

2.C.2 - Ferroalloys Production

Short description

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

Source category *Ferroalloys Production* is of minor significance and not a key source.

Ferroalloys are non-ferrous metal aggregates used in steel production. Germany has five producers of ferrochrome, silicon metal and ferrosilicon. These materials are used as alloying agents in stainless-steel production. The only process used in Germany since 1995 is the electric arc process. This process generates only a small amount of process-related emissions (specifically due to electrode consumption). The blast-furnace process, which produces relatively higher emissions, was used to some extent until 1995.

Method

Activity data

The activity data from the years 1990 to 1994 has been taken from official production statistics of the Federal Statistical Office. Since 1995, the data from the official production statistics is no longer suitable to use in this context. Since then, data from the British Geological Survey (Brown et al., 2019) has been used instead.

The most up-to-date available activity data is from 2018. This data has been carried forward into 2019. An activity rate figure of 53,258 tonnes has been used for the year 2019 (adjusted value of 2018 statistical data), a recalculation will be made when updated statistical data is available. In general, this update happens every two years.

Emission factors

The emission factor for TSP (0.1 kg/t for the current year and back to 1998) and the splitting factors for PM₁₀ and PM_{2.5} were determined in a research project (UBA, 2007) ^[Lit. 1]. There were higher but decreasing EF for the period 1990 -1997 due to the technology changes.

Recalculations

Recalculations were necessary due to updates in the activity data for the years 2017 and 2018.



For more information on recalculated emission estimates for the Base Year and 2018, please see the pollutant specific recalculation tables following chapter [8.1 - Recalculations](#).

Planned improvements

At the moment, no category specific improvements are planned.

Bibliography

Lit. 1: UBA, 2007: Jörß, Wolfram; Handke, Volker; Lambrecht, Udo and Dünnebeil, Frank (2007): Emissionen und Maßnahmenanalyse Feinstaub 2000 – 2020. UBA-TEXTE Nr. 38/2007. Dessau-Roßlau: Umweltbundesamt. URL: <https://www.umweltbundesamt.de/publikationen/emissionen-massnahmenanalyse-feinstaub-2000-2020>.

Lit. 2: BRITISH GEOLOGICAL SURVEY, WORLD MINERAL PRODUCTION;
<https://www2.bgs.ac.uk/mineralsUK/statistics/worldStatistics.html>