

ANALYSIS OF ASPECTS OF POLLUTION OF ENVIRONMENTAL COMPONENTS FROM MANUFACTURING OF PAINT MATERIALS

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Relevance of the study topic is due to the following components. Compliance with: the Order of the State Emergency Service of Ukraine № 618 dated 09/20/2013 «On approval of the Regulations on the organization of environmental support of the State Emergency Service of Ukraine», the Decree of the President of Ukraine № 722/2019 dated 09/30/2019 «On the Sustainable Development Goals of Ukraine for the period until 2030», the Resolution of the Cabinet of Ministers of Ukraine № 476 dated 04/30/2024 «On approval of the list of priority thematic areas of scientific research and scientific and technical developments for the period until December 31 of the year following the termination or abolition of martial law in Ukraine», the Specialty Passport of 21.06.01 «Ecological Safety», approved by Resolution of the Presidium of the Higher Attestation Commission of Ukraine № 33-07/7 dated 04.07.2001, the Law of Ukraine № 3769-IX dated 04.06.2024 «On Amendments to Some Laws of Ukraine Regarding the Mandatory Use of Liquid Biofuels (Biocomponents) in the Transport Sector», the Standard of Higher Education in Specialty 183 «Environmental Protection Technologies» of the Third (Educational and Scientific) Level in the Field of Knowledge 18 «Production and Technologies», approved by Order of the Ministry of Education and Science of Ukraine № 1427 dated 23.12.2021, the Topics of Scientific Research and Scientific and Technical (Experimental) Developments for 2025-2029, approved by Order of the Ministry of Internal Affairs of Ukraine № 326 dated 21.05.2024, the Civil Protection Code of Ukraine in its current version dated 12.09.2025, Article 108.

Purpose of the study. To analyze aspects of pollution of environmental components from a manufacturing of paint materials. Object of the study. Negative technogenic impact on environmental components from a manufacturing of paint materials. Subject of the study. Qualitative and quantitative indicators characterizing the object of the study. Results of the study. The study comprehensively investigated the problem of atmospheric air pollution in the production of paints and varnishes for painting fasteners, in particular using the example of the enterprise «AMEKS Fastener Technology». The technological features of production were revealed, the main components of paints and varnishes were characterized, and potentially hazardous substances formed as a result of this process were identified. It was determined that emissions of pollutants such as volatile organic compounds, carbon oxides, formaldehyde, dust particles and sulfur dioxide cause a significant negative impact on the health of the population and the environment. This is confirmed by the statistics of diseases observed in industrial areas. The dynamics of the ecological state of the city of Kyiv over the past decade were considered based on official reports of the Ministry of Environment, which made it possible to trace negative trends, in particular, an increase in the number of exceedances of the MPC of harmful substances in the air. An important part of the study was the research of existing and promising methods of purifying atmospheric air at enterprises. The feasibility of using modern technologies such as catalytic purification, electrofiltration, biofiltration, and thermal decontamination methods was demonstrated, and the need to combine several methods to increase efficiency was emphasized. Conclusions. Thus, this study analyzed qualitative and quantitative indicators characterizing the negative technogenic impact on environmental components from a manufacturing of paint materials.