

2.C.6 - Zinc Production

Short description

Within this NFR sub-category, 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				
Key Category	SO ₂	NO _x	NH ₃	NMVOC	CO	BC	Pb	Hg	Cd	Diox	PAH	HCB	TSP	PM ₁₀	PM _{2.5}
2.C.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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: Tier1 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	1,085.046	mg/t
Hg	0.5	g/t
Pb	19,604.578	mg/t
Zn	51.968	mg/t
PCDD/F	0.15	µg/t

Table 2: Tier1 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

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



For more information on recalculated emission estimates for Base Year and 2018, 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: Ökopol, 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.