2.D.3.b - Road Paving

Short description

| Category Code Method | | | | | | AD | | | | | | | E | F | | | | | |
|---|---|-----------------|------------------|--------|---------------------------------|-------------------|-------------------------|-------|------|------|-----|----|-----|-------|------|-------|------|---------------|--------|
| 2.D.3 | 2.D.3.b T1 | | | AS | | | | | | CS | | | | | | | | | |
| | | NO _x | NMVOC | SO2 | NH3 | PM _{2.5} | PM ₁₀ | TSP | BC | со | Pb | Cd | Hg | Dio | x | PAH | HC | В | |
| Key C | Category: | -/- | -/- | -/- | - | -/- | -/- | -/- | - | - | - | - | - | - | | - | - | | |
| T = k | ey source b | y Tre | end L = k | æy s | ourc | e by Le | evel | | | | | | | | | | | | |
| Meth | nods | | | | | | | | | | | | | | | | | | |
| D | | | | Defau | lt | | | | | | | | | | | | | | |
| RA F | | | | Refer | ence / | Appro | bach | ۱ | | | | | | | | | | | |
| T1 | | | | Tier 1 | Fier 1 / Simple Methodology * | | | | | | | | | | | | | | |
| T2 | | | | Tier 2 | * | | | | | | | | | | | | | | |
| T3 | | | | Tier 3 | Fier 3 / Detailed Methodology * | | | | | | | | | | | | | | |
| C C | | | | CORIN | CORINAIR | | | | | | | | | | | | | | |
| CS C | | | | Count | Country Specific | | | | | | | | | | | | | | |
| M | | | | Mode | Iodel | | | | | | | | | | | | | | |
| * as o | described in | the | EMEP/CO | RINA | AIR E | missio | n Inve | entor | y Gı | uide | boc | k | 200 | 7, in | h th | he gi | roup | specific chap | pters. |
| AD - | Data Sour | ce f | or Activi | ty D | ata | | | | | | | | | | | | | | |
| NS National Statistics | | | | | | | | | | | | | | | | | | | |
| RS R | RS Regional Statistics | | | | | | | | | | | | | | | | | | |
| IS Ir | IS International Statistics | | | | | | | | | | | | | | | | | | |
| PS P | PS Plant Specific data | | | | | | | | | | | | | | | | | | |
| AS A | AS Associations, business organisations | | | | s | | | | | | | | | | | | | | |
| Q specific questionnaires, surveys | | | | | | | | | | | | | | | | | | | |
| EF - | Emission F | acto | ors | | | | | | | | | | | | | | | | |
| DD | efault (EME | P Gu | idebook) | | | | | | | | | | | | | | | | |
| C C | onfidential | | | | | | | | | | | | | | | | | | |
| CS C | ountry Spec | cific | | | | | | | | | | | | | | | | | |
| PS PI | ant Specific | dat | a | | | | | | | | | | | | | | | | |

Currently, the report tables list produced quantities of mixed asphalt products (from stationary installations only) and NMVOC, NOx and SO2 emissions caused of this. Only emissions from asphalt production are reported. Figures relative to emissions released during laying of asphalt have not been examined.

Method

Activity data

The applicable quantity of mixed asphalt products produced (activity rate) has been taken from communications of the Deutscher Asphaltverband (DAV; German asphalt association). In total about 660 asphalt-mixing plants produce most recently 38 Million tonnes of hot-mix for road paving ¹⁾.

Emission factors

Emission factors have been determined country-specifically, pursuant to Tier 2. For determination of emission factors for emissions measurements from over 400 asphalt-mixing plants, made during the period 1989 through 2000, were used. The majority of the emissions occur during drying of pertinent mineral substances. Almost all of the NMVOC emissions originate in the organic raw materials used, and they are released primarily in parallel-drum operation, as well as from mixers and

loading areas. On average, about 50% of the NOx and SO_x involved come from the mineral substances (proportional process emissions). CO emissions are calculated solely in connection with fuel inputs.

Table 1: Overview of applied emission factors, in kg/t

| pollutant | Name of Category | EF value | EF trend |
|-----------|-----------------------------|----------|----------|
| NMVOC | Production of mixed asphalt | 0.030 | constant |
| NOx | Production of mixed asphalt | 0.015 | constant |
| SOx | Production of mixed asphalt | 0.030 | constant |
| TSP | Production of mixed asphalt | 0.006 | constant |
| PM10 | Production of mixed asphalt | 0.0057 | constant |
| PM2.5 | Production of mixed asphalt | 0.003 | constant |

Trends in emissions

All trends in emissions correspond to trends of production amount. No rising trends are to identify.

trends of emissions of road paving

Emissions by pollutant / Emissionen nach Schadstoff



* Base Year for PM = 1995 / Basisjahr für Feinstäube (PM) ist 1995 Source: German Emission Inventory (03.12.2021)

Emission trends of road paving

Recalculations

With activity data and emission factors remaining unrevised, no recalculations have been carried out compared to last year's submission.



For pollutant-specific information on recalculated emission estimates for Base Year and 2019, please see the pollutant specific recalculation tables following chapter 8.1 - Recalculations.

Planned improvements

At the moment, no category-specific improvements are planned.

¹⁾ https://www.asphalt.de/themen/aktuelles/