNOLOGICAL PROCESS EXPERTISE – YOUR BENEFITS

Our unique agglomeration process sets us apart. Südzucker COMPRI® variants have completely different physicochemical properties and structures compared to regular sugar crystals. Even though the main component is sucrose, its amorphous form offers many benefits:

- Directly compressible
- Excellent flow characteristics
- Optimal binder for active substances (in liquid or powdered form)
- Low friability
- Outstanding dissolution properties – Instant solubility (see graphic b)
- Can be dosed with high precision
- Very good compression force/breaking load characteristics (see graphic a)
- Ensures ease of processing on modern high-speed presses
- Masking agent effect
- Storage stability/low hygroscopicity
- Nearly dust-free
- Defined particle size distribution

SÜDZUCKER – A STRATEGIC PARTNER COMMITTED TO SUSTAINABILITY

Südzucker offers a wide range of sugar solutions, services and customized solutions to the Life Science industries worldwide.



Südzucker – Sugar business at a glance.
 Founded in 1837, Südzucker is the No. 1 producer of beet sugar in the world today. We produce 3.7 million tons of beet sugar in 23 sugar factories throughout Europe.

3 production sites are focused on our product range for the applications of the pharmaceutical industries.

- Plattling (GERMANY): EU1 Ph sucrose references, pure icing sucrose
- Offstein (GERMANY): COMPRI® sugar range
- Roye (FRANCE): EU2 Ph sucrose references

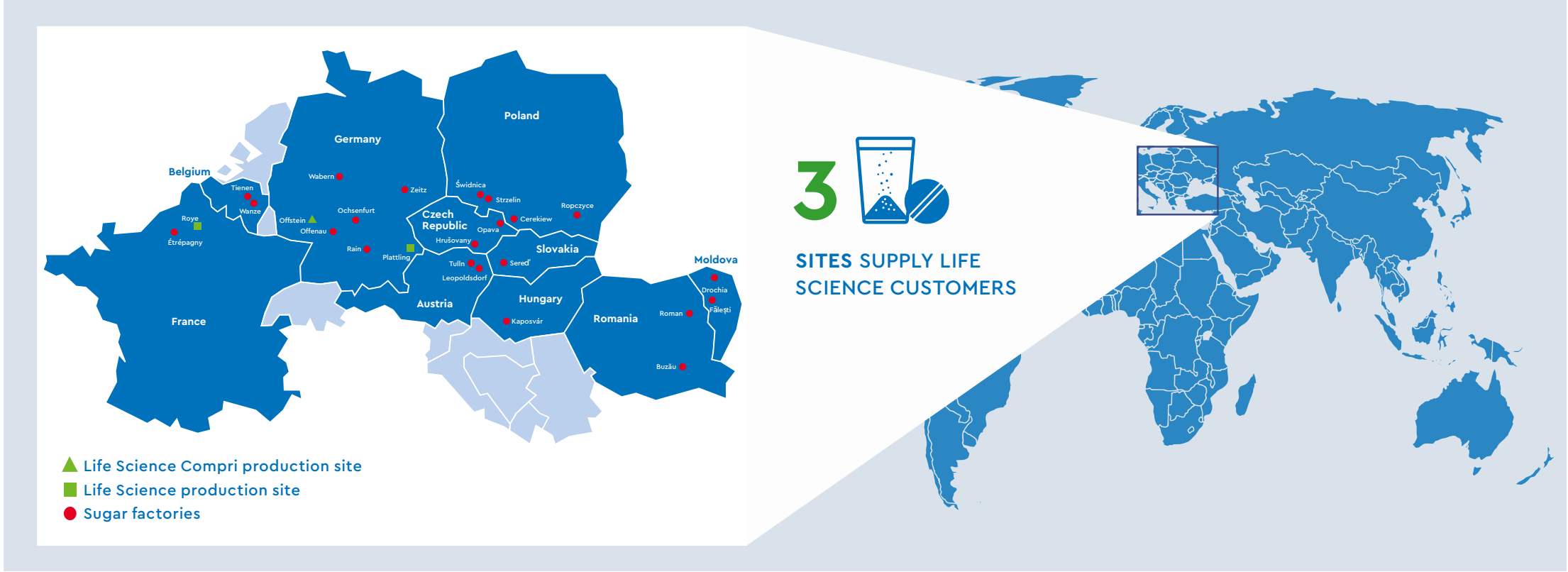
Our Research & Development and Marketing & Sales teams look forward to developing tomorrow's solutions with you to help you reach your performance goals. More than 450 professionals work at Südzucker Central Research & Development – it's our industry's finest and most experienced R&D team, with a broad range of state-of-the-art pilot and lab equipment.



SUSTAINABLE SOLUTIONS AND SUCROSE-BASED EXCIPIENTS DERIVED FROM A NATURAL SOURCE

We're plant-based sugar experts. Our sugar comes exclusively from natural sources. We source the sugar beets we process from European farmers with whom we have maintained trustful partnerships for decades.

Sustainability – Highest quality standards
 Environmental and social responsibility are essential elements of our business strategy and corporate culture. We are committed to the health of our planet and its people and have clear goals for a brighter future.



HIGHEST QUALITY STANDARDS



HIGH SÜDZUCKER STANDARDS

When you work with us, you will gain a reliable and trusted partner. We will support you with the high-quality excipients you need to guarantee your customers the high-performance formulations they expect.

Our versatile excipient portfolio is based on 100% natural sources, is 100% clean label, allergen-free, and meets the requirements of the „Sucrose“ monograph of the European Pharmacopoeia.

We would love to hear from you about your plans and expectations and look forward to supporting you in your goals.

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www.suedzucker.com

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