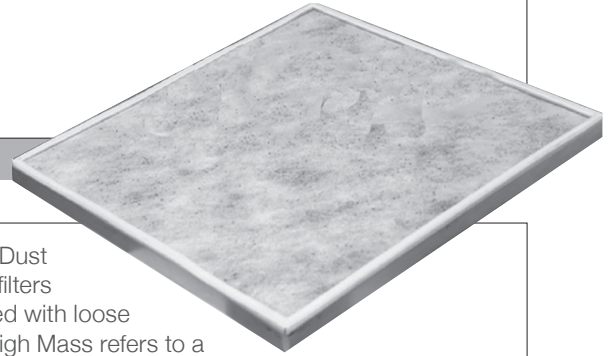


HMZD

(High Mass Zero Dust)

BONDED CARBON PANEL FILTERS



Activated carbon is highly effective for many gas phase contaminants:

- Adhesives
- Alcohols
- Animal odors
- Auto exhaust
- Turpentine
- Waste products
- Cleaning odors
- Jet engine exhaust
- Fertilizers
- Mold
- Ozone
- Paint fumes
- Sewer odors
- Vinyl chloride

AAF Flanders High Mass Zero Dust (HMZD) bonded carbon panel filters resolve the problems associated with loose filled activated carbon filters. High Mass refers to a high density of activated carbon installed, and Zero Dust means that the filters will not release carbon dust into the air stream.

The panels of this filter are fabricated from 100% virgin coconut shell activated carbon, with a minimum 60% CTC activity. Premium grade carbon is bonded together during a sintering process to form a rigid block and framed to provide clean air. HMZD panels are replaced right at the air handling unit with the same quality 100% virgin carbon as the initial installation. Loose filled tray systems are typically replaced with regenerated carbon, minimizing adsorption performance.

Contaminant removal is accomplished by physical adsorption, or from impregnated virgin carbon, where contaminant removal by chemical adsorption mechanisms are required.

Superior Performance

HMZD panel filters provide superior adsorption performance because there is no settling within the carbon bed. Carbon granules are bonded together to provide a uniform density of sorbent media across the panel, eliminating air bypass and stratification zones for high efficiency and extended service life. The panel design creates uniform airflow distribution and uniform residence time, ensuring maximum removal efficiencies.

Clean Air

Uniform air velocity through the bed of this filter eliminates high velocity zones and bed fluidization, a major cause of continuous dusting in loose granular system designs. No afterfilters are therefore required when these panels are used. HMZD carbon panel filters are suitable for solving complex Indoor Air Quality (IAQ) problems within museums, schools, airports, semiconductor manufacturing plants, wastewater treatment facilities, and hospitals.

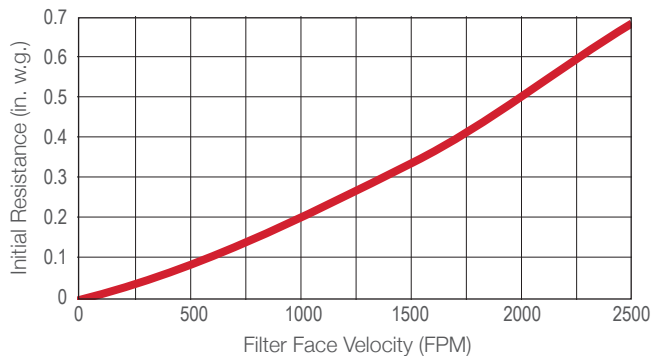
HMZD Filters

HMZD Carbon Types and Applications

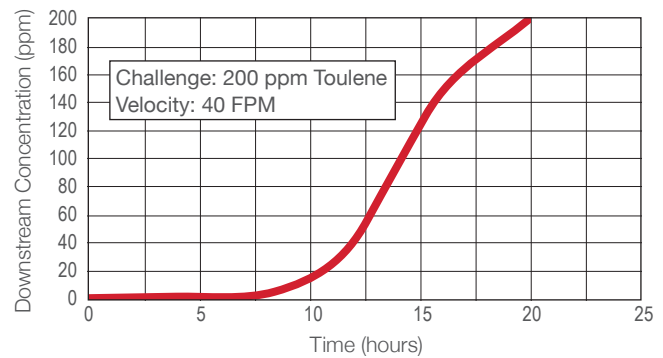
- 201 – Impregnate is virgin coconut shell carbon for general removal of Volatile Organic Chemicals (VOCs)
- 202 – Caustic impregnated for removal of acid gases
- 204 – Acid impregnated for removal of alkaline gases
- 205 – Chromate impregnated for removal of amines
- 209 – Universal impregnate for removal of acid and alkaline gases
- 225 – Proprietary blend for airports and helipads

Performance Data

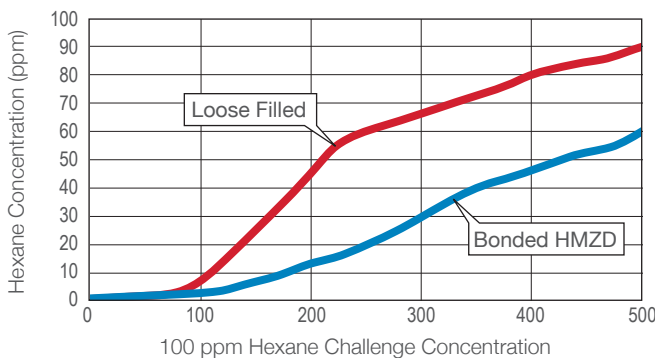
Initial Resistance vs. Filter Face Velocity



TS 201 Toulene Time to Breakthrough



Service Life Comparison



Notes:

Pressure Drop – HMZD Panel filters can be incorporated into V-shaped configurations with minimal pressure drop and impact on the system. The breakthrough test was based on continuous 100 ppm Hexane challenge concentration. Testing conducted at an independent lab on virgin coconut shell carbon.

Efficiency – HMZD panel filters perform better than loose filled systems, due to increased density of carbon and elimination of air bypass.

Carbon Selection – In general, contaminants with a boiling point greater than 212°F (160°C) can be effectively removed with carbon type 201. Contaminants with a boiling point below 212°F (160°C) require other available types of impregnated carbon, such as type 202, 204, 205, or 209.



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