

TNO REPORT | 2019 R10320**Ratio between PM2.5 and PM10 for emissions
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A PM2.5 fraction per emission source

1 Introduction

In 2007, PM2.5 fractions (ratio of PM2.5 / PM10) have been derived for all emission sources in the Dutch Pollutant Release and Transfer Register (Visschedijk, 2007). These fractions were used by default to calculate PM2.5 emissions by multiplying the PM10 emission of sector specific sources with the PM2.5 fraction. These calculations are necessary to estimate the National PM2.5 emission in the annual inventory.

As more data on PM2.5 emission from individual companies have become available in the past decennium, an update of the PM2.5 factors is deemed necessary to reflect the current (abatement) technology in the Dutch Pollutant Release and Transfer Register.

About 400 companies report their emissions in an annual environmental report (AER). In 2007, most companies did not report PM2.5 emissions, and therefore, the PM2.5 fractions were used to calculate the PM2.5 emissions. Currently, most companies do report PM10 and PM2.5 emissions which are verified by the competent authorities. In the current study these reported PM2.5 emission fractions have been compared to the PM2.5 fractions from 2007.

It was concluded that the default PM2.5 fractions in the energy and industry sector can be improved using PM10 and PM2.5 emissions reported by individual companies. This report describes these new PM2.5 fractions in the energy and industry sector. The fractions, including a description what each fraction is based on, is included in annex 1. Chapters 2 and 3 contain a general description of the methodology and a comparison between the PM2.5 emissions, as calculated with the old and new PM2.5 fractions.

2 Method

Updated default PM_{2.5} fractions have been derived for all emission sources and fuel type separately, following the emission source specification used in the Dutch Pollutant Release and Transfer Register. See Annex 1 from the complete list of emission sources and the new PM_{2.5} fractions.

The PM_{2.5} fractions are based on the following three data sources:

1. Data from individual companies for the last available years
2. Standard fractions from CEPMEIP (Visschedijk et al., 2004)
3. Standard fractions from Ehrlich et al. (2007)

If data quality of emission data from individual companies in a sector was considered high enough, then reported PM_{2.5}/PM₁₀ ratios have been used to derive PM_{2.5} fractions for the sector under consideration. The data quality was assessed by expert judgement and a comparison with PM_{2.5}/PM₁₀ ratios reported in literature. Mainly data from the last few years were used, unless it was known that most emissions were released in earlier years (for example when a large company was only operational in earlier years). The AER often specifies the specific installation(s) that cause the emission. From literature it can be assessed if the reported PM_{2.5}/PM₁₀ ratios are within what would be expected for such an installation/technology. Only if reported emissions were considered highly unlikely, or expected not to be representative for the sector, then the reported emissions were not used to derive PM_{2.5} fractions.

If the data quality from individual companies was not high enough, then data from CEPMEIP (Visschedijk et al., 2004) or Ehrlich et al. (2007) was used, similar to the fractions that were used in Visschedijk (2007).

The CEPMEIP dataset contains PM_{2.5} and PM₁₀ emission factors per source category, per fuel or production type and per level of technological sophistication. See Table 1 for the PM_{2.5} fractions from CEPMEIP that were used for the new list of PM_{2.5} fractions.

The paper by Ehrlich et al. (2007) contains measured PM₁₀, PM_{2.5} and PM₁ fractions (% of TSP) for over 100 categories, sorted by installation type, fuel, installation size and production type. See Table 2 for the PM_{2.5} fractions from Ehrlich et al. (2007) that were used in the compilation of the new list of PM_{2.5} fractions.

Table 1 Default PM2.5 fractions from CEPMEIP, used in the Pollutant Release and Transfer Register in 2019

Category	PM2.5 fraction
CEPMEIP default for combustion of coal in a medium sized combustor	0.50
CEPMEIP default for combustion of gas/diesel oil	0.95
CEPMEIP default for combustion of gaseous fuels	1.00
CEPMEIP default for combustion of industrial black liquor	0.75
CEPMEIP default for mechanically formed fugitive emissions	0.35
CEPMEIP default for industrial waste fuels	0.67
CEPMEIP default for secondary copper production	0.75
CEPMEIP default storage and handling of coal	0.10
CEPMEIP, average for storage and handling bulk	0.15
CEPMEIP/Ehrlich default for combustion of heavy fuel oil	0.85
CEPMEIP/Ehrlich medium sized wood-fired boiler-fired boiler	0.75
CEPMEIP average integrated iron and steel plant class 2	0.65
CEPMEIP default for coke oven	0.50

Table 2 Default PM2.5 fractions from Ehrlich et al. (2007), used in the Pollutant Release and Transfer Register in 2019

Category	PM2.5 fraction
CEPMEIP/Ehrlich default for combustion of heavy fuel oil	0.85
CEPMEIP/Ehrlich medium sized wood-fired boil	0.75
Ehrlich, cat cracker catalyst regenerator	0.70
Ehrlich, cement production fugitive emissions	0.10
Ehrlich, fugitive emissions from ceramic industry	0.25
Ehrlich, metallurgy average	0.70
Ehrlich, spray coating	0.85
Ehrlich, average for chemical industry	0.55
Average of last AERs of fertilizer production and Ehrlich for chemical industry	0.625

3 Results

The PM2.5 fractions are only used for non-reporting companies (supplementary emissions) and when an individual company does not report PM2.5 emissions.

PM2.5 emissions in the inventory are derived in 2 steps:

1. For each emission source with PM10 emissions, the PM2.5 emissions are estimated by multiplying the PM10 emission with the PM2.5 fraction.
2. PM2.5 emissions reported by individual companies are included in the inventory and overrule the calculated PM2.5 emissions for the specific company.

The new PM2.5 fractions were used to recalculate the PM2.5 emissions for the complete time series (1990-2017). The following tables show the PM2.5 emissions as reported in the LRTAP reporting in 2018 (with old fractions) and in 2019 (with new fractions in the years 1990 and 2015).

Table 3 and Table 4 show that the total PM2.5 emissions in the industry and energy sector has increased with 0.8 and 1.3 kton in the years 1990 and 2015 compared to the previous LRTAP report. Not all the differences are caused by changes in PM2.5 fractions, as some differences are caused by improved estimates of PM10. The main differences are visible in the following sectors (including an explanation of the changes):

- 1A1b -> PM2.5 fractions have been reduced with 5-30% based on data from Ehrlich (cat cracker regenerator).
- 1A2e -> PM10 and PM2.5 emissions have been improved in the food and beverages sector, because of improved PM10 emission factors. The effect from the new PM2.5 fractions is only minor.
- 2A1 -> PM2.5 emission from cement production is split into an oven and a fugitive part; for the fugitive part PM2.5 fraction has decreased from 0.87 to 0.1 based on data from Ehrlich (fugitive emissions from cement); oven emissions have (depending on the fuel type) a PM2.5 fraction between 0.5 and 0.9.
- 2A3 -> PM2.5 fraction has been changed only slightly. The change in PM2.5 emissions is an error correction.
- 2A6 -> PM2.5 fractions for fugitive emissions from the ceramic industry have increased from 0.33 to 0.9. The new value is based on annual environmental reports in this sector.
- 2D3i -> PM10 and PM2.5 emissions from fireworks have increased. This is caused by an improvement of the PM10 emission factor (not a result of the new fractions).
- 2H2 -> PM2.5 fraction has been changed only slightly. The change in PM2.5 emissions is an error correction.

Table 3 PM2.5 emissions per NFR category in 1990, as reported in 2018 and in 2019

		Emissions reported in 2018		Emissions reported in 2019		Difference	
		PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀
NFR Category		kt	kt	kt	kt	kt	kt
1A1a	Public electricity and heat production	1.87	2.18	1.81	2.21	-0.06	0.03
1A1b	Petroleum refining	5.05	6.38	4.86	6.38	-0.19	-
1A1c	Manufacture of solid fuels and other energy industries	0.05	0.06	0.04	0.06	-0.01	-
1A2a	Stationary combustion in manufacturing industries and construction: Iron and steel	0.12	0.19	0.12	0.19	0.00	-0.00
1A2b	Stationary combustion in manufacturing industries and construction: Non-ferrous metals	0.00	0.00	0.00	0.00	0.00	0.00
1A2c	Stationary combustion in manufacturing industries and construction: Chemicals	0.22	0.32	0.23	0.32	0.01	0.00
1A2d	Stationary combustion in manufacturing industries and construction: Pulp, Paper and Print	0.02	0.02	0.02	0.02	-0.00	-0.00
1A2e	Stationary combustion in manufacturing industries and construction: Food processing, beverages and tobacco	0.46	0.59	0.19	0.32	-0.27	-0.27
1A2gviii	Stationary combustion in manufacturing industries and construction: Other (please specify in the IIR)	0.22	0.36	0.37	0.51	0.15	0.15
1A4ai	Commercial/institutional: Stationary	0.22	0.24	0.20	0.21	-0.02	-0.03
1A4bi	Residential: Stationary	2.42	2.53	2.37	2.50	-0.04	-0.03
1A4ci	Agriculture/Forestry/Fishing: Stationary	0.03	0.03	0.04	0.04	0.01	0.02
1A5a	Other stationary (including military)	0.00	0.00	0.00	0.00	-0.00	-0.00
1B1b	Fugitive emission from solid fuels: Solid fuel transformation	0.04	0.10	0.05	0.10	0.01	-
1B2aiv	Fugitive emissions oil: Refining / storage	0.08	0.08	0.06	0.08	-0.02	-
2A1	Cement production	0.23	0.32	0.03	0.32	-0.20	-
2A3	Glass production	0.22	0.61	0.47	0.61	0.24	-
2A6	Other mineral products (please specify in the IIR)	0.91	2.03	1.57	2.03	0.66	-
2B10a	Chemical industry: Other (please specify in the IIR)	2.65	4.11	2.56	4.11	-0.09	-
2C1	Iron and steel production	5.84	9.13	5.92	9.13	0.09	-
2C3	Aluminium production	0.71	0.98	0.82	0.98	0.11	-
2C6	Zinc production	0.02	0.02	0.02	0.02	0.00	-
2C7a	Copper production	0.02	0.03	0.02	0.03	0.00	-
2D3i	Other solvent use (please specify in the IIR)	1.88	1.88	2.02	2.02	0.15	0.15
2H1	Pulp and paper industry	0.13	0.40	0.14	0.40	0.01	-
2H2	Food and beverages industry	0.82	4.34	1.05	4.34	0.22	-
2H3	Other industrial processes (please specify in the IIR)	1.61	5.45	1.65	5.42	0.05	-0.03
2I	Wood processing	0.14	0.43	0.15	0.43	0.01	-
Total in stationary combustion and industry		28.08	45.00	28.91	44.98	0.83	-0.01

Table 4 PM2.5 emissions per NFR category in 2015, as reported in 2018 and in 2019

		Emissions reported in 2018		Emissions reported in 2019		Difference	
		PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀
NFR category		kt	kt	kt	kt	kt	kt
1A1a	Public electricity and heat production	0.29	0.37	0.29	0.39	0.00	0.03
1A1b	Petroleum refining	0.18	0.22	0.18	0.22	-	-
1A1c	Manufacture of solid fuels and other energy industries	-	-	-	-	-	-
1A2a	Stationary combustion in manufacturing industries and construction: Iron and steel	0.00	0.01	0.00	0.01	-0.00	-
1A2b	Stationary combustion in manufacturing industries and construction: Non-ferrous metals	0.00	0.00	0.00	0.00	0.00	0.00
1A2c	Stationary combustion in manufacturing industries and construction: Chemicals	0.05	0.07	0.05	0.07	-0.00	0.00
1A2d	Stationary combustion in manufacturing industries and construction: Pulp, Paper and Print	0.00	0.00	0.00	0.00	0.00	0.00
1A2e	Stationary combustion in manufacturing industries and construction: Food processing, beverages and tobacco	0.04	0.09	0.04	0.09	-0.00	0.00
1A2gviii	Stationary combustion in manufacturing industries and construction: Other (please specify in the IIR)	0.02	0.03	0.07	0.08	0.04	0.05
1A4ai	Commercial/institutional: Stationary	0.03	0.03	0.06	0.06	0.04	0.04
1A4bi	Residential: Stationary	1.99	2.08	1.97	2.07	-0.02	-0.02
1A4ci	Agriculture/Forestry/Fishing: Stationary	0.03	0.03	0.08	0.08	0.04	0.04
1A5a	Other stationary (including military)	0.00	0.00	0.00	0.00	-0.00	-0.00
1B1b	Fugitive emission from solid fuels: Solid fuel transformation	-	-	-	-	-	-
1B2aiv	Fugitive emissions oil: Refining / storage	0.05	0.05	0.05	0.05	-	-
2A1	Cement production	0.02	0.02	0.02	0.02	-	-
2A3	Glass production	0.11	0.12	0.11	0.12	0.00	-
2A6	Other mineral products (please specify in the IIR)	0.36	1.07	0.95	1.07	0.59	-
2B10a	Chemical industry: Other (please specify in the IIR)	0.80	1.12	0.73	1.12	-0.07	-
2C1	Iron and steel production	0.78	1.28	0.80	1.28	0.01	-
2C3	Aluminium production	0.02	0.03	0.02	0.03	-	-
2C6	Zinc production	0.00	0.00	0.00	0.00	-0.00	-
2C7a	Copper production	0.01	0.01	0.01	0.01	-	-
2D3i	Other solvent use (please specify in the IIR)	1.10	1.10	1.59	1.59	0.49	0.49
2H1	Pulp and paper industry	0.10	0.30	0.11	0.30	0.01	-
2H2	Food and beverages industry	0.33	1.76	0.47	1.76	0.14	-
2H3	Other industrial processes (please specify in the IIR)	0.68	2.58	0.72	2.57	0.04	-0.01
2I	Wood processing	0.05	0.16	0.06	0.16	0.00	-
Total in stationary combustion and industry		7.06	12.55	8.37	13.16	1.31	0.62

4 Conclusion

This report provides a list of PM_{2.5} fractions that can be used to calculate PM_{2.5} emissions in the energy and industry sector of the Dutch Pollutant Release and Transfer Register. A large part of these fractions is based on individual company data, as reported in the annual environmental reports. It is expected that the data from individual companies is more representative for the Netherlands than the more general fractions from CEPMEIP and Ehrlich.

Part of the emission data from individual companies is based on technological knowledge of the processes, and not on measurements. The PM_{2.5} fractions could be improved further if more companies would provide PM_{2.5} data, based on actual emission measurements.

5 References

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6 Signature

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A PM2.5 fraction per emission source

Table A.1 New PM2.5 fractions (to be used in 2019 reporting), compared to the old PM2.5 fractions (which were used in 2018 reporting). This table shows the PM2.5 fractions for the emissions from individual companies. PRTR codes are internal codes used within the Dutch PRTR.

PRTR codes			Source category			PM2.5 fractions		Explanation
EMK	SSE	EVE	Emission source	Emission type	Activity	New (2019)	Old (2018)	Explanation new PM2.5 fraction
T107600	V	405	Facilities NACE 01: agriculture, hunting and services to agriculture and hunting	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T107600	P	352	Facilities NACE 01: agriculture, hunting and services to agriculture and hunting	Process		0.35	0.16	CEPMEIP default for mechanically formed fugitive emissions
T107300	V	1	Facilities NACE 06/09.1: extraction (and related services) of crude oil and natural gasses	Combustion	natural gas	1.00	1.00	Assumption for emissions from compressor station
T107300	P	36	Facilities NACE 06/09.1: extraction (and related services) of crude oil and natural gasses	Process	other fuel	1.00	1.00	Assumption for emissions from compressor station
T107300	P	49	Facilities NACE 06/09.1: extraction (and related services) of crude oil and natural gasses	Process	waste gas	1.00	1.00	Assumption for emissions from compressor station
T107300	P	352	Facilities NACE 06/09.1: extraction (and related services) of crude oil and natural gasses	Process		0.00	1.00	Assumption for emissions from compressor station
T107100	V	384	Facilities NACE 08: other quarrying and mining	Combustion	lignite	0.80	0.63	Average of last AERs, Nedmag
T107100	V	361	Facilities NACE 08: other quarrying and mining	Combustion	natural gas	0.80	0.13	Average of last AERs, Nedmag
T107100	P	361	Facilities NACE 08: other quarrying and mining	Process	natural gas	0.80	1.00	Average of last AERs, Nedmag
T107100	P	352	Facilities NACE 08: other quarrying and mining	Process		0.80	0.77	Average of last AERs, Nedmag
T105000	P	352	Facilities NACE 10.1: processing and preserving of meat and poultry	Process		0.35	0.16	CEPMEIP default for mechanically formed fugitive emissions
T105100	P	352	Facilities NACE 10.3: processing and preserving of fruit and vegetables	Process		0.35	0.16	CEPMEIP default for mechanically formed fugitive emissions
T105200	P	352	Facilities NACE 10.4: manufacture of oils and fats	Process		0.15	0.13	Average of last AERs, crushing/grinding installation
T105300	P	352	Facilities NACE 10.5: dairy industry	Process		0.20	0.98	Average of last AERs, drying of milk powder

T105400	P	352	Facilities NACE 10.6: manufacture of grain mill products, excl. starches and starch products	Process		0.35	0.16	Average of last AERs, crushing/grinding installation
T105600	P	352	Facilities NACE 10.8 (excluding NACE 10.81 and 10.82): other manufacture of food products	Process		0.35	0.16	Average of last AERs, sugar production and drying installations
T105500	P	352	Facilities NACE 10.9: manufacture of prepared animal feeds	Process		0.15	0.16	CEPMEIP, average for storage
T100201	H	8	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	biomass gaseous	0.15	1.00	Average of last AERs, crushing/grinding installation
T100201	H	466	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	biomass gaseous	0.35	1.00	CEPMEIP default for mechanically formed fugitive emissions
T100201	H	382	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	biomass liquid	0.75	0.67	CEPMEIP default for combustion of industrial black liquor
T100201	V	351	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	coal	0.50	0.57	Average of last AERs, drying installation
T100201	V	51	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	coal	0.50	0.57	CEPMEIP default for combustion of coal in a medium sized combustor
T100201	V	392	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	coking coal	0.50	0.43	CEPMEIP default for combustion of coal in a medium sized combustor
T100201	V	482	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	crude oil	0.85	1.00	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T100201	V	52	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	fuel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T100201	V	480	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	fuel oil	0.85	0.67	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T100201	V	405	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T100201	V	410	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T100201	V	18	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T100201	V	1	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	natural gas	0.15	1.00	Average of last AERs, crushing/grinding installation
T100201	V	4	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	natural gas	0.15	1.00	Average of last AERs, crushing/grinding installation
T100201	V	361	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	natural gas	0.35	0.16	CEPMEIP default for mechanically formed fugitive emissions

T100201	V	440	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	other solid fuel	0.50	0.67	Average of last AERs, drying installation
T100201	H	25	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	wood	0.75	0.77	CEPMEIP/Ehrlich medium sized wood-fired boiler
T100201	V	352	Facilities NACE 10-12: manufacture of food products, beverages and tobacco	Combustion		0.15	0.16	Average of last AERs, crushing/grinding installation
T105700	P	352	Facilities NACE 11.07: manufacture of soft drinks and other beverages	Process		0.35	0.00	CEPMEIP default for mechanically formed fugitive emissions
T105800	P	352	Facilities NACE 12: manufacture of tobacco products	Process		0.35	0.16	CEPMEIP default for mechanically formed fugitive emissions
T100100	P	352	Facilities NACE 13.20: textile weaving	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T104900	P	352	Facilities NACE 13.20: textile weaving	Process		0.35	0.16	CEPMEIP default for mechanically formed fugitive emissions
T101500	P	352	Facilities NACE 13.3: finishing of textiles	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T101600	P	352	Facilities NACE 13.93: manufacture of carpets and rugs	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T104600	P	352	Facilities NACE 13.99 manufacture of other textiles n.e.c.	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T100300	V	351	Facilities NACE 13/14: manufacture of textiles and textile apparel	Combustion	coal	0.50	1.00	CEPMEIP default for combustion of coal in a medium sized combustor
T100300	V	52	Facilities NACE 13/14: manufacture of textiles and textile apparel	Combustion	fuel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T100300	V	405	Facilities NACE 13/14: manufacture of textiles and textile apparel	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T100300	V	1	Facilities NACE 13/14: manufacture of textiles and textile apparel	Combustion	natural gas	0.35	1.00	CEPMEIP default for mechanically formed fugitive emissions
T100300	V	360	Facilities NACE 13/14: manufacture of textiles and textile apparel	Combustion	natural gas	0.35	1.00	CEPMEIP default for mechanically formed fugitive emissions
T101800	P	352	Facilities NACE 15.11: tanning of leather and fur preparation	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T100400	V	52	Facilities NACE 15: leather industry and fur preparation	Combustion	fuel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T100400	V	17	Facilities NACE 15: leather industry and fur preparation	Combustion	gas/diesel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil

T100202	P	352	Facilities NACE 16.21/16.22: manufacture of veneer sheets, manufacture of plywood, laminboard, particle board, fibre board and other panels and boards	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T102000	P	352	Facilities NACE 16.23: manufacture of builders' carpentry and joinery	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T109000	H	25	Facilities NACE 16: manufacture of wooden products	Combustion	wood	0.75	0.77	CEPMEIP/Ehrlich medium sized wood-fired boiler
T109000	H	26	Facilities NACE 16: manufacture of wooden products	Combustion	wood, wood waste	0.75	0.77	CEPMEIP/Ehrlich medium sized wood-fired boiler
T102100	P	352	Facilities NACE 17.1: manufacture of pulp, paper and paperboard	Process		0.75	1.00	Average of last AERs, Parenco
T102200	P	352	Facilities NACE 17.2: manufacture of articles of paper and paperboard	Process		0.75	0.33	Average of last AERs, Parenco
T100600	H	381	Facilities NACE 17: manufacture of paper, paperboard and articles of paper and paperboard	Combustion	biomass solid	0.75	1.00	CEPMEIP/Ehrlich medium sized wood-fired boiler
T100600	V	51	Facilities NACE 17: manufacture of paper, paperboard and articles of paper and paperboard	Combustion	coal	0.50	0.43	CEPMEIP default for combustion of coal in a medium sized combustor
T100600	V	52	Facilities NACE 17: manufacture of paper, paperboard and articles of paper and paperboard	Combustion	fuel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T100600	V	1	Facilities NACE 17: manufacture of paper, paperboard and articles of paper and paperboard	Combustion	natural gas	0.75	1.00	Average of last AERs, Parenco
T100600	V	361	Facilities NACE 17: manufacture of paper, paperboard and articles of paper and paperboard	Combustion	natural gas	0.75	1.00	Average of last AERs, Parenco
T100600	H	37	Facilities NACE 17: manufacture of paper, paperboard and articles of paper and paperboard	Combustion	other solid fuel	0.67	0.79	CEPMEIP default for industrial waste fuels
T100600	H	444	Facilities NACE 17: manufacture of paper, paperboard and articles of paper and paperboard	Combustion	other solid fuel	0.67	0.75	CEPMEIP default for industrial waste fuels
T100600	V	68	Facilities NACE 17: manufacture of paper, paperboard and articles of paper and paperboard	Combustion	waste	0.67	1.00	CEPMEIP default for industrial waste fuels
T100600	V	358	Facilities NACE 17: manufacture of paper, paperboard and articles of paper and paperboard	Combustion	waste	0.67	0.79	CEPMEIP default for industrial waste fuels
T105900	P	352	Facilities NACE 18/58: publishing, printing and reproduction of recorded media	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T102101	V	387	Facilities NACE 19.1: manufacture of coke oven products	Combustion	coke oven gas	0.50	0.75	CEPMEIP default for coke oven
T102101	V	352	Facilities NACE 19.1: manufacture of coke oven products	Combustion		0.50	0.40	CEPMEIP default for coke oven

T102101	P	352	Facilities NACE 19.1: manufacture of coke oven products	Process		0.50	0.40	CEPMEIP default for coke oven
T102201	H	471	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	biomass gaseous	0.70	1.00	Ehrlich, cat cracker regenerator
T102201	V	471	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	biomass gaseous	0.70	1.00	Ehrlich, cat cracker regenerator
T102201	H	382	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	biomass liquid	0.70	0.83	Ehrlich, cat cracker regenerator
T102201	V	388	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	chemical waste gas	0.70	0.75	Ehrlich, cat cracker regenerator
T102201	V	52	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	fuel oil	0.85	0.89	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T102201	V	480	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	fuel oil	0.85	0.89	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T102201	V	57	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	fuel oil	0.85	1.00	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T102201	V	405	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	gas/diesel oil	0.70	0.81	Ehrlich, cat cracker regenerator
T102201	V	17	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	gas/diesel oil	0.70	0.83	Ehrlich, cat cracker regenerator
T102201	V	1	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	natural gas	0.70	1.00	Ehrlich, cat cracker regenerator
T102201	V	361	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	natural gas	0.70	0.74	Ehrlich, cat cracker regenerator
T102201	V	39	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	other fuel	0.85	0.74	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T102201	V	443	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	other gaseous fuel	0.70	0.75	Ehrlich, cat cracker regenerator
T102201	V	445	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	other liquid fuel	0.70	0.89	Ehrlich, cat cracker regenerator
T102201	V	448	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	other oil	0.85	0.89	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T102201	V	454	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	petroleum coke	0.70	0.79	Ehrlich, cat cracker regenerator
T102201	V	44	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	refinery gas	0.70	0.75	Ehrlich, cat cracker regenerator

T102201	V	458	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	refinery gas	0.70	0.81	Ehrlich, cat cracker regenerator
T102201	V	45	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	refinery gas	0.70	0.75	Ehrlich, cat cracker regenerator
T102201	V	472	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	tar and asphalt	0.85	0.89	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T102201	V	436	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	unknown	0.70	0.74	Ehrlich, cat cracker regenerator
T102201	V	46	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion	waste gas	0.70	0.75	Ehrlich, cat cracker regenerator
T102201	V	352	Facilities NACE 19.201: manufacture of refined petroleum products	Combustion		0.70	0.72	Ehrlich, cat cracker regenerator
T102201	P	352	Facilities NACE 19.201: manufacture of refined petroleum products	Process		0.70	1.00	Ehrlich, cat cracker regenerator
T112200	V	52	Facilities NACE 19.202: manufacture of refined petroleum products - not oil refineries	Combustion	fuel oil	0.95	0.79	CEPMEIP default for combustion of gas/diesel oil
T112200	V	405	Facilities NACE 19.202: manufacture of refined petroleum products - not oil refineries	Combustion	gas/diesel oil	0.95	0.95	CEPMEIP default for combustion of gas/diesel oil
T112200	V	411	Facilities NACE 19.202: manufacture of refined petroleum products - not oil refineries	Combustion	gas/diesel oil	0.95	0.80	CEPMEIP default for combustion of gas/diesel oil
T112200	V	19	Facilities NACE 19.202: manufacture of refined petroleum products - not oil refineries	Combustion	gas/diesel oil	0.95	0.80	CEPMEIP default for combustion of gas/diesel oil
T112200	V	458	Facilities NACE 19.202: manufacture of refined petroleum products - not oil refineries	Combustion	refinery gas	1.00	0.96	CEPMEIP default for combustion of gaseous fuels
T112200	P	352	Facilities NACE 19.202: manufacture of refined petroleum products - not oil refineries	Process		0.70	0.80	Ehrlich, cat cracker regenerator
T100800	V	52	Facilities NACE 19: manufacture of coke oven and refined petroleum products	Combustion	fuel oil	0.50	0.89	CEPMEIP default for cokesoven
T101100	H	377	Facilities NACE 20.1: manufacture of basic chemicals	Combustion	biomass gaseous	1.00	1.00	CEPMEIP default for combustion of gaseous fuels
T101100	H	422	Facilities NACE 20.1: manufacture of basic chemicals	Combustion	biomass gaseous	1.00	1.00	CEPMEIP default for combustion of gaseous fuels
T101100	H	466	Facilities NACE 20.1: manufacture of basic chemicals	Combustion	biomass gaseous	1.00	1.00	CEPMEIP default for combustion of gaseous fuels
T101100	V	383	Facilities NACE 20.1: manufacture of basic chemicals	Combustion	bitumen	0.85	0.66	CEPMEIP/Ehrlich default for combustion of heavy fuel oil

T101100	V	427	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	carbon monoxide	0.75	0.75	Average of last AERs, production of chemical products
T101100	V	388	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	chemical waste gas	0.75	0.81	Average of last AERs, production of chemical products
T101100	V	351	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	coal	0.50	0.62	CEPMEIP default for combustion of coal in a medium sized combustor
T101100	V	51	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	coal	0.50	0.43	CEPMEIP default for combustion of coal in a medium sized combustor
T101100	V	393	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	coke oven / gas coke	0.50	0.62	CEPMEIP default for combustion of coal in a medium sized combustor
T101100	V	363	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	crude oil	0.85	0.83	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T101100	V	52	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	fuel oil	0.85	0.83	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T101100	V	57	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	fuel oil	0.85	0.79	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T101100	V	405	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T101100	V	17	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	gas/diesel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T101100	V	410	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T101100	V	56	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	hydrogen	1.00	1.00	CEPMEIP default for combustion of gaseous fuels
T101100	V	509	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	naphtha	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T101100	V	1	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	natural gas	0.75	1.00	Average of last AERs, production of chemical products
T101100	V	361	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	natural gas	0.75	0.73	Average of last AERs, production of chemical products
T101100	V	445	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	other liquid fuel	0.85	0.79	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T101100	V	448	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	other oil	0.85	0.79	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T101100	V	454	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	petroleum coke	0.90	0.58	Assumed low ashlow ash incineration with a high PM2.5 fraction
T101100	V	31	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	refinery gas	0.95	0.75	CEPMEIP default for combustion of gas/diesel oil

T101100	V	44	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	refinery gas	0.75	0.75	Average of last AERs, production of chemical products
T101100	V	458	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	refinery gas	0.75	0.95	Average of last AERs, production of chemical products
T101100	V	472	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	tar and asphalt	0.85	0.79	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T101100	V	54	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	tar and asphalt	0.85	0.79	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T101100	V	16	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	unknown	0.75	0.75	Average fraction for process emissions in AER, because this sector contains a large diversity of different processes
T101100	V	358	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	waste	0.67	0.80	CEPMEIP default for industrial waste fuels
T101100	V	46	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	waste gas	0.75	0.75	Average of last AERs, production of chemical products
T101100	V	48	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	waste liquids	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T101100	H	25	Facilities NACE 20.1:manufacture of basic chemicals	Combustion	wood	0.75	0.77	CEPMEIP/Ehrlich medium sized wood-fired boiler
T101100	V	352	Facilities NACE 20.1:manufacture of basic chemicals	Combustion		0.75	0.73	Average of last AERs, production of chemical products
T101100	P	352	Facilities NACE 20.1:manufacture of basic chemicals	Process		0.75	0.61	Average of last AERs, production of chemical products
T100700	P	352	Facilities NACE 20.1:manufacture of basic chemicals, corp. 101103	Process		0.75	0.73	Average of last AERs, production of chemical products
T100701	P	352	Facilities NACE 20.1:manufacture of basic chemicals, corp. 62	Process		0.63	0.73	Average of last AERs of fertilizer production and Ehrlich for chemical industry
T104700	P	352	Facilities NACE 20.11: manufacture of industrial gasses	Process		0.55	0.73	Ehrlich, average for chemical industry
T102400	P	352	Facilities NACE 20.12: manufacture of dyes and pigments	Process		0.35	0.73	CEPMEIP default for mechanically formed fugitive emissions
T102500	P	361	Facilities NACE 20.13: manufacture of inorganic basic chemicals	Process	natural gas	0.95	0.75	Average of last AERs, average combustion in inorganic chemical sector
T102500	P	352	Facilities NACE 20.13: manufacture of inorganic basic chemicals	Process		0.45	0.37	Average of last AERs, process emissions in the inorganic chemical sector
T102403	P	352	Facilities NACE 20.13: manufacture of inorganic basic chemicals	Process		0.55	0.90	Ehrlich, average for chemical industry
T102401	P	352	Facilities NACE 20.13: manufacture of inorganic basic chemicals, corp. 104710	Process		0.35	0.70	Average of AER 2014, silicium carbide production
T102402	P	352	Facilities NACE 20.13: manufacture of inorganic basic chemicals, corp. 105014	Process		0.65	0.70	Average of AER 2009, Brunner Mond

T102501	P	352	Facilities NACE 20.141: manufacture of petrochemicals	Process		0.85	0.82	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T102601	P	361	Facilities NACE 20.149: manufacture of organic basic chemicals (no petrochemicals)	Process	natural gas	0.63	1.00	Average of last AERs of fertilizer production and Ehrlich for chemical industry
T102601	P	352	Facilities NACE 20.149: manufacture of organic basic chemicals (no petrochemicals)	Process		0.63	0.73	Average of last AERs of fertilizer production and Ehrlich for chemical industry
T102700	V	52	Facilities NACE 20.15: manufacture of fertilizers and nitrogen compounds	Combustion	fuel oil	0.95	0.34	CEPMEIP default for combustion of gas/diesel oil
T102700	V	57	Facilities NACE 20.15: manufacture of fertilizers and nitrogen compounds	Combustion	fuel oil	0.85	0.34	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T102700	V	405	Facilities NACE 20.15: manufacture of fertilizers and nitrogen compounds	Combustion	gas/diesel oil	0.95	0.34	CEPMEIP default for combustion of gas/diesel oil
T102700	V	33	Facilities NACE 20.15: manufacture of fertilizers and nitrogen compounds	Combustion	lpg	0.70	0.34	Average of last AERs, drying installations in fertilizer production sector
T102700	V	361	Facilities NACE 20.15: manufacture of fertilizers and nitrogen compounds	Combustion	natural gas	0.70	0.34	Average of last AERs, drying installations in fertilizer production sector
T102700	V	352	Facilities NACE 20.15: manufacture of fertilizers and nitrogen compounds	Combustion		0.70	0.34	Average of last AERs, drying installations in fertilizer production sector
T102700	P	410	Facilities NACE 20.15: manufacture of fertilizers and nitrogen compounds	Process	gas/diesel oil	0.70	0.34	Average of last AERs, drying installations in fertilizer production sector
T102700	P	33	Facilities NACE 20.15: manufacture of fertilizers and nitrogen compounds	Process	lpg	0.70	0.34	Average of last AERs, drying installations in fertilizer production sector
T102700	P	352	Facilities NACE 20.15: manufacture of fertilizers and nitrogen compounds	Process		0.70	0.34	Average of last AERs, drying installations in fertilizer production sector
T102800	P	361	Facilities NACE 20.16: manufacture of plastics in primary forms	Process	natural gas	0.63	1.00	Average of last AERs of fertilizer production and Ehrlich for chemical industry
T102800	P	352	Facilities NACE 20.16: manufacture of plastics in primary forms	Process		0.63	0.10	Average of last AERs of fertilizer production and Ehrlich for chemical industry
T102900	V	52	Facilities NACE 20.2: manufacture of pesticides	Combustion	fuel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T102900	V	405	Facilities NACE 20.2: manufacture of pesticides	Combustion	gas/diesel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T102900	V	410	Facilities NACE 20.2: manufacture of pesticides	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T102900	V	1	Facilities NACE 20.2: manufacture of pesticides	Combustion	natural gas	0.55	1.00	Ehrlich, average for chemical industry
T102900	V	361	Facilities NACE 20.2: manufacture of pesticides	Combustion	natural gas	0.55	1.00	Ehrlich, average for chemical industry

T102900	P	352	Facilities NACE 20.2: manufacture of pesticides	Process		0.55	0.73	Ehrlich, average for chemical industry
T103000	V	361	Facilities NACE 20.3: manufacture of paints, varnishes and similar coatings, printing ink and mastics	Combustion	natural gas	0.50	0.73	Assumption for fugitive emissions from ovens
T103000	P	352	Facilities NACE 20.3: manufacture of paints, varnishes and similar coatings, printing ink and mastics	Process		0.50	0.73	Assumption for fugitive emissions from ovens
T103200	V	405	Facilities NACE 20.4: manufacture of detergents, perfumes and cosmetics	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T103200	V	17	Facilities NACE 20.4: manufacture of detergents, perfumes and cosmetics	Combustion	gas/diesel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T103200	V	410	Facilities NACE 20.4: manufacture of detergents, perfumes and cosmetics	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T103200	V	18	Facilities NACE 20.4: manufacture of detergents, perfumes and cosmetics	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T103101	P	352	Facilities NACE 20.41: manufacture detergents	Process		0.55	0.73	Ehrlich, average for chemical industry
T101702	H	382	Facilities NACE 20.5: manufacture of other chemical products	Combustion	biomass liquid	0.75	0.16	CEPMEIP default for combustion of industrial black liquor
T101702	H	381	Facilities NACE 20.5: manufacture of other chemical products	Combustion	biomass solid	0.75	0.16	CEPMEIP/Ehrlich medium sized wood-fired boiler
T101702	V	383	Facilities NACE 20.5: manufacture of other chemical products	Combustion	bitumen	0.85	0.99	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T101702	V	52	Facilities NACE 20.5: manufacture of other chemical products	Combustion	fuel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T101702	V	405	Facilities NACE 20.5: manufacture of other chemical products	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T101702	V	33	Facilities NACE 20.5: manufacture of other chemical products	Combustion	lpg	1.00	0.86	CEPMEIP default for combustion of gaseous fuels
T101702	V	1	Facilities NACE 20.5: manufacture of other chemical products	Combustion	natural gas	0.55	1.00	Ehrlich, average for chemical industry
T101702	V	361	Facilities NACE 20.5: manufacture of other chemical products	Combustion	natural gas	0.55	0.73	Ehrlich, average for chemical industry
T101702	V	46	Facilities NACE 20.5: manufacture of other chemical products	Combustion	waste gas	1.00	0.75	CEPMEIP default for combustion of gaseous fuels
T103300	P	352	Facilities NACE 20.52: manufacture of glues and adhesives	Process		0.55	0.73	Ehrlich, average for chemical industry
T103600	P	352	Facilities NACE 20.59: manufacture of other chemical products n.e.c.	Process		0.55	0.66	Ehrlich, average for chemical industry
T104500	P	352	Facilities NACE 20.59: manufacture of other chemical products n.e.c.	Process		0.55	0.73	Ehrlich, average for chemical industry

T103700	V	1	Facilities NACE 20.6: manufacture of synthetic and artificial fibres	Combustion	natural gas	0.55	0.64	Ehrlich, average for chemical industry
T103700	V	358	Facilities NACE 20.6: manufacture of synthetic and artificial fibres	Combustion	waste	0.67	0.64	CEPMEIP default for industrial waste fuels
T103700	V	352	Facilities NACE 20.6: manufacture of synthetic and artificial fibres	Combustion		0.55	0.64	Ehrlich, average for chemical industry
T103700	P	352	Facilities NACE 20.6: manufacture of synthetic and artificial fibres	Process		0.55	0.64	Ehrlich, average for chemical industry
T103100	V	52	Facilities NACE 21.1: manufacture of pharmaceutical preparations	Combustion	fuel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T103100	V	405	Facilities NACE 21.1: manufacture of pharmaceutical preparations	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T103100	V	1	Facilities NACE 21.1: manufacture of pharmaceutical preparations	Combustion	natural gas	0.55	1.00	Ehrlich, average for chemical industry
T103001	P	352	Facilities NACE 21.20: manufacture of pharmaceutical preparations (no raw materials)	Process		0.55	0.73	Ehrlich, average for chemical industry
T106000	V	52	Facilities NACE 22.1: manufacture of rubber products	Combustion	fuel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T106000	P	352	Facilities NACE 22.1: manufacture of rubber products	Process		0.35	0.25	CEPMEIP default for mechanically formed fugitive emissions
T106100	V	52	Facilities NACE 22.2: manufacture of plastic products	Combustion	fuel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T106100	V	405	Facilities NACE 22.2: manufacture of plastic products	Combustion	gas/diesel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T106100	V	33	Facilities NACE 22.2: manufacture of plastic products	Combustion	lpg	1.00	1.00	CEPMEIP default for combustion of gaseous fuels
T106100	V	361	Facilities NACE 22.2: manufacture of plastic products	Combustion	natural gas	0.35	1.00	CEPMEIP default for mechanically formed fugitive emissions
T106100	V	358	Facilities NACE 22.2: manufacture of plastic products	Combustion	waste	0.67	0.83	CEPMEIP default for industrial waste fuels
T106100	H	25	Facilities NACE 22.2: manufacture of plastic products	Combustion	wood	0.75	0.77	CEPMEIP/Ehrlich medium sized wood-fired boiler
T106100	V	352	Facilities NACE 22.2: manufacture of plastic products	Combustion		0.35	0.25	CEPMEIP default for mechanically formed fugitive emissions
T106100	P	352	Facilities NACE 22.2: manufacture of plastic products	Process		0.35	0.27	CEPMEIP default for mechanically formed fugitive emissions
T103601	P	352	Facilities NACE 23.1: manufacture of glass and glassware	Process		0.95	0.97	Average of last AERs, glass production
T104200	P	352	Facilities NACE 23.2-23.4: manufacture of ceramic products	Process		0.25	0.92	Ehrlich, fugitive emissions from ceramic industry
T104300	P	352	Facilities NACE 23.32: manufacture of bricks and tiles	Process		0.25	0.92	Ehrlich, fugitive emissions from ceramic industry

T109300	P	352	Facilities NACE 23.5: manufacture of cement, lime and plaster	Process		0.10	0.12	Ehrlich, cement production fugitive emissions
T100801	V	1	Facilities NACE 23.51: manufacture of cement	Combustion	natural gas	0.85	0.74	Average of last AERs, cement production
T100801	V	361	Facilities NACE 23.51: manufacture of cement	Combustion	natural gas	0.85	0.74	Average of last AERs, cement production
T100801	P	393	Facilities NACE 23.51: manufacture of cement	Process	coke oven / gas coke	0.50	0.74	CEPMEIP default for combustion of coal in a medium sized combustor
T100801	P	11	Facilities NACE 23.51: manufacture of cement	Process	lignite	0.50	0.74	CEPMEIP default for combustion of coal in a medium sized combustor
T100801	P	1	Facilities NACE 23.51: manufacture of cement	Process	natural gas	0.85	0.74	Average of last AERs, cement production
T100801	P	361	Facilities NACE 23.51: manufacture of cement	Process	natural gas	0.85	0.74	Average of last AERs, cement production
T100801	P	444	Facilities NACE 23.51: manufacture of cement	Process	other solid fuel	0.67	0.74	CEPMEIP default for industrial waste fuels
T100801	P	454	Facilities NACE 23.51: manufacture of cement	Process	petroleum coke	0.90	0.74	Assumed low ash incineration with a high PM2.5 fraction
T100801	P	352	Facilities NACE 23.51: manufacture of cement	Process		0.10	0.87	Ehrlich, cement production fugitive emissions
T108300	P	352	Facilities NACE 23.6: manufacture of articles of concrete, plaster and cement	Process		0.10	0.12	Ehrlich, cement production fugitive emissions
T104501	P	352	Facilities NACE 23.9: manufacture of other non-metallic mineral products	Process		0.80	0.32	PRTR for Denmark, non-metallic mineral products
T102102	H	381	Facilities NACE 23: construction material and glass industry	Combustion	biomass solid	0.75	0.79	CEPMEIP/Ehrlich medium sized wood-fired boiler
T102102	V	51	Facilities NACE 23: construction material and glass industry	Combustion	coal	0.50	0.79	CEPMEIP default for combustion of coal in a medium sized combustor
T102102	V	393	Facilities NACE 23: construction material and glass industry	Combustion	coke oven / gas coke	0.50	0.78	CEPMEIP default for combustion of coal in a medium sized combustor
T102102	V	52	Facilities NACE 23: construction material and glass industry	Combustion	fuel oil	0.95	0.79	CEPMEIP default for combustion of gas/diesel oil
T102102	V	57	Facilities NACE 23: construction material and glass industry	Combustion	fuel oil	0.90	0.79	Average of last AERs, cement and glass production
T102102	V	405	Facilities NACE 23: construction material and glass industry	Combustion	gas/diesel oil	0.95	0.79	CEPMEIP default for combustion of gas/diesel oil
T102102	V	17	Facilities NACE 23: construction material and glass industry	Combustion	gas/diesel oil	0.95	0.79	CEPMEIP default for combustion of gas/diesel oil
T102102	V	1	Facilities NACE 23: construction material and glass industry	Combustion	natural gas	0.90	0.79	Average of last AERs, cement and glass production

T102102	V	361	Facilities NACE 23: construction material and glass industry	Combustion	natural gas	0.90	0.79	Average of last AERs, cement and glass production
T102102	V	352	Facilities NACE 23: construction material and glass industry	Combustion		0.90	0.79	Average of last AERs, cement and glass production
T102202	V	113	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	blast furnace gas	0.65	0.75	CEPMEIP average integrated iron and steel plant class 2
T102202	V	23	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	blast furnace gas	0.65	0.75	CEPMEIP average integrated iron and steel plant class 2
T102202	V	351	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	coal	0.65	0.75	CEPMEIP average integrated iron and steel plant class 2
T102202	V	387	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	coke oven gas	0.65	0.75	CEPMEIP average integrated iron and steel plant class 2
T102202	V	394	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	coke oven gas	1.00	0.75	CEPMEIP default for combustion of gaseous fuels
T102202	V	52	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	fuel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T102202	V	405	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	gas/diesel oil	0.65	1.00	CEPMEIP average integrated iron and steel plant class 2
T102202	V	17	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	gas/diesel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T102202	V	1	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	natural gas	0.65	1.00	CEPMEIP average integrated iron and steel plant class 2
T102202	V	2	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	natural gas	1.00	1.00	CEPMEIP default for combustion of gaseous fuels
T102202	V	361	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	natural gas	0.65	0.64	CEPMEIP average integrated iron and steel plant class 2
T102202	V	440	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	other solid fuel	0.65	0.43	CEPMEIP average integrated iron and steel plant class 2
T102202	V	452	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion	oxy gas	1.00	0.75	CEPMEIP default for combustion of gaseous fuels
T102202	V	352	Facilities NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel	Combustion		0.65	0.64	CEPMEIP average integrated iron and steel plant class 2
T104101	P	410	Facilities NACE 24.2: manufacture of tubes and pipes	Process	gas/diesel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T104101	P	352	Facilities NACE 24.2: manufacture of tubes and pipes	Process		0.70	0.38	Ehrlich, metallurgical sector
T104400	P	352	Facilities NACE 24.3: other first processing of iron and steel	Process		0.70	0.50	Ehrlich, metallurgical sector

T102300	V	387	Facilities NACE 24.4/24.5: base metal industry, manufacture of non-ferrous metals and casting of metals	Combustion	coke oven gas	1.00	0.67	CEPMEIP default for combustion of gaseous fuels
T102300	V	391	Facilities NACE 24.4/24.5: base metal industry, manufacture of non-ferrous metals and casting of metals	Combustion	coking coal	0.50	0.67	CEPMEIP default for combustion of coal in a medium sized combustor
T102300	V	405	Facilities NACE 24.4/24.5: base metal industry, manufacture of non-ferrous metals and casting of metals	Combustion	gas/diesel oil	0.70	0.21	Ehrlich, metallurgical sector
T102300	V	17	Facilities NACE 24.4/24.5: base metal industry, manufacture of non-ferrous metals and casting of metals	Combustion	gas/diesel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T102300	V	18	Facilities NACE 24.4/24.5: base metal industry, manufacture of non-ferrous metals and casting of metals	Combustion	gas/diesel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T102300	V	33	Facilities NACE 24.4/24.5: base metal industry, manufacture of non-ferrous metals and casting of metals	Combustion	lpg	1.00	0.21	CEPMEIP default for combustion of gaseous fuels
T102300	V	1	Facilities NACE 24.4/24.5: base metal industry, manufacture of non-ferrous metals and casting of metals	Combustion	natural gas	0.70	0.67	Ehrlich, metallurgical sector
T102300	V	361	Facilities NACE 24.4/24.5: base metal industry, manufacture of non-ferrous metals and casting of metals	Combustion	natural gas	0.70	0.67	Ehrlich, metallurgical sector
T102300	V	454	Facilities NACE 24.4/24.5: base metal industry, manufacture of non-ferrous metals and casting of metals	Combustion	petroleum coke	0.90	0.58	Assumed low ash incineration with a high PM2.5 fraction
T102300	V	352	Facilities NACE 24.4/24.5: base metal industry, manufacture of non-ferrous metals and casting of metals	Combustion		0.70	0.67	Ehrlich, metallurgical sector
T104702	V	405	Facilities NACE 24.45: manufacture of non-ferrous metals, aluminium	Combustion	gas/diesel oil	0.95	0.73	CEPMEIP default for combustion of gas/diesel oil
T104702	P	361	Facilities NACE 24.45: manufacture of non-ferrous metals, aluminium	Process	natural gas	0.85	0.73	Average for all AERs, Pechiney and Aldel
T104702	P	352	Facilities NACE 24.45: manufacture of non-ferrous metals, aluminium	Process		0.85	0.73	Average for all AERs, Pechiney and Aldel
T104704	P	352	Facilities NACE 24.45: manufacture of non-ferrous metals, copper	Process		0.75	0.67	CEPMEIP default for secondary copper
T104705	P	352	Facilities NACE 24.45: manufacture of non-ferrous metals, lead	Process		0.70	0.83	Ehrlich, metallurgical sector
T104706	V	405	Facilities NACE 24.45: manufacture of non-ferrous metals, zinc	Combustion	gas/diesel oil	0.75	1.00	Average of last AERs, Budel Zink
T104706	P	352	Facilities NACE 24.45: manufacture of non-ferrous metals, zinc	Process		0.75	0.67	Average of last AERs, Budel Zink
T104901	P	352	Facilities NACE 24.5: casting of metals	Process		0.55	0.74	Average of last AERs, Alucast
T100901	P	361	Facilities NACE 24: manufacture of metals in primary forms	Process	natural gas	0.65	0.75	CEPMEIP average integrated iron and steel plant class 2

T100901	P	352	Facilities NACE 24: manufacture of metals in primary forms	Process		0.65	0.65	CEPMEIP average integrated iron and steel plant class 2
T106200	V	52	Facilities NACE 25: manufacture of metal structures and parts of structures (excluding manufacture of machinery)	Combustion	fuel oil	0.30	0.67	Average of last AERs, selection of companies in metal industry
T106200	V	1	Facilities NACE 25: manufacture of metal structures and parts of structures (excluding manufacture of machinery)	Combustion	natural gas	0.30	1.00	Average of last AERs, selection of companies in metal industry
T106200	V	361	Facilities NACE 25: manufacture of metal structures and parts of structures (excluding manufacture of machinery)	Combustion	natural gas	0.30	1.00	Average of last AERs, selection of companies in metal industry
T106200	V	458	Facilities NACE 25: manufacture of metal structures and parts of structures (excluding manufacture of machinery)	Combustion	refinery gas	0.30	0.75	Average of last AERs, selection of companies in metal industry
T106200	P	352	Facilities NACE 25: manufacture of metal structures and parts of structures (excluding manufacture of machinery)	Process		0.30	0.36	Average of last AERs, selection of companies in metal industry
T137300	V	352	Facilities NACE 26/27: electro technical industry	Combustion		0.20	0.25	Average of last AERs, Aluchemie
T137300	P	352	Facilities NACE 26/27: electro technical industry	Process		0.20	0.28	Average of last AERs, Aluchemie
T137400	P	352	Facilities NACE 26/31/32: manufacture of electronic apparatus, furniture and other goods	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T106300	V	52	Facilities NACE 28: manufacture of machinery	Combustion	fuel oil	0.95	0.67	Average last AERs, Komeco
T106300	V	405	Facilities NACE 28: manufacture of machinery	Combustion	gas/diesel oil	0.95	1.00	Average last AERs, Komeco
T106300	V	33	Facilities NACE 28: manufacture of machinery	Combustion	lpg	0.95	1.00	Average last AERs, Komeco
T106300	V	1	Facilities NACE 28: manufacture of machinery	Combustion	natural gas	0.35	1.00	CEPMEIP default for mechanically formed fugitive emissions
T106300	V	352	Facilities NACE 28: manufacture of machinery	Combustion		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T106300	P	352	Facilities NACE 28: manufacture of machinery	Process		0.95	0.33	Average last AERs, Komeco
T106600	V	52	Facilities NACE 29: motor-industry	Combustion	fuel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T106600	V	405	Facilities NACE 29: motor-industry	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T106600	V	17	Facilities NACE 29: motor-industry	Combustion	gas/diesel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T106600	P	352	Facilities NACE 29: motor-industry	Process		0.85	0.85	Ehrlich, spray coating
T106700	P	352	Facilities NACE 30 (excl 30.1): manufacture of other transportation	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions

T108400	V	405	Facilities NACE 30.1: ship-building	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T108400	V	17	Facilities NACE 30.1: ship-building	Combustion	gas/diesel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T108400	V	33	Facilities NACE 30.1: ship-building	Combustion	lpg	1.00	1.00	CEPMEIP default for combustion of gaseous fuels
T108400	P	352	Facilities NACE 30.1: ship-building	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T106900	V	46	Facilities NACE 31/32: manufacture of furniture and other goods	Combustion	waste gas	1.00	0.75	CEPMEIP default for combustion of gaseous fuels
T106900	H	25	Facilities NACE 31/32: manufacture of furniture and other goods	Combustion	wood	0.75	0.77	CEPMEIP/Ehrlich medium sized wood-fired boiler
T106900	H	26	Facilities NACE 31/32: manufacture of furniture and other goods	Combustion	wood, wood waste	0.75	0.77	CEPMEIP/Ehrlich medium sized wood-fired boiler
T106900	P	352	Facilities NACE 31/32: manufacture of furniture and other goods	Process		0.75	0.33	Average of last AERs, Forbo linoleum
T101001	P	27	Facilities NACE 35.111:production of electricity	Process	coal	0.75	0.78	Average of last AERs, large coal fired power plants
T101001	P	352	Facilities NACE 35.111:production of electricity	Process		0.10	0.08	CEPMEIP default Storage and handling of coal
T108500	H	8	Facilities NACE 35: production and distribution of electricity and gas	Combustion	biomass gaseous	1.00	0.87	CEPMEIP default for combustion of gaseous fuels
T108500	H	377	Facilities NACE 35: production and distribution of electricity and gas	Combustion	biomass gaseous	1.00	1.00	CEPMEIP default for combustion of gaseous fuels
T108500	H	471	Facilities NACE 35: production and distribution of electricity and gas	Combustion	biomass gaseous	1.00	0.83	CEPMEIP default for combustion of gaseous fuels
T108500	H	382	Facilities NACE 35: production and distribution of electricity and gas	Combustion	biomass liquid	0.75	0.78	Average of AER 2013, biomass combustion in power plants
T108500	H	385	Facilities NACE 35: production and distribution of electricity and gas	Combustion	biomass other	0.75	0.78	Average of last AERs, co-firing in coal fired power plants
T108500	H	381	Facilities NACE 35: production and distribution of electricity and gas	Combustion	biomass solid	0.75	0.75	Average of last AERs, biomass in large coal fired power plants
T108500	V	113	Facilities NACE 35: production and distribution of electricity and gas	Combustion	blast furnace gas	1.00	0.75	CEPMEIP default for combustion of gaseous fuels
T108500	V	23	Facilities NACE 35: production and distribution of electricity and gas	Combustion	blast furnace gas	1.00	1.00	CEPMEIP default for combustion of gaseous fuels
T108500	V	388	Facilities NACE 35: production and distribution of electricity and gas	Combustion	chemical waste gas	1.00	1.00	CEPMEIP default for combustion of gaseous fuels

T108500	V	351	Facilities NACE 35: production and distribution of electricity and gas	Combustion	coal	0.75	0.78	Average of last AERs, large coal fired power plants
T108500	V	27	Facilities NACE 35: production and distribution of electricity and gas	Combustion	coal	0.75	0.78	Average of last AERs, large coal fired power plants
T108500	V	467	Facilities NACE 35: production and distribution of electricity and gas	Combustion	coal	0.75	0.78	Average of last AERs, large coal fired power plants
T108500	V	51	Facilities NACE 35: production and distribution of electricity and gas	Combustion	coal	0.75	0.78	Average of last AERs, large coal fired power plants
T108500	V	387	Facilities NACE 35: production and distribution of electricity and gas	Combustion	coke oven gas	1.00	0.75	CEPMEIP default for combustion of gaseous fuels
T108500	V	394	Facilities NACE 35: production and distribution of electricity and gas	Combustion	coke oven gas	1.00	0.75	CEPMEIP default for combustion of gaseous fuels
T108500	V	482	Facilities NACE 35: production and distribution of electricity and gas	Combustion	crude oil	0.75	0.89	Average of last AERs, co-firing in coal fired power plants
T108500	V	52	Facilities NACE 35: production and distribution of electricity and gas	Combustion	fuel oil	1.00	0.89	Average of last AERs, combustion of light fuel oil
T108500	V	480	Facilities NACE 35: production and distribution of electricity and gas	Combustion	fuel oil	0.75	0.89	Average of last AERs, co-firing in coal fired power plants
T108500	V	57	Facilities NACE 35: production and distribution of electricity and gas	Combustion	fuel oil	0.75	0.89	Average of last AERs, co-firing in coal fired power plants
T108500	V	405	Facilities NACE 35: production and distribution of electricity and gas	Combustion	gas/diesel oil	0.95	0.97	CEPMEIP default for combustion of gas/diesel oil
T108500	V	17	Facilities NACE 35: production and distribution of electricity and gas	Combustion	gas/diesel oil	0.95	0.83	CEPMEIP default for combustion of gas/diesel oil
T108500	V	410	Facilities NACE 35: production and distribution of electricity and gas	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T108500	V	18	Facilities NACE 35: production and distribution of electricity and gas	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T108500	H	26	Facilities NACE 35: production and distribution of electricity and gas	Combustion	hout, houtmot	0.75	0.71	Average of last AERs, co-firing in coal fired power plants
T108500	V	1	Facilities NACE 35: production and distribution of electricity and gas	Combustion	natural gas	0.75	1.00	Average of last AERs, co-firing in coal fired power plants
T108500	V	361	Facilities NACE 35: production and distribution of electricity and gas	Combustion	natural gas	0.75	0.83	Average of last AERs, co-firing in coal fired power plants
T108500	V	443	Facilities NACE 35: production and distribution of electricity and gas	Combustion	other gaseous fuel	0.67	0.75	CEPMEIP default for industrial waste fuels

T108500	V	445	Facilities NACE 35: production and distribution of electricity and gas	Combustion	other liquid fuel	0.75	0.89	Average of last AERs, co-firing in coal fired power plants
T108500	V	448	Facilities NACE 35: production and distribution of electricity and gas	Combustion	other oil	0.75	1.00	Average of last AERs, co-firing in coal fired power plants
T108500	V	440	Facilities NACE 35: production and distribution of electricity and gas	Combustion	other solid fuel	0.75	0.78	Average of last AERs, co-firing in coal fired power plants
T108500	V	444	Facilities NACE 35: production and distribution of electricity and gas	Combustion	other solid fuel	0.75	0.78	Average of last AERs, large coal fired power plants
T108500	V	452	Facilities NACE 35: production and distribution of electricity and gas	Combustion	oxy gas	1.00	0.75	CEPMEIP default for combustion of gaseous fuels
T108500	V	402	Facilities NACE 35: production and distribution of electricity and gas	Combustion	phosphor oven gas	1.00	0.87	CEPMEIP default for combustion of gaseous fuels
T108500	V	68	Facilities NACE 35: production and distribution of electricity and gas	Combustion	waste	0.75	0.87	Average of last AERs, co-firing in coal fired power plants
T108500	V	358	Facilities NACE 35: production and distribution of electricity and gas	Combustion	waste	0.75	0.78	Average of last AERs, co-firing in coal fired power plants
T108500	H	378	Facilities NACE 35: production and distribution of electricity and gas	Combustion	wood	0.75	0.71	Average of last AERs, co-firing in coal fired power plants
T108500	H	25	Facilities NACE 35: production and distribution of electricity and gas	Combustion	wood	0.75	0.71	Average of last AERs, co-firing in coal fired power plants
T111300	P	352	Facilities NACE 37: collection and treatment of sewage	Process		0.35	1.00	CEPMEIP default for mechanically formed fugitive emissions
T104201	H	8	Facilities NACE 38.2 collection and treatment of waste	Combustion	biomass gaseous	0.95	1.00	Average of last AERs, modern waste incineration.
T104201	H	471	Facilities NACE 38.2 collection and treatment of waste	Combustion	biomass gaseous	0.95	1.00	Average of last AERs, modern waste incineration.
T104201	H	382	Facilities NACE 38.2 collection and treatment of waste	Combustion	biomass liquid	0.95	1.00	Average of last AERs, modern waste incineration.
T104201	H	381	Facilities NACE 38.2 collection and treatment of waste	Combustion	biomass solid	0.95	1.00	Average of last AERs, modern waste incineration.
T104201	V	52	Facilities NACE 38.2 collection and treatment of waste	Combustion	fuel oil	0.95	1.00	Average of last AERs, modern waste incineration.
T104201	V	405	Facilities NACE 38.2 collection and treatment of waste	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T104201	V	17	Facilities NACE 38.2 collection and treatment of waste	Combustion	gas/diesel oil	0.95	1.00	Average of last AERs, modern waste incineration.

T104201	V	1	Facilities NACE 38.2 collection and treatment of waste	Combustion	natural gas	0.95	1.00	Average of last AERs, modern waste incineration.
T104201	V	361	Facilities NACE 38.2 collection and treatment of waste	Combustion	natural gas	0.95	1.00	Average of last AERs, modern waste incineration.
T104201	V	448	Facilities NACE 38.2 collection and treatment of waste	Combustion	other oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T104201	V	440	Facilities NACE 38.2 collection and treatment of waste	Combustion	other solid fuel	0.95	1.00	Average of last AERs, modern waste incineration.
T104201	V	68	Facilities NACE 38.2 collection and treatment of waste	Combustion	waste	0.95	0.99	Average of last AERs, modern waste incineration.
T104201	V	358	Facilities NACE 38.2 collection and treatment of waste	Combustion	waste	0.95	1.00	Average of last AERs, modern waste incineration.
T104201	V	6	Facilities NACE 38.2 collection and treatment of waste	Combustion	waste oil	0.95	1.00	Average of last AERs, modern waste incineration.
T104201	V	352	Facilities NACE 38.2 collection and treatment of waste	Combustion		0.95	1.00	Average of last AERs, modern waste incineration.
T111200	P	352	Facilities NACE 38.2/84.1 treatment of waste, including communal waste-incineration plants	Process		0.95	1.00	Average of last AERs, modern waste incineration.
T111201	P	361	Facilities NACE 38.2: waste treatment	Process	natural gas	0.35	1.00	CEPMEIP default for mechanically formed fugitive emissions
T111201	P	352	Facilities NACE 38.2: waste treatment	Process		0.95	1.00	Average of last AERs, modern waste incineration.
T107000	H	382	Facilities NACE 38.3: preparation to recycling of metal and non-metal waste and scrap	Combustion	biomass liquid	0.80	0.71	Average of last AERs, waste sector
T107000	V	405	Facilities NACE 38.3: preparation to recycling of metal and non-metal waste and scrap	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T107000	P	352	Facilities NACE 38.3: preparation to recycling of metal and non-metal waste and scrap	Process		0.80	0.33	Average of last AERs, waste sector
T151301	V	52	Facilities NACE 39: sanitation and other waste management	Combustion	fuel oil	0.95	0.79	CEPMEIP default for combustion of gas/diesel oil
T151301	P	352	Facilities NACE 39: sanitation and other waste management	Process		0.35	1.00	CEPMEIP default for mechanically formed fugitive emissions
T107200	P	352	Facilities NACE 41-43: construction and building industries	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T107500	V	52	Facilities NACE 45: trade and repair of motor vehicles and motorcycles	Combustion	fuel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T107500	V	17	Facilities NACE 45: trade and repair of motor vehicles and motorcycles	Combustion	gas/diesel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T107500	H	25	Facilities NACE 45: trade and repair of motor vehicles and motorcycles	Combustion	wood	0.75	0.77	CEPMEIP/Ehrlich medium sized wood-fired boiler

T107500	P	352	Facilities NACE 45: trade and repair of motor vehicles and motorcycles	Process		0.15	0.89	CEPMEIP, average for storage
T151100	V	51	Facilities NACE 46/47: retail and wholesale trade	Combustion	coal	0.50	0.57	CEPMEIP default for combustion of coal in a medium sized combustor
T151100	V	405	Facilities NACE 46/47: retail and wholesale trade	Combustion	gas/diesel oil	0.95	0.80	CEPMEIP default for combustion of gas/diesel oil
T151100	P	352	Facilities NACE 46/47: retail and wholesale trade	Process		0.55	0.81	Ehrlich, average for chemical industry
T103900	H	377	Facilities NACE 49-53: transport, communications	Combustion	biomass gaseous	1.00	1.00	CEPMEIP default for combustion of gaseous fuels
T103900	V	388	Facilities NACE 49-53: transport, communications	Combustion	chemical waste gas	1.00	0.80	CEPMEIP default for combustion of gaseous fuels
T103900	V	52	Facilities NACE 49-53: transport, communications	Combustion	fuel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T103900	V	405	Facilities NACE 49-53: transport, communications	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T103900	V	17	Facilities NACE 49-53: transport, communications	Combustion	gas/diesel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T103900	V	410	Facilities NACE 49-53: transport, communications	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T103900	V	411	Facilities NACE 49-53: transport, communications	Combustion	gas/diesel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T103900	V	19	Facilities NACE 49-53: transport, communications	Combustion	gas/diesel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T103900	V	476	Facilities NACE 49-53: transport, communications	Combustion	kerosene	0.95	0.00	CEPMEIP default for combustion of gas/diesel oil
T103900	V	33	Facilities NACE 49-53: transport, communications	Combustion	lpg	1.00	1.00	CEPMEIP default for combustion of gaseous fuels
T103900	V	1	Facilities NACE 49-53: transport, communications	Combustion	natural gas	0.35	1.00	CEPMEIP default for mechanically formed fugitive emissions
T103900	V	361	Facilities NACE 49-53: transport, communications	Combustion	natural gas	0.35	1.00	CEPMEIP default for mechanically formed fugitive emissions
T103900	V	44	Facilities NACE 49-53: transport, communications	Combustion	refinery gas	1.00	0.75	CEPMEIP default for combustion of gaseous fuels
T101300	P	352	Facilities NACE 52.10/52.24: cargo handling and storage	Process		0.15	0.12	CEPMEIP, average for storage
T107400	V	30	Facilities NACE 68-82: renting and consultancy activities	Combustion	fuel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T107400	V	34	Facilities NACE 68-82: renting and consultancy activities	Combustion	fuel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil

T107400	V	52	Facilities NACE 68-82: renting and consultancy activities	Combustion	fuel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T107400	V	480	Facilities NACE 68-82: renting and consultancy activities	Combustion	fuel oil	0.85	0.67	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T107400	V	57	Facilities NACE 68-82: renting and consultancy activities	Combustion	fuel oil	0.85	0.79	CEPMEIP/Ehrlich default for combustion of heavy fuel oil
T107400	V	405	Facilities NACE 68-82: renting and consultancy activities	Combustion	gas/diesel oil	0.95	1.00	CEPMEIP default for combustion of gas/diesel oil
T107400	V	17	Facilities NACE 68-82: renting and consultancy activities	Combustion	gas/diesel oil	0.95	0.67	CEPMEIP default for combustion of gas/diesel oil
T107400	V	352	Facilities NACE 68-82: renting and consultancy activities	Combustion		0.35	1.00	CEPMEIP default for mechanically formed fugitive emissions
T107400	P	352	Facilities NACE 68-82: renting and consultancy activities	Process		0.35	0.33	CEPMEIP default for mechanically formed fugitive emissions
T107001	P	352	Facilities NACE 84.1: public administration services	Process		0.95	1.00	Average of last AERs, modern waste incineration.
T107201	H	26	Facilities NACE 85-88: education and healthcare	Combustion	wood, wood waste	0.75	0.77	CEPMEIP/Ehrlich medium sized wood-fired boiler

Table A.2 New PM2.5 fractions (to be used in 2019 reporting), compared to the old PM2.5 fractions (which were used in 2018 reporting). This table shows the PM2.5 fractions for the supplementary emission estimates. PRTR codes are internal codes used within the Dutch PRTR.

PRTR codes			Source category			PM2.5 fractions		Explanation
EMK	SSE	EVE	Emission source	Emission type	Activity	New (2019)	Old (2018)	Explanation for the new PM2.5 fraction
8922701	1	51	NACE 08: other quarrying and mining	Combustion	coal	0,80	0,57	Similar to fraction of individual facilities in table A.1: Average of last AERs, Nedmag
8922701	1	33	NACE 08: other quarrying and mining	Combustion	lpg	0,80	1,00	Similar to fraction of individual facilities in table A.1: Average of last AERs, Nedmag
8922701	1	1	NACE 08: other quarrying and mining	Combustion	Natural gas	0,80	1,00	Similar to fraction of individual facilities in table A.1: Average of last AERs, Nedmag

8910000	P		NACE 10.1: processing and preserving of meat and poultry	Process		0,35	0,16	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8910300	P		NACE 10.4: manufacture of oils and fats	Process		0,15	0,16	Similar to fraction of individual facilities in table A.1: Average of last AERs, crushing/grinding installation
8910400	P		NACE 10.5: dairy industry	Process		0,20	0,16	Similar to fraction of individual facilities in table A.1: Average of last AERs, drying of milk powder
8910406	P		NACE 10.5: dairy industry, diffuus	Process		0,20	0,33	Similar to fraction of individual facilities in table A.1: Average of last AERs, drying of milk powder
8910500	P		NACE 10.6: manufacture of grain mill products, excl. starches and starch products	Process		0,35	0,16	Similar to fraction of individual facilities in table A.1: Average of last AERs, crushing/grinding installation
8910506	P		NACE 10.6: manufacture of grain mill products, excl. starches and starch products, diffuse	Process		0,35	0,33	Similar to fraction of individual facilities in table A.1: Average of last AERs, crushing/grinding installation
8918000	P		NACE 10.8 (excluding NACE 10.81 and 10.82): other manufacture of food products	Process		0,35		Similar to fraction of individual facilities in table A.1: Average of last AERs, sugar production and drying installations
8918006	P		NACE 10.8 (excluding NACE 10.81 and 10.82): other manufacture of food products, diffuse	Process		0,35	0,33	CEPMEIP default for mechanically formed fugitive emissions
8910600	P		NACE 10.9: manufacture of prepared animal feeds	Process		0,15	0,16	Similar to fraction of individual facilities in table A.1: CEPMEIP, average for storage
8910606	P		NACE 10.9: manufacture of prepared animal feeds, diffuse	Process		0,35	0,33	CEPMEIP default for mechanically formed fugitive emissions
8900200	7	8	NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	Biomass gaseous	0,15	1,00	Similar to fraction of individual facilities in table A.1: Average of last AERs, crushing/grinding installation
8900200	1	51	NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	coal	0,50		Similar to fraction of individual facilities in table A.1:
8900200	1	52	NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	fuel oil	0,95	0,67	CEPMEIP default for combustion of gas/diesel oil
8900200	1	33	NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	lpg	0,15	1,00	Similar to fraction of individual facilities in table A.1: Average of last AERs, crushing/grinding installation
8900200	1	1	NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	Natural gas	0,15	1,00	Similar to fraction of individual facilities in table A.1: Average of last AERs, crushing/grinding installation
8900200	1	135	NACE 10-12: manufacture of food products, beverages and tobacco	Combustion	petroleum	0,95	1,00	CEPMEIP default for combustion of gas/diesel oil
8919700	4	193	NACE 13.20: textile weaving	Process	processed cotton	0,35	0,34	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions

8919700	4		NACE 13.20: textile weaving	Process		0,35	0,33	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8911400	4	155	NACE 13.3: finishing of textiles	Process	finished textiles	0,35	0,35	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8911500	4	186	NACE 13.93: manufacture of carpets and rugs	Process	manufactured carpets	0,35	0,33	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8911500	4		NACE 13.93: manufacture of carpets and rugs	Process		0,35	0,33	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8900300	1	51	NACE 13/14: manufacture of textiles and textile apparel	Combustion	coal	0,50	0,57	CEPMEIP default for combustion of coal in a medium sized combustor
8900300	1	52	NACE 13/14: manufacture of textiles and textile apparel	Combustion	fuel oil	0,95	0,67	CEPMEIP default for combustion of gas/diesel oil
8900300	1	33	NACE 13/14: manufacture of textiles and textile apparel	Combustion	lpg	0,35	1,00	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8900300	1	1	NACE 13/14: manufacture of textiles and textile apparel	Combustion	Natural gas	0,35	1,00	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8900300	1	135	NACE 13/14: manufacture of textiles and textile apparel	Combustion	petroleum	0,95	1,00	CEPMEIP default for combustion of gas/diesel oil
8900300	4	177	NACE 13/14: manufacture of textiles and textile apparel	Process	manufactured other textiles	0,35	0,36	CEPMEIP default for mechanically formed fugitive emissions
8900300	4		NACE 13/14: manufacture of textiles and textile apparel	Process		0,35	0,33	CEPMEIP default for mechanically formed fugitive emissions
8918106	P		NACE 13: manufacture of textiles, diffuse	Process		0,35	0,33	CEPMEIP default for mechanically formed fugitive emissions
8911700	P		NACE 15.11: tanning of leather and fur preparation	Process		0,35	0,10	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8900400	1	1	NACE 15: leather industry and fur preparation	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8911900	4		NACE 16.1: sawmilling and planing of wood, impregnation of wood	Process		0,35	0,33	CEPMEIP default for mechanically formed fugitive emissions

8912100	4		NACE 16.23: manufacture of builders' carpentry and joinery	Process		0,35	0,34	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8912101	1	52	NACE 16: manufacture of wooden products	Combustion	fuel oil	0,95	0,67	CEPMEIP default for combustion of gas/diesel oil
8912101	1	33	NACE 16: manufacture of wooden products	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8912101	1	1	NACE 16: manufacture of wooden products	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8912101	1	135	NACE 16: manufacture of wooden products	Combustion	petroleum	0,95	1,00	CEPMEIP default for combustion of gas/diesel oil
8912101	7	25	NACE 16: manufacture of wooden products	Combustion	wood	0,75	0,77	CEPMEIP/Ehrlich medium sized wood-fired boiler
8912106	P		NACE 16: manufacture of wooden products, diffuse	Process		0,35	0,33	CEPMEIP default for mechanically formed fugitive emissions
8900600	1	51	NACE 17.1/17.2: manufacture of pulp, paper and paperboard	Combustion	coal	0,50	0,57	CEPMEIP default for combustion of coal in a medium sized combustor
8900600	1	52	NACE 17.1/17.2: manufacture of pulp, paper and paperboard	Combustion	fuel oil	0,95	0,83	CEPMEIP default for combustion of gas/diesel oil
8900600	1	33	NACE 17.1/17.2: manufacture of pulp, paper and paperboard	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8900600	1	1	NACE 17.1/17.2: manufacture of pulp, paper and paperboard	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8912200	4	158	NACE 17.1: manufacture of pulp, paper and paperboard	Process	manufactured paper and paperboard	0,75	0,33	Similar to fraction of individual facilities in table A.1: Average of last AERs, Parenco
8912200	4		NACE 17.1: manufacture of pulp, paper and paperboard	Process		0,75	0,33	Similar to fraction of individual facilities in table A.1: Average of last AERs, Parenco
8912406	P		NACE 17: manufacture of paper, paperboard and articles of paper and paperboard, diffuse	Process		0,35	0,33	CEPMEIP default for mechanically formed fugitive emissions
8900700	1	1	NACE 18/58: publishing, printing and reproduction of recorded media	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8900700	P		NACE 18/58: publishing, printing and reproduction of recorded media	Process		0,35	0,05	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8924200	1	1	NACE 19.2 (excluding NACE 19.202): manufacture of refined petroleum products	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8912500	1	52	NACE 19.202: manufacture of refined petroleum products - not oil refineries	Combustion	fuel oil	0,95	0,67	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil

8912500	1	1	NACE 19.202: manufacture of refined petroleum products - not oil refineries	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8901100	1	51	NACE 20.1: manufacture of basic chemicals	Combustion	coal	0,50	0,43	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of coal in a medium sized combustor
8901100	1	52	NACE 20.1: manufacture of basic chemicals	Combustion	fuel oil	0,95	0,83	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil
8901100	1	33	NACE 20.1: manufacture of basic chemicals	Combustion	lpg	0,75	1,00	Similar to fraction of individual facilities in table A.1: Average of last AERs, production of chemical products
8901100	1	1	NACE 20.1: manufacture of basic chemicals	Combustion	natural gas	0,75		Similar to fraction of individual facilities in table A.1: Average of last AERs, production of chemical products
8901100	1	518	NACE 20.1: manufacture of basic chemicals	Combustion	other oil	0,95	0,83	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil
8901100	1	135	NACE 20.1: manufacture of basic chemicals	Combustion	petroleum	0,95	1,00	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil
8901100	1	54	NACE 20.1: manufacture of basic chemicals	Combustion	tar and asphalt	0,85	0,00	Similar to fraction of individual facilities in table A.1: CEPMEIP/Ehrlich default for combustion of heavy fuel oil
8901100	4	183	NACE 20.1: manufacture of basic chemicals	Process	manufactured primary synthetic rubber	0,63	0,73	Similar to fraction of individual facilities in table A.1: Average of last AERs of fertilizer production and Ehrlich for chemical industry
8901100	4	143	NACE 20.1: manufacture of basic chemicals	Process	Production value industrial gases	0,63	0,09	Similar to fraction of individual facilities in table A.1: Average of last AERs of fertilizer production and Ehrlich for chemical industry
8901100	4		NACE 20.1: manufacture of basic chemicals	Process		0,63		Similar to fraction of individual facilities in table A.1: Average of last AERs of fertilizer production and Ehrlich for chemical industry
8912600	4	170	NACE 20.12: manufacture of dyes and pigments	Process	manufactured dyes and pigments	0,35	0,73	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8912600	4		NACE 20.12: manufacture of dyes and pigments	Process		0,35	0,73	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions

8913000	4	172	NACE 20.13: manufacture of inorganic basic chemicals	Process	manufactured primary plastics	0,55	0,73	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8913000	4	161	NACE 20.13: manufacture of inorganic basic chemicals	Process	manufactured norganic basic chemicals	0,55	0,73	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8913000	4		NACE 20.13: manufacture of inorganic basic chemicals	Process		0,55	0,73	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8912900	4	175	NACE 20.149: manufacture of organic basic chemicals (no petrochemicals)	Process	manufactured organic basic chemicals	0,63	0,73	Similar to fraction of individual facilities in table A.1: Average of last AERs of fertilizer production and Ehrlich for chemical industry
8912900	4		NACE 20.149: manufacture of organic basic chemicals (no petrochemicals)	Process		0,63	0,73	Similar to fraction of individual facilities in table A.1: Average of last AERs of fertilizer production and Ehrlich for chemical industry
8900900	1	52	NACE 20.15: manufacture of fertilizers and nitrogen compounds	Combustion	fuel oil	0,95	0,34	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil
8900900	1	33	NACE 20.15: manufacture of fertilizers and nitrogen compounds	Combustion	lpg	0,70	0,34	Similar to fraction of individual facilities in table A.1: Average of last AERs, drying installations in fertilizer production sector
8900900	1	1	NACE 20.15: manufacture of fertilizers and nitrogen compounds	Combustion	natural gas	0,70	0,34	Similar to fraction of individual facilities in table A.1: Average of last AERs, drying installations in fertilizer production sector
8900900	4	171	NACE 20.15: manufacture of fertilizers and nitrogen compounds	Process	manufactured fertilizers and nitrogen compounds	0,70	0,34	Similar to fraction of individual facilities in table A.1: Average of last AERs, drying installations in fertilizer production sector
8900900	4	2	NACE 20.15: manufacture of fertilizers and nitrogen compounds	Process	natural gas	0,70	0,34	Similar to fraction of individual facilities in table A.1: Average of last AERs, drying installations in fertilizer production sector
8913100	4	163	NACE 20.2: manufacture of pesticides	Process	manufactured pesticides	0,55	0,73	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8913100	4		NACE 20.2: manufacture of pesticides	Process		0,55	0,72	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8913700	1	52	NACE 20.2-20.5: chemical products industry	Combustion	fuel oil	0,95	0,83	CEPMEIP default for combustion of gas/diesel oil
8913700	1	17	NACE 20.2-20.5: chemical products industry	Combustion	gas/diesel oil	0,95	0,83	CEPMEIP default for combustion of gas/diesel oil

8913700	1	33	NACE 20.2-20.5: chemical products industry	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8913700	1	1	NACE 20.2-20.5: chemical products industry	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8913700	1	135	NACE 20.2-20.5: chemical products industry	Combustion	petroleum	0,95	1,00	CEPMEIP default for combustion of gas/diesel oil
8913700	4	176	NACE 20.2-20.5: chemical products industry	Process	manufactured other chemicals	0,55	0,73	Ehrlich, average for chemical industry
8913700	4	178	NACE 20.2-20.5: chemical products industry	Process	manufactured perfumes and cosmetics	0,55	1,00	Ehrlich, average for chemical industry
8913700	4		NACE 20.2-20.5: chemical products industry	Process		0,55	0,73	Ehrlich, average for chemical industry
8913200	4	184	NACE 20.3: manufacture of paints, varnishes and similar coatings, printing ink and mastics	Process	manufactured paints, lacquers and ink	0,50	0,73	Similar to fraction of individual facilities in table A.1: Assumption for fugitive emissions from ovens
8913200	4		NACE 20.3: manufacture of paints, varnishes and similar coatings, printing ink and mastics	Process		0,50	0,72	Similar to fraction of individual facilities in table A.1: Assumption for fugitive emissions from ovens
8913400	4	187	NACE 20.41: manufacture detergents	Process	manufactured detergents	0,55	0,73	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8913400	4		NACE 20.41: manufacture detergents	Process		0,55	0,73	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8913600	4	173	NACE 20.52: manufacture of glues and adhesives	Process	manufactured glues	0,55	0,73	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8913600	4		NACE 20.52: manufacture of glues and adhesives	Process		0,55	0,73	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8919300	4	166	NACE 20.59: manufacture of other chemical products n.e.c.	Process	manufactured photochemical products	0,55	0,73	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8919300	4		NACE 20.59: manufacture of other chemical products n.e.c.	Process		0,55	0,72	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8913800	4		NACE 20.6: manufacture of synthetic and artificial fibres	Process		0,55	0,73	Similar to fraction of individual facilities in table A.1: Ehrlich, average for chemical industry
8901706	P		NACE 22.1: manufacture of rubber products, diffuse	Process		0,35	0,33	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions

8913900	P		NACE 22.2: manufacture of plastic products	Process		0,35	0,10	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8913906	P		NACE 22.2: manufacture of plastic products, diffuse	Process		0,35	0,33	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8901702	1	52	NACE 22: manufacture of rubber and plastic products	Combustion	fuel oil	0,95	0,67	CEPMEIP default for combustion of gas/diesel oil
8901702	1	33	NACE 22: manufacture of rubber and plastic products	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8901702	V	33	NACE 22: manufacture of rubber and plastic products	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8901702	1	1	NACE 22: manufacture of rubber and plastic products	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8901702	V	1	NACE 22: manufacture of rubber and plastic products	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8914000	4	157	NACE 23.1: manufacture of glass and glassware	Process	manufactured glass	0,95	0,54	Similar to fraction of individual facilities in table A.1: Average of last AERs, glass production
8914000	4		NACE 23.1: manufacture of glass and glassware	Process		0,95	0,89	Similar to fraction of individual facilities in table A.1: Average of last AERs, glass production
8914100	4	169	NACE 23.2-23.4: manufacture of ceramic products	Process	manufactured ceramic products	0,25	0,92	Similar to fraction of individual facilities in table A.1: Ehrlich, fugitive emissions from ceramic industry
8914100	4		NACE 23.2-23.4: manufacture of ceramic products	Process		0,25	0,75	Similar to fraction of individual facilities in table A.1: Ehrlich, fugitive emissions from ceramic industry
8914200	4	83	NACE 23.32: manufacture of bricks and tiles	Process	Bricks	0,25	0,92	Similar to fraction of individual facilities in table A.1: Ehrlich, fugitive emissions from ceramic industry
8914200	4		NACE 23.32: manufacture of bricks and tiles	Process		0,25	0,75	Similar to fraction of individual facilities in table A.1: Ehrlich, fugitive emissions from ceramic industry
8914300	4	180	NACE 23.6: manufacture of articles of concrete, plaster and cement	Process	manufactured cement, chalk and gypsum	0,10	0,45	Similar to fraction of individual facilities in table A.1: Ehrlich, cement production fugitive emissions
8914500	4	204	NACE 23.9: manufacture of other non-metallic mineral products	Process	value of manufactured other non-metallic products	0,80	0,70	Similar to fraction of individual facilities in table A.1: PRTR for Denmark, non-metallic mineral products
8914500	4		NACE 23.9: manufacture of other non-metallic mineral products	Process		0,80	0,70	Similar to fraction of individual facilities in table A.1: PRTR for Denmark, non-metallic mineral products

8914600	1	51	NACE 23: construction material and glass industry	Combustion	coal	0,50	0,45	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of coal in a medium sized combustor
8914600	1	13	NACE 23: construction material and glass industry	Combustion	cokes	0,50	0,54	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of coal in a medium sized combustor
8914600	1	52	NACE 23: construction material and glass industry	Combustion	fuel oil	0,95	0,83	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil
8914600	1	33	NACE 23: construction material and glass industry	Combustion	lpg	0,90	0,54	Similar to fraction of individual facilities in table A.1: Average of last AERs, cement and glass production
8914600	1	1	NACE 23: construction material and glass industry	Combustion	natural gas	0,90	0,54	Similar to fraction of individual facilities in table A.1: Average of last AERs, cement and glass production
8914600	1	135	NACE 23: construction material and glass industry	Combustion	petroleum	0,95	0,54	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil
8914606	P		NACE 23: construction material and glass industry, diffuse	Process		0,90	0,33	Similar to fraction of individual facilities in table A.1: Average of last AERs, cement and glass production
8924406	P		NACE 24.1-24.3 base metal industry, processing and manufacture of iron and steel, diffuse	Process		0,65		Similar to fraction of individual facilities in table A.1: CEPMEIP average integrated iron and steel plant class 2
8924407	1	33	NACE 24.1-24.3/24.51/24.52: base metal iron and steel	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8924407	4		NACE 24.1-24.3/24.51/24.52: base metal iron and steel	Process		0,70	0,64	Ehrlich, metallurgical sector
8914602	4	168	NACE 24.2: manufacture of tubes and pipes	Process	manufactured tubes and pipes	0,70	0,37	Similar to fraction of individual facilities in table A.1: Ehrlich, metallurgical sector
8914602	4		NACE 24.2: manufacture of tubes and pipes	Process		0,70	0,37	Similar to fraction of individual facilities in table A.1: Ehrlich, metallurgical sector
8919200	4		NACE 24.3: other first processing of iron and steel	Process		0,70	0,50	Similar to fraction of individual facilities in table A.1: Ehrlich, metallurgical sector
8920100	1	13	NACE 24.4/24.53/24.54: manufacture and casting of light and other non-ferrous metals	Combustion	cokes	0,50	0,43	CEPMEIP default for combustion of coal in a medium sized combustor
8920100	1	33	NACE 24.4/24.53/24.54: manufacture and casting of light and other non-ferrous metals	Combustion	lpg	1,00	0,73	CEPMEIP default for combustion of gaseous fuels
8920100	1	1	NACE 24.4/24.53/24.54: manufacture and casting of light and other non-ferrous metals	Combustion	natural gas	1,00	0,73	CEPMEIP default for combustion of gaseous fuels
8914702	4		NACE 24.45: manufacture of non-ferrous metals, aluminium	Process		0,75	0,67	Similar to fraction of individual facilities in table A.1: CEPMEIP default for secondary copper

8914900	4	111	NACE 24.5: casting of metals	Process	casting of metals	0,55	0,15	Similar to fraction of individual facilities in table A.1: Average of last AERs, Alucast
8914900	4		NACE 24.5: casting of metals	Process		0,55	0,15	Similar to fraction of individual facilities in table A.1: Average of last AERs, Alucast
8902100	1	33	NACE 25: manufacture of metal structures and parts of structures	Combustion	lpg	0,30	1,00	Similar to fraction of individual facilities in table A.1: Average of last AERs, selection of companies in metal industry
8902100	1	1	NACE 25: manufacture of metal structures and parts of structures	Combustion	natural gas	0,30	1,00	Similar to fraction of individual facilities in table A.1: Average of last AERs, selection of companies in metal industry
8902100	1	135	NACE 25: manufacture of metal structures and parts of structures	Combustion	petroleum	0,30	1,00	Similar to fraction of individual facilities in table A.1: Average of last AERs, selection of companies in metal industry
8915000	P		NACE 25-33/95 (excluding NACE 30.1/33.15): metal-electronic industry	Process		0,35	0,33	CEPMEIP default for mechanically formed fugitive emissions
8915006	P		NACE 25-33/95 (excluding NACE 30.1/33.15): metal-electronic industry, diffuse release of PM10	Process		0,35	0,33	CEPMEIP default for mechanically formed fugitive emissions
8902301	1	52	NACE 26/28: manufacture of machinery and electronic apparatus	Combustion	fuel oil	0,95	0,67	CEPMEIP default for combustion of gas/diesel oil
8902301	1	33	NACE 26/28: manufacture of machinery and electronic apparatus	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8902301	1	1	NACE 26/28: manufacture of machinery and electronic apparatus	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8902301	1	135	NACE 26/28: manufacture of machinery and electronic apparatus	Combustion	petroleum	0,95	1,00	CEPMEIP default for combustion of gas/diesel oil
8915300	1	51	NACE 26/31/32: manufacture of electronic apparatus and furniture	Combustion	coal	0,50	0,57	CEPMEIP default for combustion of coal in a medium sized combustor
8915300	1	52	NACE 26/31/32: manufacture of electronic apparatus and furniture	Combustion	fuel oil	0,95	0,67	CEPMEIP default for combustion of gas/diesel oil
8915300	1	33	NACE 26/31/32: manufacture of electronic apparatus and furniture	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8915300	1	1	NACE 26/31/32: manufacture of electronic apparatus and furniture	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8915300	1	135	NACE 26/31/32: manufacture of electronic apparatus and furniture	Combustion	petroleum	0,95	1,00	CEPMEIP default for combustion of gas/diesel oil
8902304	1	1	NACE 26: manufacture of computers and electronic and optical apparatus	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8902303	1	1	NACE 27: manufacture of electrical apparatus	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels

8902200	1	52	NACE 28: manufacture of machinery	Combustion	fuel oil	0,95	0,67	Similar to fraction of individual facilities in table A.1: Average last AERs, Komeco
8902200	1	33	NACE 28: manufacture of machinery	Combustion	lpg	0,35	1,00	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8902200	1	1	NACE 28: manufacture of machinery	Combustion	natural gas	0,35	1,00	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8902400	1	52	NACE 29: motor-industry	Combustion	fuel oil	0,95	0,67	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil
8902400	1	33	NACE 29: motor-industry	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8902400	1	1	NACE 29: motor-industry	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8902400	1	135	NACE 29: motor-industry	Combustion	petroleum	0,95	1,00	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil
8914800	P		NACE 30.1: ship-building, painting	Process		0,35	0,33	Similar to fraction of individual facilities in table A.1: CEPMEIP default for mechanically formed fugitive emissions
8908100	1	52	NACE 30: manufacture of other transport equipment	Combustion	fuel oil	0,95	0,67	CEPMEIP default for combustion of gas/diesel oil
8908100	1	33	NACE 30: manufacture of other transport equipment	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8908100	1	1	NACE 30: manufacture of other transport equipment	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8908100	1	135	NACE 30: manufacture of other transport equipment	Combustion	petroleum	0,95	1,00	CEPMEIP default for combustion of gas/diesel oil
8908000	1	52	NACE 31/32: manufacture of furniture and other goods	Combustion	fuel oil	0,95	0,67	CEPMEIP default for combustion of gas/diesel oil
8908000	1	33	NACE 31/32: manufacture of furniture and other goods	Combustion	lpg	1,00	1,00	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gaseous fuels
8908000	1	1	NACE 31/32: manufacture of furniture and other goods	Combustion	natural gas	1,00	1,00	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gaseous fuels
8908000	7	25	NACE 31/32: manufacture of furniture and other goods	Combustion	wood	0,75		Similar to fraction of individual facilities in table A.1: CEPMEIP/Ehrlich medium sized wood-fired boiler
8908000	7	26	NACE 31/32: manufacture of furniture and other goods	Combustion	wood, wood waste	0,75	0,77	Similar to fraction of individual facilities in table A.1: CEPMEIP/Ehrlich medium sized wood-fired boiler
8920400	7	8	NACE 35: production and distribution of electricity and gas	Combustion	Biomass gaseous	0,75		Similar to fraction of individual facilities in table A.1: Average of last AERs, co-firing in coal fired power plants

8920400	1	51	NACE 35: production and distribution of electricity and gas	Combustion	coal	0,75	0,83	Similar to fraction of individual facilities in table A.1: Average of last AERs, large coal fired power plants
8920400	1	52	NACE 35: production and distribution of electricity and gas	Combustion	fuel oil	0,95	0,83	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil
8920400	1	17	NACE 35: production and distribution of electricity and gas	Combustion	gas/diesel oil	0,95	0,83	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil
8920400	1	1	NACE 35: production and distribution of electricity and gas	Combustion	natural gas	0,75		Similar to fraction of individual facilities in table A.1: Average of last AERs, co-firing in coal fired power plants
8920500	1	52	NACE 36: collection, purification and distribution of water	Combustion	fuel oil	0,95	0,80	CEPMEIP default for combustion of gas/diesel oil
8920500	1	17	NACE 36: collection, purification and distribution of water	Combustion	gas/diesel oil	0,95	0,67	CEPMEIP default for combustion of gas/diesel oil
8920500	1	33	NACE 36: collection, purification and distribution of water	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8920500	1	1	NACE 36: collection, purification and distribution of water	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8920500	1	135	NACE 36: collection, purification and distribution of water	Combustion	petroleum	0,95	1,00	CEPMEIP default for combustion of gas/diesel oil
E400109	7	8	NACE 37: collection and treatment of sewage	Combustion	Biomass gaseous	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
E400109	H	8	NACE 37: collection and treatment of sewage	Combustion	Biomass gaseous	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
E400109	1	17	NACE 37: collection and treatment of sewage	Combustion	gas/diesel oil	0,95	0,67	CEPMEIP default for combustion of gas/diesel oil
E400109	V	17	NACE 37: collection and treatment of sewage	Combustion	gas/diesel oil	0,95	0,67	CEPMEIP default for combustion of gas/diesel oil
E400109	1	1	NACE 37: collection and treatment of sewage	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
E400109	V	1	NACE 37: collection and treatment of sewage	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8921804	P		NACE 38.2/84.1 treatment of waste, including communal waste-incineration plants	Process		0,95	1,00	Similar to fraction of individual facilities in table A.1: Average of last AERs, modern waste incineration.
8916000	1	52	NACE 38.3: preparation to recycling of metal and non-metal waste and scrap	Combustion	fuel oil	0,95	0,83	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil
8916000	1	33	NACE 38.3: preparation to recycling of metal and non-metal waste and scrap	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8916000	1	1	NACE 38.3: preparation to recycling of metal and non-metal waste and scrap	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
8921900	1	52	NACE 39: sanitation and other waste management	Combustion	fuel oil	0,95	0,67	Similar to fraction of individual facilities in table A.1: CEPMEIP default for combustion of gas/diesel oil

8921900	1	33	NACE 39: sanitation and other waste management	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
0020401	1	51	NACE 41-43: construction and building industries	Combustion	coal	0,50	0,50	CEPMEIP default for combustion of coal in a medium sized combustor
0020401	1	33	NACE 41-43: construction and building industries	Combustion	lpg	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
0020401	1	1	NACE 41-43: construction and building industries	Combustion	natural gas	1,00	1,00	CEPMEIP default for combustion of gaseous fuels
0020401	7	25	NACE 41-43: construction and building industries	Combustion	wood	0,75	0,77	CEPMEIP/Ehrlich medium sized wood-fired boiler
0833400	P		NACE 52.10/52.24: cargo handling and storage	Process		0,15	0,27	Similar to fraction of individual facilities in table A.1: CEPMEIP, average for storage