

2.C.6 - Zinc Production

Short description

Within this NFR subcategory, SO₂, PM_{2.5}, PM₁₀, TSP, As, Cd, Hg, Pb, Zn, PCDD/F, and PCB emissions from the production of zinc are reported.

Category Code	Method					AD					EF				
2.C.6	T1					AS					D,CS				
	NO _x	NM VOC	SO ₂	NH ₃	PM _{2.5}	PM ₁₀	TSP	BC	CO	Pb	Cd	Hg	Diox	PAH	HCB
Key Category:	-	-	-/-	-	-/-	-/-	-/-	-	-	-/-	-/-	-/-	-/-	-	-

Method

Activity data

The yearly production figures were taken from the annual statistical report of the German association for non-ferrous metals [\[Lit. 1\]](#).

Emission factors

The emission factors are either default values according to the 2019 EMEP/EEA air pollutant emission inventory guidebook [\[Lit. 2\]](#) or determined in several research projects. The EF for the heavy metals (HM) are taken from a research project [\[Lit. 3\]](#).

Table 1: Tier 2 emission factors applied for primary zinc production

Pollutant	EF	Unit
SO ₂	1.35	kg/t
PM _{2.5}	0.0385	kg/t
PM ₁₀	0.0613	kg/t
TSP	0.100	kg/t
As	123.882	mg/t
Cd	1,085	mg/t
Hg	0.5	g/t
Pb	19,605	mg/t
Zn	51.968	mg/t
PCDD/F	0.15	µg/t

Table 2: Tier 2 emission factors applied for secondary zinc production

Pollutant	EF	Unit
SO ₂	1.35	kg/t
PM _{2.5}	0.0385	kg/t
PM ₁₀	0.0613	kg/t
TSP	0.100	kg/t
As	0.03	g/t
Cd	0.23	g/t
Hg	1.5	mg/t
Pb	0.95	g/t
Zn	9	g/t
PCDD/F	0.15	µg/t

Recalculations

No recalculations were necessary.



For more 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 category specific improvements are planned.

Bibliography

Lit. 1: German association for non-ferrous metals (WirtschaftsVereinigung Metalle): Annual statistical report:

<https://www.wvmetalle.de>

Lit. 2: EMEP/EEA, 2019: EMEP/EEA air pollutant emission inventory guidebook 2019, Copenhagen, 2019.

<https://www.eea.europa.eu/publications/emep-eea-guidebook-2019/part-b-sectoral-guidance-chapters/2-industrial-processes/2-c-metal-production/2-c-6-zinc-production-2016/view>

Lit. 3: Ökopöl, IER, IZT, IfG: Bereitstellung einer qualitätsgesicherten Datengrundlage für die Emissionsberichterstattung zur Umsetzung von internationalen Luftreinhalte- und Klimaschutzvereinbarungen für ausgewählte Industriebranchen
Teilvorhaben 2: NE-Metallindustrie, Kalkindustrie, Gießereien.