



Tech Support: 800-365-1331 (5)

Q: EPA standards specify PM10 and PM2.5. What do these numbers mean; do my Donaldson[®] Torit[®] collectors comply with the standards?

Paul W., Plant Engineer

A: In 1990, EPA set requirements for particulate matter emissions, concluding that particulate matter with an equivalent diameter of 10 microns or smaller (PM10) presented a major threat to the nation's air quality. In 1997, EPA toughened the standards to 2.5 microns or smaller (PM2.5), stating that studies showed major health and visibility concerns with the finer particulate (PM2.5).

Since nature doesn't produce particles smaller than 2.5 microns, they argue emissions smaller than 2.5 microns are man-made. PM10 and PM2.5 emissions requirements vary by region, but are always at least equal to or below federal standards. By federal standards, "major" sources have the potential to emit 70 to 100 tons of PM10 per year. Small shops can still be affected depending on what they process. Shops processing rubber or hazardous compounds like lead are required to permit regardless of emission volume. Obtaining and keeping a permit requires periodic emissions monitoring that you can perform at your site.

Donaldson Torit filter media is capable of meeting PM2.5 emission guidelines. As an example,

Ultra-Web[®] efficiency is rated at MERV 13. This rating means that Ultra-Web captures 90% of the particles in the 0.3 to 10 micron size.

Note: MERV stands for Minimum Efficiency Reporting Value as measured by ASHRAE Standard 52.2 – a test that measures particle size efficiency and expresses efficiency as a function of particle size. 52.2 classifies these sizes into 12 ranges. If this seems complicated, don't worry – the easy way to remember is that the higher the MERV rating, the more efficient the filter media. Of course, you always have to balance the efficiency with airflow restriction or pressure drop....you don't want to sacrifice one for the other....it's a balance thing. For instance, a very highly rated filter, say MERV 17, sounds great because it's in the HEPA range – but depending on what you're filtering, it will fill up fast and you'll be replacing it often.

For more information about PM10 or PM2.5 refer to the EPA's website, www.epa.gov, or refer to your state's Pollution Control Agency website.

- How to Get Cleaner Plant Air
- How Ultra-Web filters work in the real world
- Donaldson Torit Filtration Advisor

If you have a dust collector question for Little Joe, send it to dustmktg@mail.donaldson.com. If your question is printed, we'll send you a free baseball cap.



Donaldson[®]
Filtration Solutions

Donaldson Company, Inc.
Industrial Air Filtration
P.O. Box 1299
Minneapolis, MN
55440-1299 U.S.A.

Tel 800.365.1331
dustmktg@mail.donaldson.com
www.donaldsontorit.com