



# Pleated Cartridge Filter Pre-Coat Procedure

- Pre-coating pleated cartridge media is a customary practice to optimize its performance and longevity in dust collection systems.
- There are several types of pre-coat materials available (diatomaceous earth, lime, perlite, cellulose, activated carbon, etc.) Chose an appropriate pre-coat material based on filtration requirements and the particulate being filtered. If required, consult the manufacturer for recommendations on the best selection of pre-coat for your applications.
- Some pre-coat materials may require mixing several ingredients. Prior to coating filters ensure all pre-coat ingredients are thoroughly mixed to achieve uniform consistency.
- The easiest method to pre-coat cartridges is with the filters installed in the collector and the system fan activated to draw the pre-coat into the collector and onto the filter media.
- Prior to pre-coating, all the pleated cartridge filter elements should be inspected for defects or damage. They should be clean and free of debris. The best results are achieved by pre-coating the filters when they are newly installed.
- When pre-coating clean cartridge filters in the collector for the first time it is recommended to turn the pulse cleaning system off or set it to the “pulse-on-demand” mode. This will help ensure all the filters get an even precoat before the collector cleaning system begins a pulsing cycle.
- Be aware of the filter differential pressure as the precoat is being applied to ensure proper filter efficiency and prevent excessive pressure buildup.
- Typically, the pressure drop during pre-coating should remain minimal indicating the pre-coat is evenly distributed across the filters and has not clogged the media pores excessively. A slight increase in pressure drop may occur as the pre-coat layer forms, but it should remain within acceptable limits.

# Pleated Cartridge Filter Pre-Coat Procedure (cont.)

- Pre-coat can be applied to the cartridge filters mounted in the collector by several methods. With the collector running, an injection system can be used to induce metered amounts of pre-coat into the dust collector if so equipped. Precoat can also be applied manually by pouring the material directly into an open port on the dust collector inlet, or through the flange opening on the dirty air inlet.
- The ratio of pre-coat to filter area can vary depending on the filtration requirements and type of pre-coat material used. However, a good rule of thumb is to apply a layer of precoat between  $\frac{1}{16}$  to  $\frac{1}{8}$  inch thick over the entire surface area of the cartridge filters.
- Depending on pre-coat material used, allow sufficient time for the pre-coat layer to form and settle onto the cartridge surface. Follow the manufacturers recommendations for the specific pre-coat materials used.
- Maintain the filtration system according to the manufacturers recommendations, including periodic inspections, cleaning and replacement of cartridges as needed.
- The total volume of pre-coat required can be calculated by using the formula **total surface area of all filter media x desired thickness of pre-coat layer.**