

# Microcrystalline Cellulose (MCC)

Microcrystalline Cellulose (MCC) is a pure white powder without any taste or smell that adds form and hardness to tablets, acts as a bulking agent, and gives the desirable weight for products. MCC also has minimal bulk density, which increases flow characteristics that help to ensure that each ingredient is consistently spread throughout a mixture.

MCC also works well with many other popular excipients and is an integral part of many manufacturers' formulas. It is directly compressible and therefore can be compressed into a tablet without having to granulate or process a mix, making the overall manufacturing process more efficient. Additionally, MCC's compressibility affects all aspects of the final product such as disintegration, dissolution, and absorption.

With its ability not to react or interfere with other substances and being a non-caloric natural source of dietary fiber along with other advantages, MCC is an ideal choice for a binding agent. However, due to its versatility, MCC is excellent for both tablet and capsule production.



## Main Benefits of MCC

- **High Compressibility** - MCC has excellent compressibility properties, aiding in tablet production.
- **Increased Flow** - Due to its flow, MCC allows formulations to move smoothly through the machine and ensures consistent tablet weight.
- **Excellent Binder** - With its binding qualities, MCC helps tablets stay together after compression, avoiding fragile tablet production.
- **Great Filler** - If there are low doses of active ingredients in a formulation, MCC can help fill in the gaps in tablet production due to it being odorless, tasteless, and non-reactive.
- **Low Bulk Density** - MCC has a low bulk density, which results in higher dilution and packing density.

## Specifications

CAS number	9904-34-6
Molecular formula	(C <sub>6</sub> H <sub>10</sub> O <sub>5</sub> ) <sub>n</sub>
Appearance	Fine white powder
Physical state	Solid
Melting point	260-270 °C / 500-518 °F
Density	1.5 g/cm <sup>3</sup>
Bulk density	0.4 g/cm <sup>3</sup>
Solubility in water	None