

# EN 1822:2009

Classification: EPA, HEPA and ULPA air filters



## The filter class description are:

**EPA 10 - EPA 12:**  
Efficiency Particulate Air Filters

**HEPA 13 - HEPA 14:**  
High Efficiency Particulate Air Filters

**ULPA 15 - ULPA 17:**  
Ultra Low Penetration Air Filters

## High Efficiency Air Filters (EPA, HEPA and ULPA)

### EN 1822:2009

This new European standard is based on particle counting methods that actually cover most needs for different applications. EN 1822:2009 differs from its previous edition (EN 1822:1998) by including the following:

- An alternative method for leakage testing of Group H filters with shapes other than panels
- An alternative test method for using a solid, instead of a liquid, test aerosol
- A method for testing and classifying of filters made out of membrane-type media
- A method for testing and classifying filters made out of synthetic fibre media

The main difference is related to the classification for the filter classes H10 - H12, which has now been changed to E10 - E12.



Camfil Farr	DATA SHEET
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# EN 1822:2009

## Classification: EPA, HEPA and ULPA air filters

Camfil Farr is the leading manufacturer of clean air solutions and a member of committees for European and international filtration standards.



To give you a brief overview of the main changes in EN 1822:2009, please see the following tables:

Old classification

Filter Group	Integral value
Filter Class	Efficiency (%)
<del>H10</del>	<del>≥ 85</del>
<del>H11</del>	<del>≥ 95</del>
<del>H12</del>	<del>≥ 99,5</del>
<del>H13</del>	<del>&gt; 99,95</del>

E10	≥ 85
E11	≥ 95
E12	≥ 99,5

New classification

Filter Group	Integral value		Local value <sup>a b</sup>	
	Efficiency (%)	Penetration (%)	Efficiency (%)	Penetration (%)
E10	≥ 85	≤ 15	... <sup>c</sup>	... <sup>c</sup>
E11	≥ 95	≤ 5	... <sup>c</sup>	... <sup>c</sup>
E12	≥ 99,5	≤ 0,5	... <sup>c</sup>	... <sup>c</sup>
H13	≥ 99,95	≤ 0,05	≥ 99,75	≤ 0,25
H14	≥ 99,995	≤ 0,005	≥ 99,975	≤ 0,025
U15	≥ 99,9995	≤ 0,0005	≥ 99,9975	≤ 0,0025
U16	≥ 99,99995	≤ 0,00005	≥ 99,99975	≤ 0,00025
U17	≥ 99,999995	≤ 0,0000005	≥ 99,9999	≤ 0,0001

<sup>a</sup>See 7.5.2 and EN 1822-4  
<sup>b</sup>Local penetration values lower than those given in the table may be agreed between supplier and purchaser.  
<sup>c</sup>Group E filters (Classes E10, E11 and E12) cannot, and shall not, be leak-tested for classification purposes.

These filter have to be verified at least with statistical methods (EN1822-5:2009).

**When you use Camfil Farr products you have the guarantee that our filters fully comply with the latest European standards.**

