DECOLOURCARB® DCL series

Wood Based Powdered Activated Carbon

Applications

Food & Beverage

Pharmaceutical

Liquid Chemicals

Edible Oil

Industrial Process

DECOLOURCARB® DCL 320, 330 and 330N are widely used in the decolourisation and purification of foodstuffs, vegetable oils, beverages (including wines, spirits, and beers), APIs and fine chemicals.

DECOLOURCARB® DCL 320, 330 and 330N are suitable for applications in acidic media where pH shocks need to be avoided, and due to their high consistency, the dose can easily be adjusted to compensate for variations in colour and contamination removal requirements.

Specifications	DECOLOURCARB® DCL 320	DECOLOURCARB® DCL 330	DECOLOURCARB® DCL 330N	Test Method
Molasses Number (min.)	400	750	750	TM-3
pH	2-4	2-4	4-6	ASTM D3838
Moisture (As Packaged), wt% (max.)	10	10	10	ASTM D2867
US SIEVE SERIES (wt%): < 325 US MESH [0.045 mm]	60-85	60-85	60-85	TM-13,JIS K 1474

Description

DECOLOURCARB® DCL 320, 330 and 330N are high activity chemically activated wood based powder carbon specially designed for decolourisation and purification of food grade and fine chemical process liquids.

DECOLOURCARB® DCL 320, 330 and 330N are made from selected grades of wood, which are chemically treated with phosphoric acid before being heat treated to activate under controlled conditions to develop the unique pore structure. This process results in activated carbon powders that give excellent decolourisation and purification properties over a wide range of applications.

Features

DECOLOURCARB® DCL 320, 330 and 330N have several properties which explain their superior performance over a wide range of applications:

- Chemically activated to promote an unique pore structure ideally suited to **the removal of colour** molecules and common contaminants found in food grade and specialty products.
- As they are produced from carefully selected renewable wood based resources, the powdered activated carbons are more uniform resulting in **consistent high quality products.**
- The optimal mesh size guarantees **a rapid rate of adsorption.**
- A controlled particle size distribution that allows for ease of handling in most feed systems, and enables a consistently lower filter cake resistance to be achieved resulting in higher filtration rates for industrial processes.
- **DECOLOURCARB® DCL 320, 330 and 330N** conform to the Food Chemical Codex (10th edition) and the most of the known oenological standards and as such are the product of choice in many countries for wine purification as no zinc chemicals are used.

Design Information

The main design consideration for the use of powder activated carbon is the dose rate, contact time and dosing point in the process.

Performance for a particular application will depend on the following factors:

- Type of compound to be removed – Compounds with a higher molecular weight and low solubility are better adsorbed.
- Concentration of the compounds to be removed – the higher the concentration of the compound to be removed, the greater the dose rate or contact time required.
- Composition and concentration of compounds that need to be removed: Organic matter has a major effect on adsorption capacity, as it will compete with the compound to be removed for the available adsorption sites.
- Fluid conditions: Factors like temperature, viscosity can affect the performance. Generally if these increase, adsorption is reduced and larger contact time are required to maximize the performance.
- The dose rate of carbon will have a significant effect on the performance of the carbon. Adsorption kinetics and the contact time are important factors in the performance of activated carbon, therefore the time allowed for adsorption is essentially important.

Safety Message

Wet activated carbon preferentially removes oxygen from air. In closed or partially closed containers and vessels, oxygen depletion may reach hazardous levels. If workers are to enter a vessel containing carbon, appropriate sampling and work procedures for potentially low-oxygen spaces should be followed.

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