

WCC - Chlor-Alkali Industry
Mercury consumption and emissions in kg/year (absolute data)

Production year: 2017									
Country or Area	Hg plants	Capacity	Purchases /Sales	Consumption /Use	Emission with products	Emission to water	Emission to air	Total emissions	Solid waste
	Number	In 1000 t Cl ₂ /y	kg Hg /y (- if sold)	kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y
Europe	18	1 684	17 716	156 771	266	65,5	820	1152	68 085
United States of America + Canada + Mexico + Brazil + Argentina (1 plant) + Uruguay (1 plant)	9	566	28 497	30 959	168	12	2 615	2795	8 143
Russia	3	389	7 763	9 252	91	34	396	521	4 031
Total	30	2 639	53 976	196 982	525	111	3 832	4 468	80 259

Production year: 2018									
Country or Area	Hg plants	Capacity	Purchases /Sales	Consumption /Use	Emission with products	Emission to water	Emission to air	Total emissions	Solid waste
	Number	In 1000 t Cl ₂ /y	kg Hg /y (- if sold)	kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y
United States of America + Canada + Mexico + Brazil + Argentina (1 plant) + Uruguay (1 plant)	9	566	27 188	31 041	109	26	2 792	2927	12 067
Russia	3	426	35 754	7 737	78	42	293		2 728
Total	12	992	62 942	38 778	187	68	3 085	2 927	14 795

Explanation of the table

References: the data communicated refer normally to the end of the mentioned year (December 31).

Number Hg plants: number of electrolysis production units in activity using the mercury technology.

Capacity: nameplate chlorine production capacity according to authorisations (expressed in thousands metric tonnes chlorine per year).

Mercury data: the quantities of mercury are expressed in kilograms per year.

Purchases / Sales: quantity of mercury coming in or leaving (negative value) the production site (from or to other sites of the same company, other companies, traders, suppliers ...). If the mercury comes from a unit already closed, even on the same production site, it will also be considered as "Purchase". The quantity of mercury contained in solid waste sent to **external** treatment units for metal recovery will be considered here as "Sales"; if (and when) recovered metallic mercury is reintegrated back in the production site, the corresponding quantity will then be considered as "Purchases".

Consumption / Use: mercury added to the production cells and circuits (negative value if removed) to keep the amount of mercury contained in the cells and circuits at the same constant level (structurally immobilised in the process); this value correspond to the "Purchases /Sales" figure corrected to remove the effect of mercury inventory variation in the warehouse of the site, and/or any voluntary change in the installation inventory (cells ...). A comment has to be added is there is a voluntary increase or decrease of the inventory.

Emission to air: quantity of mercury emitted to the air (including process exhaust, hydrogen vented or burned, diffuse emissions from cell room ...).

Emission to water: quantity of mercury emitted with the water effluents leaving the production unit (after treatment).

Emission with products: quantity of mercury emitted with the products (mainly caustic soda/potash and hydrogen used as chemical); this does not include the hydrogen vented or burned. If mercury emission with HCl, hypochlorite ... is separately accounted, care must be taken to avoid double counting (with mercury in hydrogen, caustic ...).

Total emissions: sum of emissions to air, water and with products.

Solid waste to deposit: estimation/measure of the quantity of mercury included in the solid waste sent to final waste disposal (internal or external).

The mercury contained in the waste waiting for recovery treatment or to be sent to final disposal, and temporarily stored on the site, will still be considered as being part of the site inventory for this reporting.

Difference to balance: this calculated value (not indicated in the tables) corresponds to the difference between the consumption and the sum of the total emissions (air, water, products) and the mercury in the waste sent to final disposal; it integrate the inaccuracies of the measures and the mercury accumulated in the installation but not measured.