

Toxic Industrial Chemical Filtration

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The filtration performance of military and commercial canisters at high flow rates have been measured for a broad spectrum of chemical vapors. Data are correlated to provide predictive methods for determining the filtration service time when exposed to various chemical challenge concentrations, relative humidities, breather and constant flow type and rate. Filter performance models have been used to design filters meeting specific performance requirements such as selection of adsorbent properties, bed configuration and size. This paper summarizes the principal factors involved when designing a chemical filter requiring the use of two or more adsorbents for removal of multiple chemical families.