# 2.B.10.b - Storage, Handling and Transport of Chemical Products

| Category Code | Method | | | | | AD | | | EF | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.B.10.b | T2 | | | | | NS | | | CS | | | | | |
| | NO$_x$ | NMVOC | SO$_2$ | NH$_3$ | PM$_{2.5}$ | PM$_{10}$ | TSP | BC | CO | Pb | Cd | Hg | Diox | PAH | HCB |
| Key Category: | - | -/- | - | - | - | - | - | - | - | - | - | - | - | - | - |

**T** = key source by Trend **L** = key source by Level

| Methods | |
|---|---|
| **D** | Default |
| **T1** | Tier 1 / Simple Methodology * |
| **T2** | Tier 2* |
| **T3** | Tier 3 / Detailed Methodology * |
| **C** | CORINAIR |
| **CS** | Country Specific |
| **M** | Model |

* as described in the EMEP/EEA Emission Inventory Guidebook - 2019, in the group specific chapters.

| AD - Data Source for Activity Data | |
|---|---|
| **NS** | National Statistics |
| **RS** | Regional Statistics |
| **IS** | International Statistics |
| **PS** | Plant Specific data |
| **As** | Associations, business organisations |
| **Q** | specific Questionnaires (or surveys) |
| **M** | Model / Modelled |
| **C** | Confidential |

| EF - Emission Factors | |
|---|---|
| **D** | Default (EMEP Guidebook) |
| **C** | Confidential |
| **CS** | Country Specific |
| **PS** | Plant Specific data |
| **M** | Model / Modelled |

## Short description

Emissions from storage consider all refinery products. According to the EMEP guidebook, fuel-related emissions are reported under 1.B.2. (see Chapter 3., 1.B.2a Oil ). Emissions from other mineral oil products that are not used as fuel (like naphtha, methanol etc.) are reported separately here.

## Method

A distinction of mineral oil products is only made between fuels and naphtha. Based on the individual annual amount for these two subcategories, a split factor is calculated.

### Activity data

The annual production of naphtha through the time series is listed in **Table 1** below.

**Table 1**: Annual production of naphtha from 1990 to 2020

| | Naphtha production in kt |
|---|---|
| 1990 | 11546.09 |
| 1991 | 12566.84 |
| 1992 | 12705.24 |
| 1993 | 12986.79 |
| 1994 | 13393.21 |
| 1995 | 13369.77 |
| 1996 | 13430.44 |
| 1997 | 15070.53 |
| 1998 | 15959.62 |
| 1999 | 15810.00 |
| 2000 | 16091.47 |
| 2001 | 16736.24 |
| 2002 | 16660.01 |
| 2003 | 16981.74 |
| 2004 | 17895.30 |
| 2005 | 18024.31 |
| 2006 | 17016.65 |
| 2007 | 16708.99 |
| 2008 | 15744.92 |
| 2009 | 15236.77 |
| 2010 | 16610.69 |
| 2011 | 15708.84 |
| 2012 | 15770.00 |
| 2013 | 16213.82 |
| 2014 | 17065.99 |
| 2015 | 16331.02 |
| 2016 | 15797.92 |
| 2017 | 15605.03 |
| 2018 | 11439.19 |
| 2019 | 11263.72 |
| 2020 | 11804.49 |

## Emission factors

The emission factor used for NMVOC was determined by evaluating emission declarations from refineries for the period 2004 through 2016, in the framework of a research project (Bender & von Müller, 2019)[1]. Since no data was available for earlier years, the data obtained this way was used for all years as of 1990.

**Table 2**: Emission factor of NMVOC from storage of petroleum products

| Source of emission factor | Substance | Unit | Value |
|---|---|---|---|
| Storage of liquid petroleum products in tank-storage facilities outside of refineries | NMVOC | g/m³ | 100 |
| Storage of gaseous petroleum products in tank-storage facilities outside of refineries | NMVOC | g/m³ | 500 |

# Recalculations

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

No specific improvement is planned for this category.

---

[1] Bender, M., & von Müller, G. (2019). Konsolidierung der Treibhausgasemissionsberechnungen unter der 2. Verpflichtungsperiode des Kyoto-Protokolls und der neuen Klimaschutz-Berichterstattungspflichten an die EU (FKZ 3716 41 107 0).