



Environmental Status Report 2022



Deza, a.s. is a producer of basic organic substances intended for further industrial use. Maximum care is devoted to a permanently responsible approach in comprehensive environmental protection, emergency preparedness, operational safety and health protection at work.

Company introduction

Deza, a. s. is a producer of basic aromatic hydrocarbons and other chemical substances with more than 130 years of tradition. It is one of the most important companies in the world in the field of coal tar and crude benzole processing. By constantly renewing and modernizing the production technologies used, the company tries to reduce the impact of chemical production on the environment.

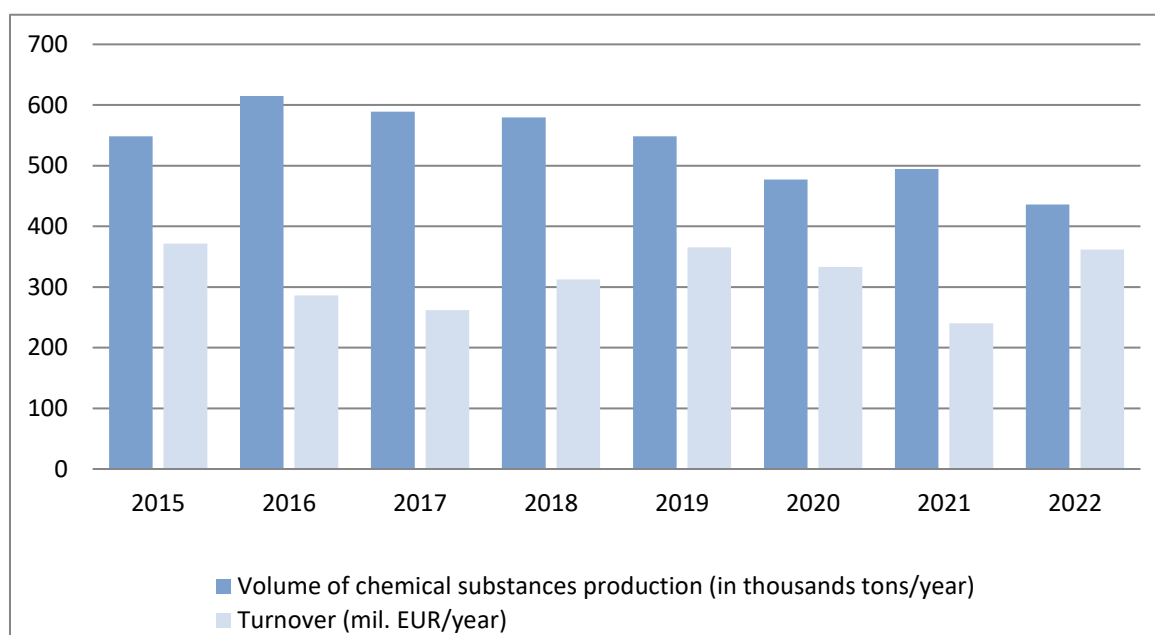
Reducing the impact of production activities on the environment and public trust are the result of a correctly set management system. The internationally recognized standards ISO 9001 (QMS), ISO 14001 (EMS) and 45001 (HSMS) are at DEZA, a.s. certified and regularly reviewed. At the same time, 50,001 (EnMS) is introduced.

The product portfolio is very broad. DEZA, a.s. produces aromatic hydrocarbons – benzene, toluene, a mixture of xylenes, as well as phenolic substances and polyaromatic hydrocarbons such as naphthalene, anthracene, carbazole, pyrene and tar oils. Phthalic anhydride and then esters are produced from naphthalene, and anthraquinone is produced from anthracene.

An important product is coal pitch, which is shipped overseas via the company's seaport cargo terminal in Świnoujście, Poland. Chemical production is carried out at the company's headquarters in Valašské Meziříčí and in the separate Organik operation in Otrokovice. For the subsidiary CS CABOT spol. s.r.o. the basic raw material for the production of carbon black is produced.



DEZA, a.s. has a modern approach to the production of energy from conventional and alternative fuels, controlled waste water treatment by physical, chemical and biological processes. A corporate incinerator of industrial waste is used to minimize the production of hazardous waste.



DEZA, a.s. is a long-term participant in the Responsible Business in Chemistry program. It actively supports this worldwide initiative, leading to the achievement of a high level of health and safety protection of employees, general population and the environment. In 2020, the Responsible Care certificate was defended for the ninth time in a row, with the right to use the RC logo until October 2024.

Investment and development

The accepted commitment to constantly reduce the impacts of the activities and services provided on the environment and people's health is regularly reflected in the investment plan for technical development. In 2022, with environmental protection focus the following projects and plans were completed or supported by investment:



- Reconstruction of D1 boiler and improvements to flue gas denitrification on K2 boiler of the heating plant
- Adjustments to hermetic emissions at the Phenols and MTVCH production facilities
- Hermetization of operations of Esters VM in connection with the intensification of this production plant
- Replacement of gas furnace burners with low-emission LowNOx burners
- Reduction of NOX emissions using SNCR at an industrial waste incinerator
- Optimization of the crushing line and restoration of the lifting equipment of the waste incinerator
- Modernization of the turbocharger as an air source for partial oxidation
- Continuous monitoring of discharged water and purchase of a flow analyzer"

Investments [mil. CZK]	2019	2020	2021	2022
Renewing	57.4	65.1	84.9	169.9
Development	144.2	138.1	69.8	138.0
Ecological	343.9	123.6	122.4	89.1
Total	545.6	326.8	277.1	397.0



In the last 10 years, more than 1.158 billion CZK have been invested in the greening of facilities. In the long term, the share of investments in ecology represents almost 32% of costs.

Operating expenses related to the greening of the facility reached CZK 480.5 million in 2022. Another CZK 5.2 million was spent on ensuring safety and health protection at work.

Air protection

DEZA, a.s. runs more than 60 stationary sources of air pollution, operated in accordance with binding operating conditions and in accordance with the requirements of the best available techniques (BAT), currently listed in European reference documents (BREF).

The total air emissions in 2022 and in previous years are as follows:

Indicator [t/year]	2019	2020	2021	2022
Sulfur oxides (SO ₂)	834.684	940.577	1074.034	1082.226
Nitrogen oxides (NO _x)	582.490	540.735	636.603	610.498
Carbon monoxide (CO)	82.212	77.475	46.815	38.084
Carbon dioxide (CO ₂)	314,670	308,839	305,647	269,528
Particulate matter (PM) pollutants (Dust)	14.469	13.635	14.790	13.387
Volatile organic compounds (VOC)	18.092	16.549	14.790	10.385
VOC emissions on production output [%]	0.0033	0.0035	0.0029	0.0024

The emission level is periodically verified by one-time measurements carried out by accredited laboratories. Continuous emission monitoring systems are applied at significant sources. The costs of verifying the level of emissions in 2022 reached the amount of CZK 1.142 million.

Since 2005, DEZA, a.s. has been included in the European system of trading greenhouse gas emission allowances. For the year 2022, these CO₂ emissions reached the level of 254,285 tons.

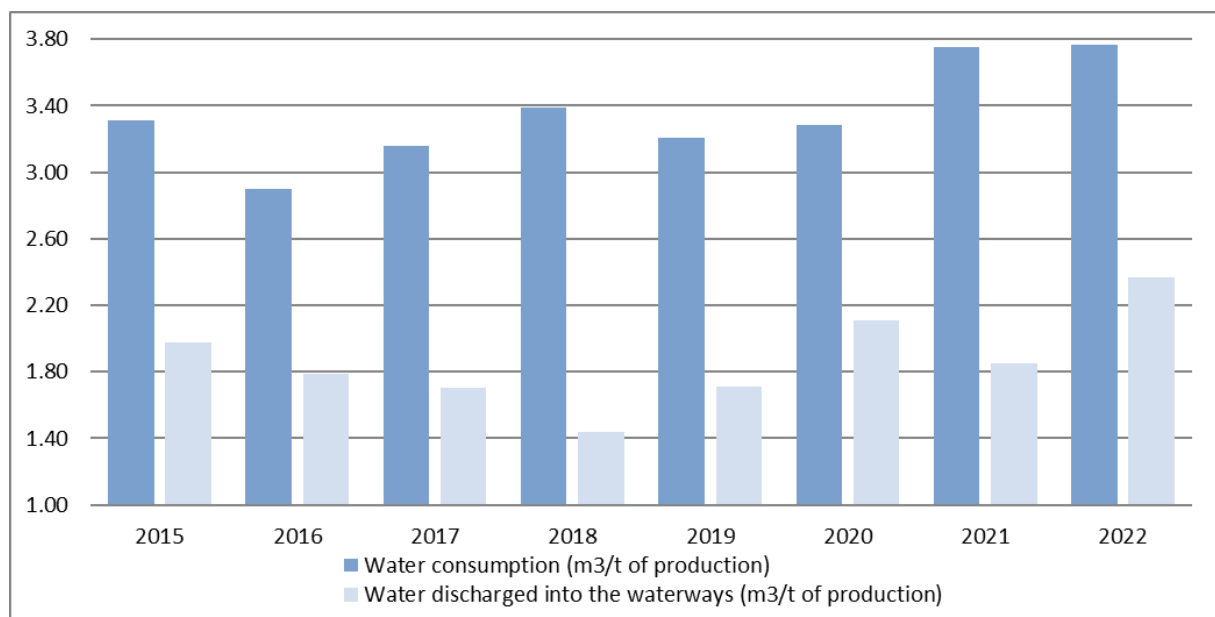
In connection with the plan for the denitrification of the industrial waste incinerator and the expansion of the hermetic system by the Esters VM production plant, a further reduction in the level of nitrogen oxides and volatile organic substances is expected.



Water protection

The priority for DEZA, a.s. in the field of water protection is to minimize the impact of technological wastewater from operations on the quality of water discharged into the Bečva river.

For this purpose, a multi-stage chemical and biological treatment of industrial wastewater is operated. It meets the requirements of the best available technique for discharged water from the chemical industry (BAT CWW). The completed intensification of the biological treatment plant at a cost of CZK 438 million, including upstream pressure flotation, cascade activation and a tertiary stage of water purification, is scheduled to go into permanent operation at the end of 2023.



The gradual introduction of techniques to reduce the level of emissions often leads to the increasing consumption of resources, especially feed water for the production of heat and service water, forced by the adopted environmental measures.

Groundwater monitoring is carried out regularly and long-term. The area in Valašské Meziříčí operates a hydraulic barrier consisting of 11 active wells, 5 internal line wells and 13 monitoring wells, the purpose of which is to prevent groundwater contamination outside the production area.

Total emissions to surface water in 2022 and in previous years are shown in the following table:

Indicator [t/year]	2019	2020	2021	2022
Chemical oxygen demand (COD)	29.211	21.238	14.911	14.602
Total phosphorus (TP)	0.360	0.195	0.363	0.177
Total inorganic nitrogen (N inorg.)	24.924	2.341	2.164	1.402
Total dissolved solids (TDS)	723.3	643.8	762.5	673.6
Total suspended solids (TSS)	7.157	4.022	3.341	3.528

For the discharge of waste water into surface waters, established by the binding condition of operation, emission limits are set in accordance with the requirement for a good condition of the water course.

Industrial waste

Production operation steps logically follow each other in such a way that

by-products and generally less applicable products are utilized elsewhere as a valuable raw material source for chemical production, and in the final phase are energetically evaluated as an alternative fuel. To minimize the production of emerging hazardous waste, an industrial waste incinerator with heat utilization, simultaneously operated as the best available technique (BAT WI), is applied.



Problematic waste from the region is also accepted for heat treatment at the incinerator. Waste and by-products that cannot be burned, that can be materially processed or that can be better used elsewhere are handed over to specialized companies.

The long-term goal of DEZA, a.s. is to minimize waste production with the permanent intention of reusing it. The total waste production has long-term oscillated around the level of 2.57%, related to the unit production of the relevant production and is shown in the following table:

Indicator [t/year]		2019	2020	2021	2022
P r o d u c t i o n	hazardous waste	9,528	8,561	7,885	6,546
	other waste	18,240	12,935	2,985	8,189
	removed in an incinerator	7,569	7,902	7,698	6,671
	total production	27,768	21,496	10,842	14,736
	per unit of relevant production [%]	5.06	3.77	2.19	2.69

In 2022, a total of 9,691 tons of waste were transferred to waste management facilities, of which more than 64.2% were materially usable and only 4.8% of the waste was considered hazardous.

Chemical legislation

The increasing pressure of environmental measures within the framework of the European Green Deal is reflected in the chemical legislation in the adoption of the Strategy for Chemical Substances (CSS). It can be assumed that the review of the REACH Regulation and the CLP Regulation initiated by the European Commission will cause further impacts on the chemical industry. An internal working group was therefore established to deal with the impacts and identification of measures resulting from the Green Agreement.

DEZA, a.s. is an active member of sectoral groups and consortia within CEFIC (Association for the Chemical Industry), which unites joint effort to monitor events surrounding individual chemicals and restrictions proposed by the European Commission or various non-governmental organizations.

In 2021, DEZA, a.s. became a member of the "Creosote Council Europe" group to aim to resume the production and sale of creosote biocidal product. The good news is that creosote was approved again last October as an active substance with validity until 31/10/2029.

The approval in question is subject to a restriction on the use for the treatment of wooden railroad ties and posts used for electric and telecommunication lines; limited to the Member States listed and published on the ECHA website. DEZA is currently awaiting its first national approval of creosote as a biocidal product. After obtaining the permit, we will be able to deliver creosote to selected countries in the EU.

Energy consumption

Energy consumption in recent years is shown in the following overview:

Energy\ [GJ/year]	2019	2020	2021	2022
Heat energy consumption	2,042,154	2,021,872	2,054,799	1,692,110
Purchase of electricity	165,697	104,093	103,228	86,343
Production of electricity	117,623	180,958	176,239	156,730
Total energy consumption	2,207,851	2,125,965	2,158,027	1,778,453

Local companies, and indirectly also households, are connected to the company's central heat supply system. In 2022, a total of 245 TJ of heat was transferred to external customers, which is about 12.7% of the total production.

Surplus heat and unused heat is used to produce electricity. The source of heat is chemical production, but also commercial fuels and alternative fuels from chemical production, as well as high-calorific waste or end waste gases.



The heating plant operates flue gas denitrification using the SNCR technique, a semi-dry method of desulfurization and dust removal of flue gas on a sleeve filter. These environmental measures, assessed as Best Available Techniques (BAT LCP), have contributed to complying with the stricter emission limits, valid since 18 August 2021, and at the same time lead to a reduction in the environmental impact of heat production.

The implementation of the ENERGIS energy information system, as well as the introduction of the energy management system in accordance with the standard ČSN EN ISO 50 001 and the setting of action goals lead to a gradual reduction of the energy intensity of the activities being carried out, which have shown a downward trend in recent years.

Socially beneficial activities

In the development of social relations of DEZA, a.s. we respect information openness. We inform the public about our influence and comprehensive environmental protection. Investment plans are discussed in a timely manner with the professional public and public authorities. Deza, a.s. is an important employer in the region. We offer our employees a number of above-standard benefits and create safe working conditions and the assurance of a good employer. We inform about the happenings in the company in the periodical Valašský chemik.

Sponsorship activities are primarily focused on selected interest groups (sports education of youth, cultural and charitable projects) to promote and explain the role of the chemical industry in our everyday life, including in building a developed economy. In 2022, we supported selected applications and spent

funds in the amount of CZK 1.548 million. We cooperate with vocational high schools in the region and support students in the study of these fields.

Work Safety and Health Protection

Work and health safety are ensured on the basis of system management through continuous education and training of employees in this area. Subsequently, control activities are carried out by company executives. Carelessness and risk underestimation are the main causes of incidents.

In 2022, nine workplace accidents with subsequent work absence were recorded, none of which were fatal. One work-related disease was registered. Most injuries were caused by mechanical risks (resulting in limb injuries).

Occupational accidents of employees	2019	2020	2021	2022
Number of occupational accidents	18	16	14	9
Accident frequency ¹⁾	11.2	10.0	8.8	5.8
Frequency of accidents ²⁾	1.76	1.56	1.38	0.90

Notes: ¹⁾ number of accidents per million hours worked; ²⁾ number of accidents per 100 employees

Occupational hygiene is ensured by the monitoring of work tools and the measurement of the concentration of harmful substances in the working environment, carried out by our own accredited analytical laboratory. The results found are the basis for the categorization of works and are reflected in the plan of corrective measures.

Prevention and operational safety

With regard to the amount and risk of stored chemicals, DEZA, a.s. belongs to business that are subject to increased requirements for the prevention of serious accidents. Active and passive elements of preventive protection are therefore applied in the technology, which enable the timely detection of non-standard conditions and the appropriate implementation of adequate measures preventing the rise of an emergency situation. At the same time, chemical operations meet the requirements of the best available techniques (BAT LVOC).



Regular emergency preparedness drills take place every year, usually with the participation of the company's fire brigade, which also participates in the voluntary TRINS system (Transport Information and Accident System). In this way, the public is offered continuous assistance in dealing with extraordinary situations connected with the transport, loading or storage of hazardous substances in the territory of the Czech Republic.

Identification data

Business name: **DEZA, a.s.**

Headquarters: **Masarykova 753
Krásno nad Bečvou
757 01 Valašské Meziříčí**

Plant Organik: **třída Tomáše Bati 1764
765 02 Otrokovice**

DEZA Polska: **ul. Bunkrowa 1
Nabrzeze Chemikow
72-602 Świnoujście**

Identification number: **00011835**

VAT: **CZ 00011835**

Telephone: **+420 571 69 1111 (recepcce)
+420 571 69 2110 (dispečink)**

Data box: **av3cdzk**

Email: **info@deza.cz**

Webside: **www.deza.cz**



Responsible Care (RC)
since 1994

Integrated management systems and certificates



ČSN EN ISO 9001 (QMS)
since 1996



ČSN EN ISO 14001 (EMS)
since 2012



ČSN ISO 45001 (HSMS)
since 2021