

1.A.2.b - Stationary Combustion in Manufacturing Industries and Construction: Non-Ferrous Metals

Short description

Sub-category 1.A.2.b - Stationary Combustion in Manufacturing Industries and Construction: Non-Ferrous Metals includes aluminium production (sub-divided into primary and resmelted aluminium) as well as lead production, thermal galvanisation, copper and zinc production.

In Germany, aluminium is produced at four foundries, in electrolytic furnaces with pre-burnt anodes. The principal emission sources are resulting from fuel provided in the energy related processes.

NFR Code	Method	AD	EF
1.A.2.b	T2	NS	CS
Method(s) applied			
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 category chapters.			
(source for) Activity Data			
NS	National Statistics		
RS	Regional Statistics		
IS	International Statistics		
PS	Plant Specific		
As	Associations, business organisations		
Q	specific Questionnaires (or surveys)		
M	Model / Modelled		
C	Confidential		
(source for) Emission Factors			
D	Default (EMEP Guidebook)		
CS	Country Specific		
PS	Plant Specific		
M	Model / Modelled		
C	Confidential		

NO _x	NM VOC	SO ₂	NH ₃	PM _{2.5}	PM ₁₀	TSP	BC	CO	Pb	Cd	Hg	As	Cr	Cu	Ni	Se	Zn	PCDD/F	B(a)P	B(b)F	B(k)F	I(x)P	PAH1-4	HCB	PCBs
-/-	-/-	-/-	-/-	IE	IE	IE	IE	-/-	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
				L/- key source by Level only																					
				-/T key source by Trend only																					
				L/T key source by both Level and Trend																					
				-/- no key source for this pollutant																					
				IE emission of specific pollutant Included Elsewhere (i.e. in another category)																					
				NE emission of specific pollutant Not Estimated (yet)																					
				NA specific pollutant not emitted from this source or activity = Not Applicable																					
				* no analysis done																					

Method

Activity data

The source of the fuel inputs consists of the statistics for the manufacturing sector (Statistik 060 - Energieverwendung des produzierenden Gewerbes / energy use in the manufacturing sector), DESTATIS, reporting number 27.43 and 27.44, production and initial processing of lead, zinc and tin, production and initial processing of copper - and, for differentiations relative to heat and electricity production, Statistik 067 (DESTATIS).

Data for fuel consumption for production and initial processing of precious metals are also provided by these statistics.

Emission factors

Reported pollutants are NO_x, NMVOC, SO₂, NH₃ and CO. Instead, all particulate matter emissions are reported as process emissions in the associated categories in 2.C. Germany carefully checked all possible additional sources for HCB in this sector. This includes the BREF documents as well as other literature. There was no indication for any missing emission found. The emission factors for HCB in the Guidebook are only applicable to processes not occurring in Germany.

The underlying data for the emission factors used is provided by the report on the research project "Ermittlung und Evaluierung von Emissionsfaktoren für Feuerungsanlagen in Deutschland für die Jahre 1995, 2000 und 2010" (Determination and evaluation of emission factors for combustion systems in Germany for the years 1995, 2000 and 2010"; RENTZ et al, 2002)¹⁾. The values for the intermediate years 1996 - 1999 and 2001 - 2010 are obtained via linear interpolation; adjusted values for the following years.

Recalculations



For **pollutant-specific information on recalculated emission estimates for Base Year and 2023**, please see the recalculation tables following [chapter 9.1 - Recalculations](#).

Planned improvements



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

¹⁾ Rentz et al. (2002): Rentz, O., Karl, U., Peter, H.: Ermittlung und Evaluierung von Emissionsfaktoren für Feuerungsanlagen in Deutschland für die Jahre 1995, 2000 und 2010: Forschungsbericht 299 43 142; on behalf of the Umweltbundesamt; final report; Deutsch-Französisches Inst. f. Umweltforschung, Univ. (TH); <https://publikationen.bibliothek.kit.edu/21412002>; Karlsruhe / Dessau-Roßlau, 2002.