

Mannogem® Mannitol

Improved Formulations, Better Tablets

www.spipharma.com



Direct Compression Grades

Mannogem XL Technology

Mannogem XL is an innovative way to create mannitol for direct compression. The technology is designed to improve the formulation experience as well as to enhance formulation performance. It creates multifunctional, compendial grades of DC spray dried mannitol that provides superior binding and quick disintegration, resulting in superior tabletability.

XL provides greater manufacturing consistencies through its performance and its tight particle size range. Using XL, it is possible to increase patient compliance through tablet size reduction and faster disintegration times.

Products created with Mannogem XL technology retain the positive qualities of compendial mannitol while boasting enhancements over standard competitive mannitol:

25% Higher Tablet Hardness

38% Quicker Disintegration per Tablet

50% Higher Drug Loading Capability

200% Friability Improvement at Low Compression Force

Spray-Dried Mannogem

The proprietary spray dry process used to manufacture Mannogem yields a porous material with lower disintegration times, a narrow particle size distribution, enhanced flow, and compression properties. It is due to these properties that Mannogem is excellent in ODT formulations.

It produces tablets with higher hardness than other excipients at comparable compression forces, and its higher surface area allows Mannogem to work well as a base for ordered mixing with micronized APIs and low dose formulations.

SPI Pharma has innovated spray dried mannitol to provide even higher compactability. Mannogem XL technology creates a mannitol designed to improve the formulation experience and enhance formulation performance. The result is a multifunctional, compendial grades that provides superior binding and quick disintegration.

Mannogem Granular Grades

Granular Mannogem Grades are manufactured through a wet granulation process and have a larger particle size than our Mannogem spray dried material. They exhibit excellent flow, disintegration and compression properties. These products are ideal for formulating tablets with taste masked APIs, which often have a larger particle size due to the taste making process.

Mannogem Granular has a larger particle size that has shown to contribute to a softer texture for chewable tablets. The larger particle size allows it to match specific particle size and density constraints to minimize segregation during transport and manufacturing.

Mannogem 2080 has a smaller average particle size and a tighter overall particle size range. This lower particle size produces higher surface area relative to Mannogem Granular, making it an effective API carrier system.

Mannogem Powder

Mannogem Mannitol Powder is an excellent excipient for use in wet granulation and lyophilization. It dries rapidly, resulting in shorter processing time and increased productivity.

Mannitol is also a good excipient for hot melt extrusion applications. It melts without decomposition at a temperature of approximately 165° C. Its rapid recrystallization upon cooling make it an attractive carrier to improve solubility of poorly soluble APIs.

User Guides



Application Guide for Operations

Mannogem Mannitol allows for higher production rates, reduced sensitivity to lubricants, low friability, and high binding capacity. Your team will want to work with Mannogem because it makes your operation run more efficiently.

Reference the chart to the right/below to find your process of choice. There, you will be able to see which grade of Mannogem best suits your needs.

Once you have determined the grade that works for you, contact us for a sample. Our technical team is available to answer questions and discuss best practices.

Mannogem XL			
Mannogem EZ			
		Mannogem Granular and 2080	
		Mannogem Powder	
✓	✓		Dry blending of micronized and low dose actives
		✓	Dry blending
✓	✓	✓	Direct compression
✓	✓	✓	Roller compaction
		✓	Wet granulation
		✓	Lyophilization
		✓	Hot melt extrusion

Use-Based Formulation Guide

Development of dose forms that are age-appropriate and acceptable to patients is a clear trend with regulators. The excellent organoleptics of Mannogem, together with its high compatibility and improved tableability of our XL Grade over standard mannitol, mean that it can be used by formulators in projects to cover a wide range of dose form concepts and dosage strengths.

The chart below illustrates dosage form options and which grade of Mannogem Mannitol works best for the desired product.

Our regionally-based technical experts are available to come and work with your team to optimize the formulation and delivery method of your choice. Contact us to request a sample and get started.



Mannogem XL			
Mannogem EZ			
		Mannogem Granular and 2080	
		Mannogem Powder	
			 Swallow tablets
			Orally disintegrating tablets
			Chewable tablets and lozenges
			Tablets with taste masked APIs
			Sachets and stickpacks
			 Liquid suspensions/syrups
			Effervescent tablets



An ABF Ingredients Company



**Excipients for
Swallow Tablets**



**Taste Masked
Actives**



ODTs/ODPs



**Effervescent
Tablets**



**Vaccine
Adjuvants**



**Soft Gel
Capsules**



**Antacid & Laxative
Ingredients**



**Chewable Tablets
& Lozenges**



**Nutraceutical
Applications**

**Improve the patient experience
and benefit from efficient
manufacturing operations by
formulating with Mannogem
Mannitol.**

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