

Sorbitol Special®

Soft Gel Plasticizer

User Guide

The gelatin-plasticizer ratio depends on the quantity and nature of fill material as well as the size of the capsule.

Initially, soft gelatin capsules contained simple lipophilic fills, such as purified oils, which only requires glycerol as a plasticizer. However, recent products have more complexity and have a hydrophilic or hygroscopic nature.

Hydrophilic soft gelatin capsule fill formulations (like polyethylene glycol) are often chosen to address bioavailability, to improve solubility of poorly soluble drugs, or to dispense low-dose and/or high-potency drugs. PEG-based formulations are very susceptible to water migration into the fill, causing increased drying time and other potential migration issues.

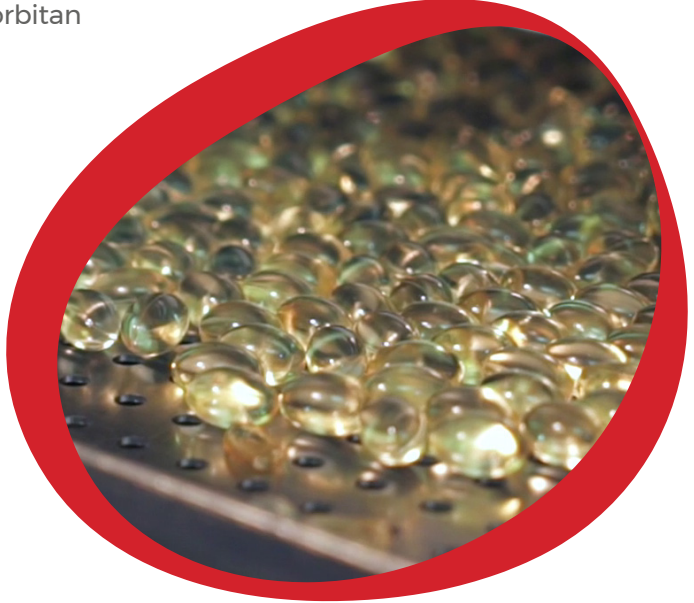
Application	Description	Recommended Grades	Advantage
PEG, hydrophilic, hygroscopic fills	Sorbitol Sorbitan Solution	Sorbitol Special	Premium capsule appearance
PEG, hydrophilic, hygroscopic fills	Sorbitol Sorbitan Solution	Sorbitol Special GC	Reduced blooming
PEG, hydrophilic, hygroscopic fills	Sorbitol Sorbitan Solution	Sorbitol Special MDF 85	Improved drying time Premium capsule appearance
Lipophilic fill	Sorbitol Sorbitan Solution	Sorbitol Special	Improved drying time
Lipophilic fill	Sorbitol Sorbitan Solution/Glycerin USP Blend (1:1)	Sorbitol Special and Grade A810	Convenient blend Low cost in use
Difficult fills (e.g. lecithin)	Sorbitol Sorbitan Solution	Sorbitol Special	Reduced failures from leaks
Difficult fills (e.g. lecithin)	Sorbitol Sorbitan Solution	Sorbitol Special MDF 85	Improved drying time
Nutraceutical Actives	Sorbitol Sorbitan Solution/Glycerin USP Blend (1:1)	Sorbitol Special and-Grade A810	Convenient blend Low cost in use

SPI Pharma can offer customized technical service and support- with skilled pharmacists and chemists offering formulation support and assistance in troubleshooting and analysis. Let our depth and breadth of experience in formulation and development speed your time to market by avoiding potential problems that can delay progress.

Sorbitol Special and Sorbitol Special MDF 85 (sorbitol/sorbitan blends) act as a barrier to water migration and are ideal excipients in formulations requiring low moisture.

In oil-based or lipophilic fills, the addition of Sorbitol Special can improve drying times compared to glycerol. Sorbitol Special can be added to formulations from 20% up to 50% to find the optimum level for drying time improvement.

Standard Sorbitol Special can be blended with glycerol to reduce or remove incompatibilities caused by glycerol alone. Grade A-810 is a pre-blended mixture of 50% Sorbitol Special plasticizer and 50% glycerin USP which can be used for general applications. This convenient blend reduces cost in use and adds the drying benefits of Sorbitol Special.



Making a Difference in Your Soft Gel

SPI Pharma's material science expertise and formulation experience enable the quality and performance of our Sorbitol Special plasticizers. Our materials can be used to create value for manufacturers and consumers.

 SPI Pharma

 salesinfo@spipharma.com

 @spipharma_real

 @spipharma

 www.spipharma.com

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