German Regulation concerning Mercury – Immission protection (Air quality control)
Important instruments: Federal Immission Control Act and implementing ordinances

Air quality control in Germany is mainly governed by the Act on the Prevention of Harmful Effects on the Environment Caused by Air Pollution, Noise, Vibration and Similar Phenomena, short Federal Immission Control Act (BImSchG) and its implementing ordinances and administrative regulations like Technical Instructions on Air Quality Control (TA Luft). In addition, there are also provisions on air quality control at Länder level. The Technical Instructions on Air Quality Control (TA Luft) are a modern instrument for German authorities to control air pollution. They contain provisions to protect citizens from unacceptably high pollutant emissions from installations as well as requirements to prevent adverse effects on the environment. In addition, it lays down emissions limit values for relevant air pollutants from installations. Existing installations must also be upgraded to the best available technology.
http://www.bmu.de/english/air_pollution_control/general_information/doc/4352.php

Emission values

Sector / Industry	Limit value for Hg	Comments	Source
All facilities which are in need of an environmental permit (4th BImschV).	none	Mercury emission declaration (kg/h and kg/a) is required except for selected types of plants like wind farms or installations for the production of compost from organic wastes (see § 1).	11th BImSchV
Combustion plants for solid fuels	a) 0.03 mg/m³ (daily mean value) b) 0.05 mg/m³ (half-hourly mean value)	The operator has to ensure that (under others) 1. no daily mean value exceeds the emission limit value for mercury and its compounds, to be indicated as Hg, 0.03 mg/m³ 2. no half-hourly mean value exceeds twice the emission limit values established in number 1. Notwithstanding the emission limit value for mercury and its compounds, established in paragraph 1 sentence 2 no. 2, no half-hourly mean value shall exceed the emission limit value of 0.05 mg/m³.	13th BImSchV

Sector / Industry	Limit value for Hg	Comments	Source
		The operator has continuously to determine, record, evaluate and submit the mass concentration of mercury (and other pollutants) to the authorities. "The competent authority shall on demand waive the continuous measuring of mercury and its compounds, to be indicated as mercury, if it has been reliably proven by regular control that the emission limit values according to Article 3 for mercury and its compounds are only utilized for less than 50 per cent."	
Waste incineration plants and co-incineration plants	a) 0.03 mg/m³ (daily mean value) b) 0.05 mg/m³ (half-hourly mean value) Reference oxygen contents: Waste incineration: 11 % Cement clinker or cement production or lime-burning plants: 10 % Power plants burning solid fuels: 6 %	Incineration plants shall be built and operated in such a way that 1. no daily mean value exceeds the emission limit value for mercury and its compounds, to be indicated as Hg, of 0.03 mg/m³ 2. no half-hourly mean value exceeds the emission limit value for mercury and its compounds, to be indicated as Hg, of 0.05 mg/m³ "At the operator's request, the competent authority shall waive the continuous monitoring of mercury and its compounds, expressed as mercury, if reliable assurance can be provided that the actual emission concentrations account for less than 20 per cent of the emission limit values set out in Art. 5 para (1) no. 1 letter g) and no. 2 letter g) or in Annex II, nos. II.1.1, II.1.2, II.2.5, II.2.6, II.3.1 and II.3.2."	17th BImSchV, Article 5
General Requirements to Emission Limits: Inorganic Particulate Matter	0.25 g/h or 0.05 mg/m³	With regard to the inorganic particulate matter listed hereunder, the following total mass concentrations or mass flows contained in waste gas may not be exceeded; notwithstanding this, the requirements for Class I substances shall refer to individual substances:	TA Luft, 5.2.2

Sector / Industry	Limit value for Hg	Comments	Source
		Class I — mercury and its compounds, to be indicated as Hg — … mass flow, per substance 0.25 g/h or mass concentration, per substance 0.05 mg/m³;	
Mass flow thresholds for continuous monitoring	>2.5 g/h	Installations with mass flows of mercury and its compounds of over 2.5 g/h, to be indicated as Hg, shall be equipped with measuring instruments at their relevant sources which continuously determine mercury mass concentrations, unless it has been reliably proven that the mass concentrations are less than 20 per cent of those specified in 5.2.2 Class I.	TA Luft, 5.3.3.2
Installations for the Production of Chlorine or Alkali (existing installations)	a) 1.0 g per Mg of permitted chlorine production (amalgam process). b) 1.2 g per Mg of permitted chlorine production (simultaneous production of alkali and dithionite or alcoholates in one installation)	In existing installations for chlor-alkali electrolysis using the amalgam process, mercury emissions in the cell room waste air shall not exceed an annual average mass ratio of 1.0 g per Mg of permitted chlorine production. If alkali and dithionite or alcoholates are produced simultaneously in one installation, mercury emissions from cell room waste air shall not exceed an annual average mass ratio of 1.2 g per Mg of permitted chlorine production. The possibilities to further reduce mercury emissions from chlor-alkali electrolysis using the amalgam process by state of the art techniques shall be exhausted.	TA Luft, 5.4.4.1l.1/5.4.4.1n.1

Immission values

Background	Limit value for Hg	Comments	Source
Immission Values for Pollutant Deposition	1 µg/(m*²d) (average of 1 year)	The protection against harmful effects of the deposition of air pollutants on the environment, including the protection against adverse soil alterations, is ensured if a) the total deposition load of mercury and its inorganic compounds, to be indicated as mercury, does not exceed 1 µg/(m*²d) at any assessment point (averaging period: 1 year) b) the evidence indicating that the relevant examination and action values of Annex 2 of the Federal Soil Protection and Contaminated Sites Ordinance have been exceeded by air pollutants at any assessment point is insufficient.	TA Luft, 4.5.1
Determination within the Permit procedure	0.0025 kg/h (minor mass flow)	It is unnecessary to determine the immission indicators within the permit procedure for the respective emitted pollutant if a) the emissions disposed of pursuant to 5.5 (mass flows) do not exceed the minor mass flows listed in Table 7 and b) the emissions not disposed of pursuant to 5.5 (diffuse emissions) do not exceed 10 per cent of the minor mass flows listed in Table 7, insofar as a special geographic situation or special circumstances do not require to proceed otherwise. Table 7: Minor Mass Flows: Mercury and its inorganic compounds, to be indicated as mercury: 0.0025 kg/h	TA Luft, 4.6.1.1
Determination without Established Immission Values and in Special Cases	30 µg/(m²*d) (Croplands) 3 µg Hg/(m²*d) (Grassland)	Table 8: Deposition Values as Basic Evidence Speaking in Favour of Special-Case Examination: Croplands: 30 µg Hg/(m²*d) Grassland: 3 µg Hg/(m²*d)	TA Luft, 4.8