

## 2.C.6 - Zinc Production

### Short description

Within this NFR sub-category, 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 |     |     |                  |                   |
| Key Category  | SO <sub>2</sub> | NO <sub>x</sub> | NH <sub>3</sub> | NM VOC | CO | BC | Pb | Hg | Cd | Diox | PAH  | HCb | TSP | PM <sub>10</sub> | PM <sub>2.5</sub> |
| 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 entire time series

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

### 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.

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## Bibliography

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

<https://www.wvmetalle.de>

**Lit. 2:** 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.

**Lit. 3:**