



PACIFIC International Development GmbH

P.O. Box 22 01 18

D-40608 Düsseldorf

T: +49-211-92 96 45 55
@: info@pacific-int.de

Calcium Carbonate

(PCC & GCC)

Powder & Compound



Best Purity

Whiteness & Brightness



PE calcium carbonate Compound

Calcium Carbonate Compound may be used with a myriad of thermoplastic resins. Polypropylene compounds are often filled with calcium carbonate to increase rigidity, an important requirement for operations at high temperatures. In PVC, calcium carbonate is used with flexible compounds such as tubing, wire and cable insulation, latex gloves, trash bags and in rigid compounds such as extruded pipes, conduits and window profiles.

Modify physical property of plastics, act as plastical modifier.

Replace petroleum resource, reduce production cost. Environmentally friendly.

Improve printability, smoothness, hardness, stiffness, anti-block...

PE calcium carbonate additive: used for LDPE/LLDPE/HDPE film blowing/casting, HDPE sheet extrusion, HDPE pipe extrusion, HDPE bottle blowing..., one of additives modifying polyethylene/polythene/polyolefin resin.



- Processed by the four paddle rotor internal batch mixer or twin screw extruder.
- Calcium carbonate master batch for transparent HDPE film available now. Adding by %10-5, transparency becomes better in some cases; adding by %30-10, transparency is still good enough. It's also good for LDPE film, HDPE pipe and PP sheet, which are transparent, but not very transparent.
- Rub the film, CaCO₃ (powder) and/or talc (powder) are not found.
- Pellet is round and flat in shape, smooth feeling, well plastified, good dispersibility.
- Ideal additive, harmless, no toxin.
- Save cost, reduce expenditure, strengthen competition.
- Professional process: CaCO₃ (powder) and/or talc (powder) are coated and activated by unique coupling agent, dispersant and plasticizer before CaCO₃ (pellet) and/or talc (pellet) are produced.
- Special formula: CaCO₃ compound and/or talc compound do not apparently side effect physical property of PE film, sometime the tensile strength of PE film becomes better after adding CaCO₃ compound and/or talc compound.
- Plastic calcium carbonate additive named as CaCO₃ filler additive, CaCO₃-filled agent, CaCO₃ composite, CaCO₃ extender, CaCO₃ granule.

The Role of Calcium Carbonate

Calcium carbonate, as it is used for industrial purposes, is extracted by mining or quarrying. Pure calcium carbonate can be produced from marble, or it can be prepared by passing carbon dioxide into a solution of calcium hydroxide. In the later case calcium carbonate is derived from the mixture, forming a grade of product called “precipitated calcium carbonate,” or PCC. PCC has a very fine and controlled particle size, on the order of 2 microns in diameter, particularly useful in production of paper. The other primary type of industrial product is “ground calcium carbonate,” or GCC. GCC, as the name implies, involves crushing and processing limestone to create a powdery-like form graded by size and other properties for many different industrial and pharmaceutical applications.

Industrial Usages: Calcium carbonate is the most widely used mineral in the paper, plastics, paints, Adhesives & Sealants and coatings industries both as a filler – and due to its special white color - as a coating pigment. In the paper industry it is valued worldwide for its high brightness and light scattering characteristics, and is used as an inexpensive filler to make bright opaque paper. Filler is used at the wet-end of paper making machines, and calcium carbonate filler allows for the paper to be bright and smooth. As an extender, calcium carbonate can represent as much as %30 by weight in paints. Calcium carbonate also is used widely as a filler in adhesives, and sealants.

Health and Food Processing Usages: Calcium carbonate is used widely as an effective dietary calcium supplement, antacid, phosphate binder, or base material for medicinal tablets. It also is found on many grocery store shelves in products such as baking powder, toothpaste, dry-mix dessert mixes, dough, and wine. Calcium carbonate is the active ingredient in agricultural lime, and is used in animal feed. Calcium carbonate also benefits the environment through water and waste treatment.

Talc can be crushed into a white powder that is widely known as "talcum powder".

This powder has the ability to absorb moisture, absorb oils, absorb odor, serve as a lubricant and produce an astringent effect with human skin. These properties make talcum powder an important ingredient in many baby powders, foot powders, first aid powders and a variety of cosmetics.

Talcum powder is made from talc, a mineral made up mainly of the elements magnesium, silicon, and oxygen. Talc, hydrous magnesium silicate, is a soft mineral used in food, drugs, cosmetics and industrial applications. Cosmetic-grade talc is produced so that it conforms to United States Pharmacopeia (USP) and industry specifications.



Grand Calcium Carbonate (GCC)

Products	Particle Size	Effect of GCC
Surface Treated Coated with stearic acid %1	~ 2 μm ~ 5 μm 10 μm	Rheological/ Mechanical Modifier
Untreated	< 100 μm	Functional Filler Extender

Name Product: Grand Calcium Carbonate (GCC)

CHEMICAL ANALYSIS OF THE RAW MATERIAL:

CaCO ₃	99 %
Fe ₂ O ₃	0.05 %
MgO	0.6 %

SPECIFIC PRODUCT DATA:

Specific Gravity (g/Cm ³):	2.7
Packed bulk density:	0.7
Moisture:	0.2 (Max)
Oil absorption (ISO 5/787)	26.0
Brightness (Dry, C ^l 2, DIN 53163)	%95-93 (Coated) %99.5-98 (un coated)

Percipitate Carbonate Calcium (PCC)

Products	Particle Size	Effect of PCC
Surface Treated Coated with stearic acid %1	~ 1.2 μm ~ 2 μm	Higher Rheological Higher Mechanical Higher Modifier
Untreated	3.5 μm	Functional Filler Extender

Name Product: Percipitate Carbonate Calcium (PCC)

CHEMICAL ANALYSIS OF

THE RAW MATERIAL:

CaCO ₃	98.6 %
Fe	176 ppm
Mg	300 ppm
Al	168 ppm
Ti	300 ppm

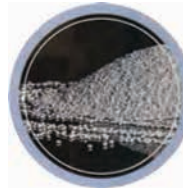
SPECIFIC PRODUCT DATA:

Specific Gravity (g/Cm ³):	2.74
Packed bulk density:	0.7
Moisture:	0.35 (Max)
Surface Area (BET) (m ² /gr):	5.68
Brightness (Dry, C ^l 2, DIN 53163)	%84.5

Talc has many uses in cosmetics and personal care products including as an absorbent, anti caking agent and to improve the feel of the product. Talc is approved by the Food and Drug Administration for use in ingested and topical drug products. The Food and Drug Administration has determined that talc is Generally Recognized As Safe (GRAS) for use as an anti-caking agent in foods. It is also permitted as an anti-caking agent in vanilla powder. FDA has listed talc as a color additive that may be used in coloring drug products and as a component of colors for use in drugs and cosmetics.



Calcium Carbonate Powder
Talc Powder



Calcium Carbonate Compound



Rich Mineral Calcium Carbonate