

CS90

Directly Compressible Calcium Carbonate with Starch for supplement tablets



With our specialized spray dry technology, we provide our mineral supplement customers with a highly compactable, directly compressible high assay (90%) calcium carbonate. Ideally CS90 is used for chewable tablets due to its smooth mouthfeel and creamy texture. However, it can be used for swallow, gummies and other tablet forms due to its high compactability.

Why use CS90 in chewable supplement tablet?

- Our specialized spray drying technology along with a specialized grade of calcium carbonate and starch as starting raw materials enables us to produce very smooth, creamy directly compressible CS90
- Excellent flow
- CS90 has excellent compactability and binding properties allowing the formulator to reduce the amount of other binders in the formula; making room for additional actives or simply making a smaller tablet



CS90

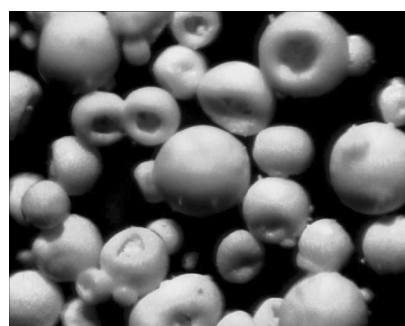
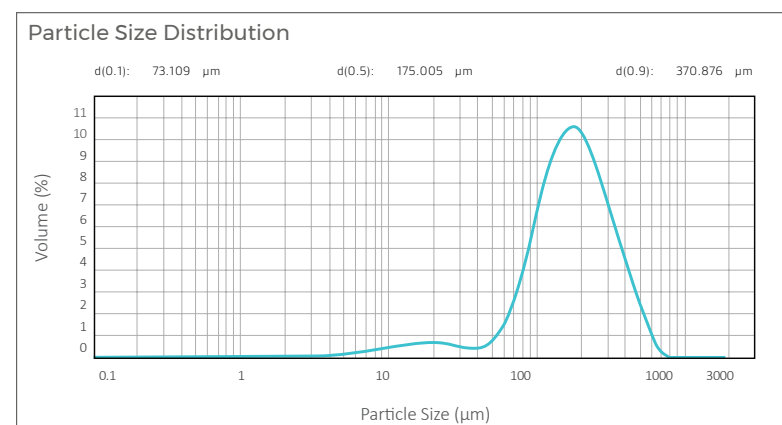
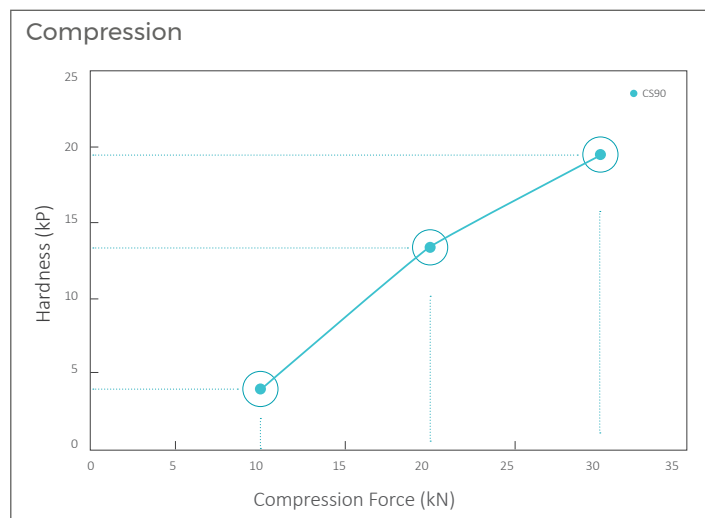
Excellent for direct compression tableting, saving time and money

Good Compactibility

- At compression force between 10-20 kN, the CS90 tablets have ideal hardness for chewable tablets

Excellent flowability

- Our specialized spray drying technology provides very consistently shaped spherical particles that ensures good flowability
- CS90 narrow particle size distribution ensures good content uniformity and homogeneity during dry blending with no risk of segregation
- Consistent feed to the tableting machine



Versatility

- CS90 is a versatile ingredient that can be used as an active or as an excipient. As an excipient it can improve the gritty texture and binding properties. Also, it provides buffering properties (in a pH 9 environment)
- Can be used in many different final application forms - chewable, sachet, gummies, toffees, swallow and effervescent forms with smooth fizzing



SPI Pharma's technical expertise will help you formulate a Calcium based supplement tablet using direct compression.

Starting Formula using CS90 in a chewable Calcium and Vitamin tablet

	LABEL CLAIM per Tablet	
Calcium Carbonate	1250 mg CaCO ₃ equivalent to: 500 mg of Calcium (Ca ²⁺)	
Vitamins D3	400 IU	
INGREDIENTS	% by weight	Qty per Tablet
DC CS90 at 90% CaCO ₃	69.44 %	1388.80 mg
Vitamin D3 (100 IU/mg)	0.20 %	4.00 mg
Mannogem EZ	27.96 %	559.20 mg
Sucralose	0.40 %	8.00 mg
Magnesium Stearate	1.00 %	20.00 mg
Flavor	1.00 %	20.00 mg
Total Tablet Weight 2000.00 mg		



Regulatory Compliance*

CS90 Calcium Carbonate

- ✓ Technical File
- ✓ Non-GMO
- ✓ Gluten Free
- ✓ Aflatoxin Free
- ✓ cGMP
- ✓ Nano Material Free
- ✓ Components Origin
- ✓ Latex Free
- ✓ Absence of Residual Solvents
- ✓ Absence of Phthalates
- ✓ Food Compliance
- ✓ Heavy Metals Compliance
- ✓ USP
- ✓ BSE/TSE
- ✓ Absence of Allergens

Manufacturing Guidance

- 1. Screening / Weighing:** screen through #20 mesh sieve and weigh the ingredients listed in the above recipe
- 2. Blending:** blend the ingredients for approximately 10 minutes on a Turbula Blender Type
- 3. Tableting:** compress the blend to the targeted tablet characteristics on a rotary tablet press

Elemental Impurities

Operating in a highly regulated industry, we understand the importance of minimal elemental impurities for our customers. We perform a thorough risk assessment on all of our products to ensure regulatory compliance. SPI Pharma has invested approximately \$1M of testing technology, resources and external testing to ensure our customers the peace of mind that our products are below the threshold and only require annual confirmation testing. Customers can depend on our certification and can alleviate their burden of testing.

* Documents available upon request.



Excipients for Swallow Tablets



Taste Masked Actives



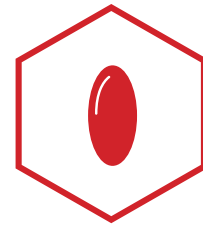
ODTs/ODPs



Effervescent Tablets



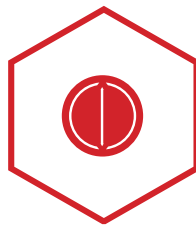
Vaccine Adjuvants



Soft Gel Capsules



Antacid & Laxative Ingredients



Chewable Tablets & Lozenges



Nutraceutical Applications

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