

First European limit values for PM_{2.5}

PM_{2.5} are particles with a diameter smaller than 2.5 µm. Because of their small dimension they can penetrate deeply into the lungs and so bring other polluting substances that are on the particles into the human body.

On 14 April 2008 the new European Air Quality Directive 2008/50/EC was approved. In this, the limit values for PM_{2.5} were included for the first time. The limit value for 2010 was set at 25 µg/m³. This target was adopted in the MINA plan 3+ (2008-2010). The indicative limit value for 2020 of 20 µg/m³ will be reviewed in 2013 by the European Commission.

To protect human health, Europe also set limits and target values for the average exposure index (AEI). This index includes the three-year running annual mean PM_{2.5} concentrations averaged over the urban background locations of the Member State. In 2015, the AEI can be a maximum of 20 µg/m³. The target value in 2020 is a percentage decrease compared to the AEI in 2010, where the percentage decrease to be achieved depends on the AEI reached in 2010.

PM_{2.5} concentration in Flanders

In September 2005, Europe specified a standardised method for the measurement of PM_{2.5}. In 2008, VMM completed an initial study for determining the calibration factor for the automatic measuring equipment compared to the European reference method. Due to the application of the new calibration factor, these figures differ compared to the figures reported earlier.

At all measurements points the measured PM_{2.5} concentration is under the target 25 µg/m³. In urban areas the target of 20 µg/m³ for 2015 will not yet be reached. From 1 January 2009 additional measurements are carried out at urban background stations for the determination of the average exposure index.

PM_{2.5} concentration (µg/m³)	2000	2001	2002	2003	2004	2005	2006	2007	2008
Borgerhout	28	25	26	25	24	22
Evergem	27	25	26	24	23
Hasselt	26	22	23	21	21
Houtem	19	21	21	20	19
Kallo-Liefkenshoek tunnel	19
Kallo-Sluis Kallo	18
Kortrijk	28	26	..	..	..	..
Mechelen-Nekkerspoel	27	29	26	..	..	..	..
Mechelen-Technopolis	25	22	22	..	24	21
Mechelen South	..	28	31	33	27	21	21	19	21
Menen	30	25	24	26	..	..
Verrebroek	17
Zaventem	24	27	27	29	24	21	25	24	22

Source: based on the telemetric monitoring network and the specific monitoring network studies, VMM