

2.B.10.a - Other Chemicals

Short description

In sub-category *2.B.10.a - Other Chemicals*, emissions from the production of organic chemicals, titanium dioxide, sulphuric acid, carbon black, fertilizers and from the chlor-alkali industry are reported. Relevant pollutants are NMVOC, CO, PCDD/F, SO_x, NH₃, PM_{2.5}, PM₁₀, TSP and Hg.

Table 1: Overview of emission sources covered

Emission sources	Pollutants	Method	AD	EF	Key Category
Organic products	NMVOC (PCDD/F <small>only for Ethylene Dichloride</small>)	T2	NS	CS	
Carbon Black	CO, SO ₂ , TSP, PM ₁₀ , PM _{2.5}	T2	NS	D, CS	
Fertilizers	TSP, PM ₁₀ , PM _{2.5} , NH ₃	T2	-	D, CS	
Sulphuric acid	SO ₂	T2	NS	CS	L & T
Chlor-alkali industry	Hg	T3	PS	-	T

T = key source by Trend **L** = key source by Level

Methods

D	Default
RA	Reference Approach
T1	Tier 1 / Simple Methodology *
T2	Tier 2*
T3	Tier 3 / Detailed Methodology *
C	CORINAIR
CS	Country Specific
M	Model

* as described in the EMEP/CORINAIR Emission Inventory Guidebook - 2007, in the group specific chapters.

AD - Data Source for Activity Data

NS	National Statistics
RS	Regional Statistics
IS	International Statistics
PS	Plant Specific data
AS	Associations, business organisations
Q	specific questionnaires, surveys

EF - Emission Factors

D	Default (EMEP Guidebook)
C	Confidential
CS	Country Specific
PS	Plant Specific data

Methodology

Organic products: activity data and emission factors

The annual production volumes for all organic products are extracted from national production statistics ¹⁾ by the Federal Statistical Office.

Organic products comprise:

- Acrylonitrile
- Ethylene
- Ethylbenzene
- Ethylene Dichloride
- Ethylene Oxide
- Formaldehyde (Methanal)
- Methanol
- Phthalic Anhydride
- Propene
- Styrene
- Vinyl Chloride
- Polyethylene (LD/HD)
- Polypropylene
- Polystyrene
- Polyvinyl Chloride
- Styrene Copolymeres

The emission factors for the production of organic products as shown in table 2 and 3 are derived from best reference documents polymers and LVOC mostly for the early years. For later years, plant-specific data on an aggregated level were used.

Table 2: NMVOC emission factors for organic products in Germany, in kg/t

Product	Acrylonitrile	Ethylbenzene	Ethylene	Ethylene Dichloride	Ethylene Oxide	Formaldehyde (Methanal)	Methanol	Phthalic Anhydride	Propene	Styrene	Vinyl Chloride
from 1990-1994	5	0.6	5	C	5	5	0.04	5	2.5	0.02	0.2
1995	0.07	0.02	0.4	C	0.06	0.02	0.04	0.2	0.2	0.02	0.2
1996	0.05	0.015	0.3	C	0.045	0.015	0.04	0.15	0.15	0.02	0.15
1997	0.05	0.015	0.3	C	0.045	0.015	0.04	0.15	0.15	0.02	0.15
1998	0.04	0.012	0.25	C	0.04	0.012	0.04	0.12	0.12	0.02	0.12
1999	0.04	0.012	0.25	C	0.04	0.012	0.04	0.12	0.12	0.02	0.12
from 2000	0.035	0.01	0.2	C	0.03	0.01	0.04	0.1	0.1	0.02	0.1

¹⁾

DESTATIS, Fachserie 4, Reihe 3.1, Produzierendes Gewerbe, Produktion im Produzierenden Gewerbe ("manufacturing industry; production in the manufacturing industry")