

# 1.A.3.b vii - Road Transport: Automobile Road Abrasion

## Short description

In sub-category *1.A.3.b vii - Road Transport: Automobile Road Abrasion* emissions from road abrasion in Road Transport are reported. Therefore, this sub-category is an important source for a) particle emissions and b) emissions of heavy metals, POPs etc. included in these particles.

Category Code	Method					AD					EF				
1.A.3.b.vii	T1, T3					NS, M					CS				
Key Category	SO <sub>2</sub>	NO <sub>x</sub>	NH <sub>3</sub>	NM VOC	CO	BC	Pb	Hg	Cd	Diox	PAH	HCB	TSP	PM <sub>10</sub>	PM <sub>2.5</sub>
1.A.3.b.vii	-	-	-	-	-	-	-/-	-	-/-	-	-	-	L/-	L/-	L/-

## Methodology

### Activity data

Abrasive emissions from tyre and brake wear are estimated based on vehicle-type specific mileage data. For detailed mileage data, please see [superordinate chapter](#) on abrasive emissions from road vehicles.

### Emission factors

Table 1: Default tier1 emission factors applied

	UNIT	PCs	LDVs	HDVs	Buses	Mopeds	Motorcycles
<b>BC</b>	[mg/km]	NA	NA	NA	NA	NA	NA
<b>PM<sub>2.5</sub></b>	[mg/km]	4,05	4,05	20,5	20,5	1,62	1,62
<b>PM<sub>10</sub></b>	[mg/km]	7,50	7,50	38,0	34,2	3,00	3,00
<b>TSP</b>	[mg/km]	15,0	15,0	76,0	76,0	6,00	6,00
<b>Pb</b>	[µg/km]	0,00006	0,00006	0,00031	0,00006	0,00002	0,00002
<b>Hg</b>	[µg/km]	NA	NA	NA	NA	NA	NA
<b>Cd</b>	[µg/km]	0,000003	0,000003	0,000016	0,000003	0,000001	0,000001
<b>As</b>	[µg/km]	0,00004	0,00004	0,00020	0,00004	0,00002	0,00002
<b>Cr</b>	[µg/km]	0,00108	0,00108	0,00547	0,00108	0,00043	0,00043
<b>Cu</b>	[µg/km]	0,00004	0,00004	0,00019	0,00004	0,00001	0,00001
<b>Ni</b>	[µg/km]	0,00057	0,00057	0,00289	0,00057	0,00023	0,00023
<b>Se</b>	[µg/km]	NA	NA	NA	NA	NA	NA
<b>Zn</b>	[µg/km]	0,00129	0,00129	0,00654	0,00129	0,00052	0,00052

## Discussion of emission trends

Table 2: Outcome of Key Category Analysis

for:	<b>TSP</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
by:	L/-	L/-	L/-

### Particulate Matter

*(from wear/abrasion only; no fuel combustion included)*

Emissions from road abrasion are directly linked to driven mileage. Thus, the overall trend of emissions from road abrasion is similar to the trend for total driven mileage.

## Recalculations

**Activity data** (mileage) have been revised due to the regular revision of the TREMOD model. (see [superordinate chapter](#) ).

However, the biggest changes occur in the tier1 **emission factors** that have been revised during a research study. The variety of old and revised emission factors cannot be compared here in a comprehensible way.



For more information on recalculated emission estimates for Base Year and 2018, please see the pollutant-specific recalculation tables following chapter [8.1 - Recalculations](#).

## Planned improvements

Besides a routine revision of the underlying model, no specific improvements are planned.