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 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
2021	13686.27

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, in [g/m^3]

	EF
Storage of liquid petroleum products in tank-storage facilities outside of refineries	100
Storage of gaseous petroleum products in tank-storage facilities outside of refineries	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 2020**, 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). Emissionsfaktoren zu Raffinerien für die nationale Emissionsberichterstattung (FKZ 3716 41 107 0).