

Olds Filtration Engineering, Inc.
P.O. Drawer 970 Daphne, AL 36526
251-626-9492; 251-626-7988 (fax)
www.oldsfiltration.com



Filtration – Air Pollution Control - Ventilation

Common Terms of Filtration and Separation

Filtration Efficiency

A quantitative measure of how well a filter retains particles in a filtration process. Often expressed as the fractional or percentage retention of particles of a specific size by the filter

Micrometer, Micron

One millionth part of a meter. A standard SI unit and a widely used unit in statements of particle size

Merv Rating

Minimum Efficiency Reporting Values, for rating air filters according to their average particle size efficiency on a scale from 1 – 16. The value 16 represents the highest capture efficiency for particles in the 0.3 – 1 micron range. Used to rate HVAC filters according to a testing methodology developed by ASHRAE.

Mesh

A term referring to a woven wire cloth filter medium. Mesh describes the interlacing of the crossed wires that determines the openings which, depending on weave and texture, can be square, rectangular or triangular.

Mesh Count, Mesh Size

Number of openings in a linear inch of woven media, e.g. wire cloth or monofilament fabric.

Absolute (Filter) Rating

In liquid filtration 'absolute' is frequently used to imply the size above which no particles will be found in a filtrate. Commonly used to describe a membrane. Previously applied to high efficiency air filters but modern terminology prefers HEPA filter.

Nominal (Filter) Rating

Based on filtration tests, 90% by mass of particles with size equal to or larger than a specified size are stopped by the filter; sometimes quoted as 95% or 98%. This method of filter rating should be discouraged in favor of the absolute filter rating.

Filter Medium

Any permeable material used in filtration and upon which, or within which, the solids (i.e. dispersed phase) are deposited. Also termed septum. Plural is filter media. The material in a filter element that causes filtration is the filter medium. Can be woven, nonwoven, cast (e.g. membrane), a collection of particles (e.g. sand) etc.

Filter Area

The septum area, i.e. area of cloth, membrane, etc, that is available for filtration. A term that can be applied to an individual element or the total area of all elements in the filter.

Filtrate

The liquid that has passed out of the filter and from which the solids have been removed. Also referred to as discharge liquor, effluent, mother liquor or strong liquor.

Pressure Drop

The clean pressure drop is the differential pressure across a vessel, measured in pressure units at rated flow on new elements with clean product. The term pressure drop can be applied to any individual porous medium such as a filter cake or septum or flow through a pipe or channel.

"Reproduced with permission from Dictionary of Filtration and Separation (ISBN 978 0 9559346 0 5) – Steve Tarleton and Richard Wakeman, Filtration Solutions, UK - for more information see <http://homepage.ntlworld.com/steve.tarleton/DictionaryAdvert.pdf>"