

STATISTICAL RELEASE

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Environmental statistics

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Consumption of hazardous chemicals in 2009 and 2010

– Preliminary data –

Statistical Release contains the selected statistical data on consumed quantity of hazardous chemicals in 2009 and 2010, by divisions of activities and toxicity classes.

Total quantity of consumed hazardous chemicals in 2010 increased by 35.5% in comparison with the referent period 2009. Observing by sections and comparing 2009 and 2010, the increase of 12.9% was noted in the section of Mining and quarrying, followed by section of Manufacturing (increase of 36.2%), while in the section of Electricity, gas and steam supply, the decrease of 3.6% was recorded.

In the division of Manufacturing of chemicals and chemical products, consumed quantity of hazardous chemicals in 2010 increased by 36.1% compared to the referent period 2009 and in the division of Manufacturing of basic metals the increase amounted to 44.2%.

Table 1. Consumption of chemicals, by divisions of activities, 2009 and 2010

	Consumed quantity of chemicals ¹⁾ , in tons	
	2009	2010
Republic of Serbia	429 391	581 887
Mining and quarrying	931	1 052
Manufacturing	421 668	574 287
Manufacture of food products	17 404	21 731
Manufacture of beverages	12 557	13 963
Manufacture of paper and paper products	1 144	509
Printing and reproduction of recorded media	859	579
Manufacture of coke and refined petroleum products	5 446	5 525
Manufacture of chemicals and chemical products	320 722	436 678
Manufacture of basic pharmaceutical products and pharmaceutical preparations	673	646
Manufacture of rubber and plastic products	6 327	11 410
Manufacture of non – metallic mineral products	642	1 441
Manufacture of basic metals	46 292	66 742
Manufacture of fabricated metal products, except machinery	1 642	1 926
Manufacture of electrical equipment	5 907	10 713
Manufacture of motor vehicles and trailers	566	510
Electricity, gas and steam supply	6 792	6 548

¹⁾ Consumption of acyclic and aromatic oils is included.

In 2009, in the section of Manufacturing, 421 668 tons of chemicals were consumed, whereof, observed by toxic properties, 6.24% of chemicals was in the class of carcinogenic, mutagenic and toxic (A), 2.99% of chronically toxic (B), 24.72% of very toxic (C), 50.71% of toxic (D) and 15.34% of harmful (E).

In 2010, in the section of Manufacturing, 574 287 tons of chemicals were consumed, whereof, observed by toxic properties, 5.39% of chemicals was in the class of carcinogenic, mutagenic and toxic (A), 2.50% of chronically toxic (B), 30.44% of very toxic (C), 48.86% of toxic (D) and 12.80% of harmful (E).

Comparing consumed chemicals' quantities in 2009 and 2010 in the section of Manufacturing, 67.69% increase of consumed hazardous chemicals was noted in the class of very toxic chemicals (C).

Table 2. Consumption of chemicals¹⁾, by toxicity classes (A-E), 2009, in tons

	Total	Toxicity class				
		A	B	C	D	E
Republic of Serbia	429 391	27 677	12 883	106 123	218 009	64 698
Mining and quarrying	931	606	286	22	15	1
Manufacturing	421 668	26 324	12 595	104 253	213 822	64 674
Manufacture of food products	17 404	759	123	7 634	8 876	12
Manufacture of beverages	12 557	44	51	2 147	764	9 551
Manufacture of paper and paper products	1 144	535	0,74	132	445	31
Printing and reproduction of recorded media	859	791	2	1	1	64
Manufacture of coke and refined petroleum products	5 446	2 570	0	587	599	1 690
Manufacture of chemicals and chemical products	320 722	13 704	11 210	86 223	163 559	46 025
Manufacture of basic pharmaceutical products and pharmaceutical preparations	673	5	7	118	427	116
Manufacture of rubber and plastic products	6 327	405	8	14	3 238	2 661
Manufacture of non – metallic mineral products	641	97	18	5	56	465
Manufacture of basic metals	46 292	4 880	9	3 125	35 276	3 002
Manufacture of fabricated metal products, except machinery	1 642	953	22	134	267	266
Manufacture of electrical equipment	5 907	810	852	3 973	82	189
Manufacture of motor vehicles and trailers	566	186	209	13	42	116
Electricity, gas and steam supply	6 792	748	2	1 849	4 171	22

¹⁾ Consumption of acyclic and aromatic oils is included.

Table 3. Consumption of chemicals¹⁾ by toxicity classes (A-E), 2010, in tons

	Total	Toxicity class				
		A	B	C	D	E
Republic of Serbia	581 887	32 354	14 627	176 977	284 375	73 555
Mining and quarrying	1 052	685	251	26	88	2
Manufacturing	574 287	30 951	14 374	174 827	280 608	73 527
Manufacture of food products	21 731	648	241	9 865	10 950	27
Manufacture of beverages	13 963	44	42	2 501	847	10 528
Manufacture of paper and paper products	509	39	0	261	171	38
Printing and reproduction of recorded media	579	508	4	2	0	65
Manufacture of coke and refined petroleum products	5 525	2 504	0	1 907	636	478
Manufacture of chemicals and chemical products	436 678	17 798	12 495	147 049	207 613	51 722
Manufacture of basic pharmaceutical products and pharmaceutical preparations	646	5	7	57	458	119
Manufacture of rubber and plastic products	11 410	1 462	9	169	4 485	5 285
Manufacture of non – metallic mineral products	1 441	180	355	12	65	829
Manufacture of basic metals	66 742	5 244	6	3 608	54 712	3 172
Manufacture of fabricated metal products, except machinery	1 926	1 013	18	140	303	452
Manufacture of electrical equipment	10 713	537	1 010	8 922	60	184
Manufacture of motor vehicles and trailers	510	184	104	17	66	139
Electricity, gas and steam supply	6 548	717	3	2 123	3 679	26

¹⁾ Consumption of acyclic and aromatic oils is included.

Methodological explanations

The presented data are collected by regular statistical surveys on consumption of chemicals.

The list of hazardous chemicals is created on the basis of chemicals' characteristics that affect human life and health.

According to the toxic properties, hazardous chemicals are grouped in five classes: class A – carcinogenic, mutagenic and reprotoxic, class B – chronically toxic (e.g. sensitizing, etc.), class C- very toxic, class D- toxic and class E- harmful.

Carcinogenic chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause cancer or increase the risk of it.

Mutagenic chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause genetic changes or increase the risk of them.

Chemicals toxic for reproduction are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause hazardous effects on posterity and/ or decrease male or female reproductive functions, i.e. decrease the capabilities or increase the risk of their appearance.

Chemicals that cause sensibilization are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause over sensibility and longer exposure to such chemicals can cause characteristic hazardous effects.

Very toxic chemicals are chemicals which, if inhaled, swallowed or absorbed through the skin, in small quantities, can cause death, acute or chronic health effects.

Toxic chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, in small quantities, cause death, acute or chronic health effects.

Harmful chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, cause death, acute or chronic health effects.

List of chemicals is in compliance with the Regulation on registration, evaluation and authorization of chemicals 1907/06 (REACH – Registration, Evaluation, Authorization and Restriction of Chemical substances).

More detailed methodologies are available on the website of SORS: <http://webzrs.stat.gov.rs/WebSite/userFiles/file/Zivotna%20sredina/SMET8/SMET011110C.pdf>

Starting from 1999 the Statistical Office of the Republic of Serbia has not at disposal and may not provide available certain data relative to AP Kosovo and Metohia and therefore these data are not included in the coverage for the Republic of Serbia (total).