

Entrepreneur India

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PRECIPITATED CALCIUM CARBONATE

Capacity:	15000 MT/Annum
Plant and machinery cost:	193.00 Lakh
Working Capital:	0.00 Lakh
Rate of return(ROR):	43.00 %
Break Even Point (BEP):	60.00 %
TCI:	448.00 Lakh
Cost of Project:	448.00 Lakh

Profile Precipitated Calcium Carbonate (PCC) also known as purified, refined or synthetic calcium carbonate. It has the same chemical formula as other types of calcium carbonate, such as limestone, marble and chalk: CaCO_3 . The calcium, carbon and oxygen atoms can arrange themselves in three different ways, to form three different calcium carbonate minerals. Precipitated calcium carbonate (PCC), a manufactured form of calcium carbonate, is made by first hydrating high-calcium quicklime, and then reacting the resulting slurry or milk of lime with carbon dioxide. The resulting product is extremely white and has a uniformly small particle size. It has numerous uses, most notably in the paper industry. With the trend in papermaking toward using the alkaline over the acid process, PCC is being used increasingly as a filler and coating pigment for premium quality paper. The trend is to produce PCC in slurry form at satellite plants located near the paper mills, using commercial quicklime, although it is also produced and sold commercially. Properties Calcium Carbonate PPT is synthetically processed from naturally occurring high grade lime stone. The material is brilliant white and can be supplied in different bulk densities from 0.28 gms/cc to 0.9 gms/cc, depending upon the requirement of end user. This alone is the Major advantage of precipitate calcium carbonate. The assay of material is around 98.7 % as CaCO_3 . Application PCC is used to enhance the brightness, color, smoothness, and bulk of the paper, replacing more expensive paper pulp. Approximately 75% of worldwide PCC production is used for this purpose. Calcium carbonates, including PCC, are considered to be non-toxic. PCC is also used extensively as a plastics additive, white paint pigment, putty, ingredient in sealers and adhesives, and specialized filler. It has replaced clays and similar substances in many applications, in which it serves as a filler (to add density to the final product). It is also an important ingredient in toothpaste. Precipitated calcium carbonate is a versatile additive for use in a wide range of plastic and elastomeric applications. Its regular and controlled crystalline shape and ultrafine particle size together with the hydrophobic surface coating combine to the benefit of both polymer processing and subsequent physical properties. Market Scenario Calcium Carbonate is being manufactured in India since last three decades. The approximate demand of this product in India is around 300000 MT per annum. This product is mainly used as filler by different industry. Precipitated Calcium Carbonate is better substitute than most of the fillers in different categories. Around 75% of the total output of Precipitated Calcium Carbonate of the world is consumed by Paper Industry alone. Detergent powder manufacturers due to its characteristics of high water absorption capacity and fluffiness use precipitated Calcium Carbonate. World demand for precipitated calcium carbonate (PCC) is forecast to grow by an average of 4%py from around 13MT in 2007 to nearly 16 MT by 2012.

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