

## 2.C.6 - Zinc Production

### Short description

Within this NFR subcategory, SO<sub>2</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>, 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 <sub>x</sub>	NM VOC	SO <sub>2</sub>	NH <sub>3</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	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 <sub>2</sub>	1.35	kg/t
PM <sub>2.5</sub>	0.0385	kg/t
PM <sub>10</sub>	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 <sub>2</sub>	1.35	kg/t
PM <sub>2.5</sub>	0.0385	kg/t
PM <sub>10</sub>	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 2019**, please see the pollutant specific recalculation tables following chapter [8.1 - Recalculations](#).

## Planned improvements

No category specific improvements are planned.

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## 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.