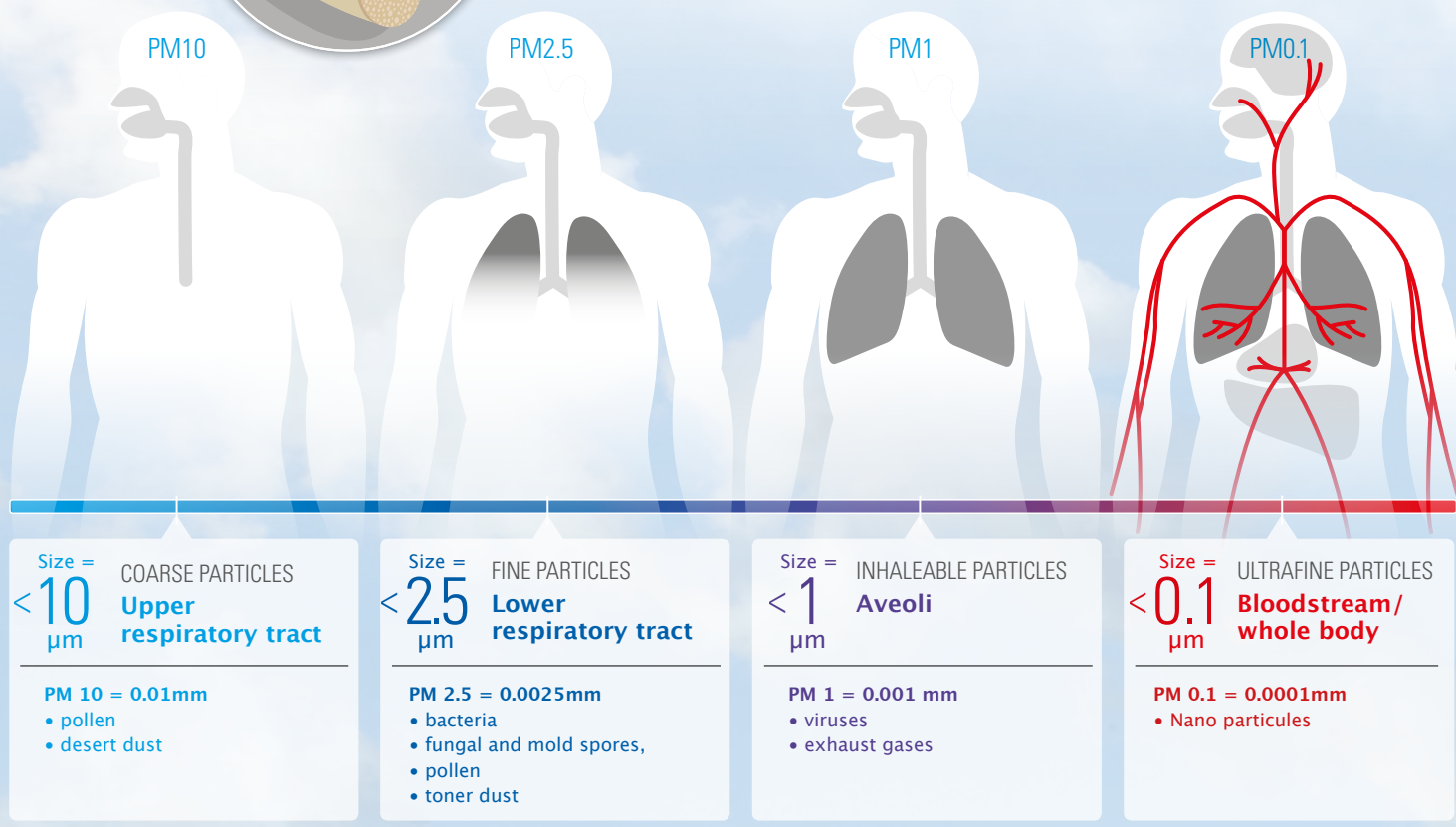
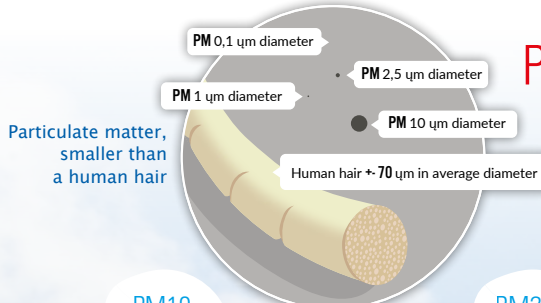




**ISO16890 STANDARD**

# PENETRATION OF PARTICLES INTO THE BODY

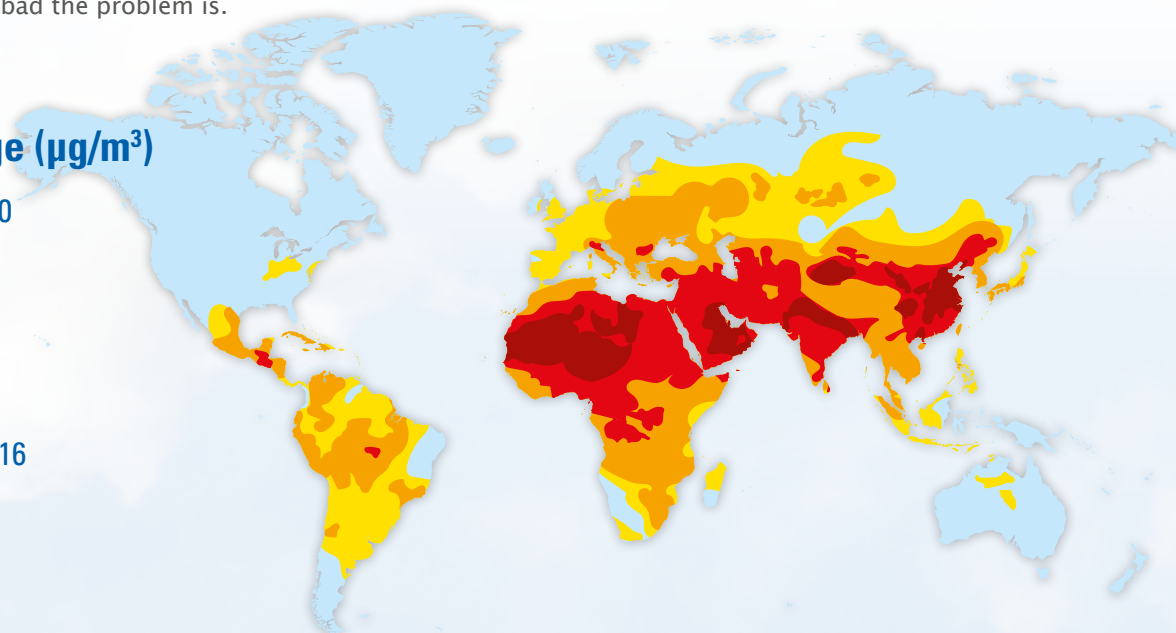
(THE SMALLER THE PARTICLES, THE MORE DANGEROUS THEY ARE)



An estimated 92% of the world's population lives in areas where air pollution exceeds safety limits, according to the World Health Organization (WHO), which has released new research showing where the worst - and least - affected places are. This map shows just how bad the problem is.

## Annual average ( $\mu\text{g}/\text{m}^3$ )

- LESS THAN 10
- 10-12 ODA1
- 12-14 ODA2
- 14-16 ODA3
- MORE THAN 16



Source: WHO

**Supply air, (SUP)** = Airflow entering the treated room, or air entering the system after any treatment

\* **MIN** filtration requirementS ISO ePM1 50%

\*\* **MIN** filtration requirementS ISO ePM2.5 50%

	PM2.5	PM10
<b>ODA1</b>	≤ 10µg/m <sup>3</sup>	≤ 20µg/m <sup>3</sup>
<b>ODA2</b>	≤ 15µg/m <sup>3</sup>	≤ 30µg/m <sup>3</sup>
<b>ODA3</b>	> 15µg/m <sup>3</sup>	> 30µg/m <sup>3</sup>

	ePM1 SUP1*	ePM1 SUP2*	ePM2.5 SUP3**	ePM10 SUP4	ePM10 SUP5
<b>ODA1</b>	60%	50%	60%	60%	50%
<b>ODA2</b>	80%	70%	70%	80%	60%
<b>ODA3</b>	90%	80%	80%	90%	80%
	<b>Industrial applications with high hygienic demands e.g. like:</b> <ul style="list-style-type: none"> <li>• hospitals</li> <li>• pharmaceuticals</li> <li>• electronics</li> <li>• supply air to clean rooms</li> </ul>	<b>Rooms for permanent occupation e.g. like:</b> <ul style="list-style-type: none"> <li>• kindergarten</li> <li>• offices</li> <li>• hotels</li> <li>• residential</li> <li>• meeting rooms</li> <li>• exhibition halls</li> <li>• conference halls</li> <li>• theatres</li> <li>• cinemas</li> <li>• concert halls</li> </ul> <b>Industrial applications with medium hygienic demands e.g. like:</b> <ul style="list-style-type: none"> <li>• food &amp; beverages production</li> </ul>	<b>Rooms with temporary occupation e.g. like:</b> <ul style="list-style-type: none"> <li>• storage</li> <li>• shopping centres</li> <li>• washing rooms</li> <li>• server rooms</li> <li>• copier rooms</li> </ul> <b>Industrial applications with low hygienic demand e.g. like:</b> <ul style="list-style-type: none"> <li>• food &amp; beverages production with low hygienic demand</li> </ul>	<b>Rooms with short term occupation e.g. like:</b> <ul style="list-style-type: none"> <li>• rest rooms</li> <li>• storage rooms</li> <li>• stair ways</li> </ul> <b>Industrial applications without hygienic demands e.g. like:</b> <ul style="list-style-type: none"> <li>• general production areas in automotive industry</li> </ul>	<b>Rooms without occupation e.g. like:</b> <ul style="list-style-type: none"> <li>• garbage</li> <li>• data centres</li> <li>• underground car parks</li> </ul> <b>Production areas of the heavy industry e.g. like:</b> <ul style="list-style-type: none"> <li>• steel mill</li> <li>• smelters</li> <li>• welding plants</li> </ul>

The ISO 16890 standard is the new worldwide guideline for testing and classifying air filters and has replaced the EN779: 2012 standard.

With the new ISO16890 standard the air filters are divided into four groups. A prerequisite for each group is that a filter captures at least 50% of the appropriate particle size range. If a filter, for example, captures more than 50% of PM1 particles, it will be grouped as an ISO ePM1 filter. The respective efficiency is then reported, rounded in 5 % increments.

On the next page you will see some filters from our assortment classified according to the new ISO16890 standard.

## THE BENEFITS OF ISO16890

The new standard offers several improvements when compared to the EN779 Standard:

- One global international standard
- The ISO16890 records their performance at a particle spectrum of 0.3 up to 10 microns (versus the EN779 test which qualified fine filter performance at 0.4 microns)
- Fractional efficiencies of the filter prior to and after IPA discharge of any electrostatic properties can be seen.
- Filters can be chosen for their specific performance related to the need of the application.

Want to learn more about the new ISO16890 standard or need help in choosing the right air filter for the best protection against fine dust?

We're always ready to help you!

The team of AFPRO Filters.

	ISO Coarse	PM10	PM2.5	ePM1
95%				
90%				
85%				HQ98
80%				HPQ-98, CP-F9
75%				
70%				
65%				HQ85
60%				HPQ-85, CP-F7
55%				ECO70, HQ80
50%				
	ISO Coarse	PM10	ePM2.5	PM1
95%				
90%				
85%				
80%				
75%				
70%				
65%			LSB80	
60%			HPQ-65, CP-M6	
55%				
50%			HQ65	
	ISO Coarse	ePM10	PM2.5	PM1
95%				
90%				
85%				
80%				
75%		CP-M5		
70%		HQ55, LSB60		
65%				
60%				
55%				
50%				
	ISO Coarse	PM10	PM2.5	PM1
95%				
90%				
85%				
80%	HS55, HSB55			
75%				
70%	HS35, HSB35			
65%				
60%	APMC, AERO			
55%				
50%	GP			

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