

## Pyrolysis Carbon Black

The term **Carbon Black** (CB) generally refers to a material produced by either the partial combustion or thermal decomposition of gaseous or liquid hydrocarbons, for example heavy petroleum products such as FCC tar, coal tar, or ethylene cracking tar. It is a fine black powder with a high surface-area-to-volume ratio, very low quantities of extractible organic compounds and has a wide range of uses, for example as a reinforcing filler in tires and other rubber products. In plastics, paints, coatings and inks, carbon black is used as a color pigment. There are a wide variety of CB grades sorted according to the properties specific surface area, particle size and structure, conductivity and color. It should be noted that the term Carbon Black is not the same as Black Carbon, which is used in the context of climate modeling and refers to combustion-related carbonaceous light absorbing aerosols.

**Pyrolysis** refers to the thermal decomposition of materials at elevated temperatures in an inert atmosphere. Pyrolysis is most commonly used in the treatment of organic materials. In general, pyrolysis of organic substances produces volatile products and leaves a solid residue enriched in carbon, also in this case referred to as char. Extreme pyrolysis, which leaves mostly carbon as the residue, is called carbonization.

**Pyrolysis Carbon Black** is most commonly produced by the pyrolysis of waste rubber or from other plastics. In most cases, not only carbon black but also combustible gases and liquid hydrocarbons are obtained.

The **CREMER Rotary Drum Technology** is well suited for pyrolysis of carbon black under a controlled furnace gas atmosphere. Our rotary drum furnaces are ideally designed to operate under the optimum process parameters depending on the raw material mix used (i.e. process temperature, gas composition, gas flow). We offer thermal process plants tailor-made to suit our client's needs.

## Specifications and Technical Features

The technical features, specifications and additional equipment of the CREMER thermal process plants are adapted to the specific needs of our clients and depend on the required thermal process, throughput and process parameter range.

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