

## **Production of industrial products in 2023**

**Content-related works**

Statistics Poland, Enterprises Department

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## Preface

This publication contains data on the production of major products or assortment groups representing particular divisions of the Polish Classification of Goods and Services (PKWiU 2015) for Section B "Products of Mining and Quarrying" and section C "Manufactured Products" obtained in the annual survey which is carried out in accordance with the requirements of the Community industrial production survey PRODCOM.

The aim of the publication is to present changes in the production of industrial products in 2023 based on data expressed in physical units of measure and the results of the Community industrial production survey PRODCOM. The publication also includes a retrospective of the production of manufactured major industrial products, for which it was possible to maintain time series in 2000 as well as in the years 2005-2023. Selection of presented industrial products reflects the needs of a wide range of users, including among others, government administration, producers' associations, individual producers and scientific research institutions.

Presenting this publication we hope that the data will be a valuable source of information on production of the most significant products in Poland. At the same time, we will appreciate any comments and suggestions regarding the scope of data presented in this publication, which will allow for its better adaptation to the needs of users.

We would like to thank all Respondents participating in the yearly survey on the production of industrial products, carried out on the P-01 form "Questionnaire on production" as your commitment contributed to compiling this publication.

Director  
of Enterprises Department

/-/ Katarzyna Walkowska

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## Symbols

Symbol	Description
(-)	magnitude zero
(0)	magnitude not zero, but less than 0,5 of a unit
(.)	data not available, classified data (statistical confidentiality) or providing data impossible or purposeless
(*)	revised data
of which	indicates that not all elements of the sum are given

## Main abbreviations

Symbol	Description
ce/el	number of elements
CGT	Compensated Gross Tonne
GT	gross tonnage
g	gram
kg	kilogram
kg 90% sdt	kilogram of substance 90% dry
kg act. subst.	kilogram of activate substance
m	metre
km	kilometre
m <sup>2</sup>	square metre
m <sup>3</sup>	cubic metre
dam <sup>3</sup>	cubic decametre
hm <sup>3</sup>	cubic hectometre
pa	number of pairs
p/st	number of items
l	litre
hl	hectolitre
l alc 100%	litre pure (100%) alcohol

Symbol	Description
kW	kilowatt
MW	megawatt
MVA	megavolt-ampere
GWh	gigawatt-hour
TJ	terajoule
PJ	petajoule
Cl	chlorine
Cu	copper
F	fluorine
N	nitrogen
S	sulphur
K <sub>2</sub> O	potassium oxide
P <sub>2</sub> O <sub>5</sub>	phosphorus pentoxide (phosphoric anhydride)
TiO <sub>2</sub>	titanium dioxide
NaOH	sodium hydroxide (caustic soda)
NH <sub>3</sub>	ammonia
HCl	hydrogen chloride
H <sub>2</sub> SO <sub>4</sub>	sulfuric acid
HNO <sub>3</sub>	nitric acid
CH <sub>3</sub> OH	methanol



Symbol	Description
$C_4H_9OH$	butanol
$C_6H_5OH$	phenol
$CH_3COOH$	acetic acid

## Introduction

The survey of production of industrial products in physical units of measure complements the survey of sold production of industry, and allows for assessment of development trends of domestic production. The publication contains data on manufactured and sold production in Poland in 2023 for more than 700 products or assortment groups representing major branches of industrial production. For selected products, a retrospection of data on production manufactured in 2000 and in the years 2005-2023 is presented. In addition, value of sold production of own products by manufacturers for the years 2020-2023 is presented, by division, group and class of the Polish Classification of Goods and Services (PKWiU).

Presented results of the survey are based on data reported by manufacturers of industrial products regardless of their type of business activity, with more than 9 persons employed. The data were collected as part of the annual product survey carried out on P-01 form "Questionnaire on production".

According to the revision policy of statistical data, the annual data on production of industrial products may be subject to revision even in the long term due to the specificity of the industrial products survey related mainly to the difficulties in classifying certain products to relevant headings of PKWiU/PRODPOL by producers.

Products or assortment groups are presented according to the PRODPOL nomenclature based on PKWiU 2015 and the European PRODCOM List. In some cases, products are presented according to additional groupings – aggregates of selected items of PRODPOL nomenclature.

## Executive summary

### Sold production of industrial products

The value of sold production by manufacturers of own products classified in the sections: Products of Mining and Quarrying and Manufactured Products in 2023 amounted to PLN 1 778.0 billion and decreased in relation to the previous year by 5.5 %.

In relation to the 2022 year, increase in the value of sold production was recorded for two divisions of sections of Products of Mining and Quarrying and 11 divisions of section Manufactured products. The largest increase in the value of sold production of products occurred in the divisions: Motor vehicles, trailers and semi-trailers (by 16.7%) and Other transport equipment (by 14.3%). The largest decrease in the value of sold production of products occurred in the divisions: Chemicals and chemical products (by 24.6%), Coke, briquettes and similar solid fuels from coal and peat and refined petroleum products, Wood and products of wood and cork products, except furniture; articles of straw and plaiting materials and Basic metals (by 17.1%).

At the level of classes, in 2023 the largest increase in the value of sold production in comparison to the previous year was recorded for: Leather clothes (by 51.6%), Sugar (by 45.2%), Homogenized food preparations and dietetic food (by 36.7%), Motor vehicles, excluding motorcycles (by 33.8%), Prepared pet foods (by 32.8%), Air and spacecraft and related machinery (by 30.9%).

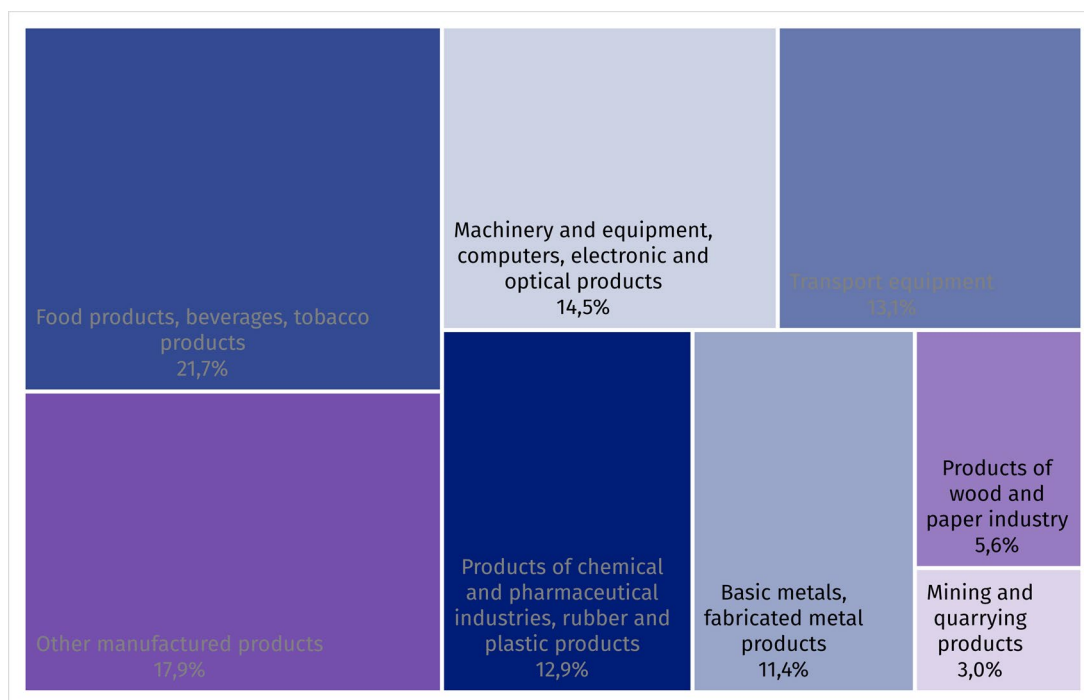
A decrease in the value of sold production at class level was recorded, among others, for the following headings: Fertilisers and nitrogen compounds (by 51.3%), Cold rolled narrow strip (by 48.8%), Other organic basic chemicals (by 41.2%), Man-made fibres (by 38.7%), Bricks, tiles and construction products in baked clay (by 38.7%), Motorcycles (by 35.3%).

In 2023 the following divisions had the largest share in the total value of sold production of products: Food products – 18.1%, Motor vehicles, trailers and semi-trailers – 11.5%, Electrical equipment – 8.0%, Rubber and plastic products – 6.7%, Basic metals – 5.9%, Fabricated metal products, except machinery and equipment – 5.5%, Chemicals and chemical products – 5.3%. The lowest was share in the total value of sold production of the divisions Crude petroleum and natural gas, Metal Ores, Wearing apparel and Leather and related products.

Mazowieckie voivodship has the largest share in the value of sold production of products at country level (21.4% of total sold production). Second largest share is Śląskie voivodship (15.5% of total sold production) and the third is Dolnośląskie voivodship (11.9%).

Enterprises from Mazowieckie voivodship have the largest share in the value of sold production of products in the following divisions: Crude petroleum and natural gas; Coke, briquettes and similar solid fuels manufactured from coal and peat and refined petroleum products; Computers, electronic and optical products; Basic pharmaceutical products, medicaments and other pharmaceutical preparations; Printing and reproduction services of recorded media; Food products; Chemicals and chemical products; Machinery and equipment n.e.c. Śląskie voivodship has the largest share in the following divisions: Hard coal and lignite; Basic metals; Motor vehicles, trailers and semi-trailers; Rubber and plastic products; Fabricated metal products, except machinery and equipment; Other non-metallic mineral products. Dolnośląskie voivodship has the largest share in the value of sold production of products in the divisions: Leather and leather products, Electrical equipment.

**Chart 1. Share in the value of sold production in 2023, by groups of divisions of the Polish Classification of Goods and Services (PKWiU)**



The following were among the products with largest value of sold production according to PRODCOM List: other parts and accessories, n.e.c., for vehicles of HS 8701 to 8705; vehicle compression-ignition internal combustion piston engines (diesel or semi-diesel) (excluding for railway or tramway rolling stock and wheeled agricultural or forestry tractors); structures and parts of structures of iron or steel, n.e.s. (e.g. weirs, sluices, landing stages and other maritime and waterway structures); plastic doors, windows and their frames and thresholds for doors; cartons, boxes and cases, of corrugated paper or paperboard; sausages and similar products of meat, offal, blood or insects and food preparations based thereon (excluding liver sausages and prepared meals and dishes); parts and accessories of bodies (including cabs and windows), n.e.c.; preparations used for farm animal feeding (excluding premixtures): poultry; fresh bread containing by weight in the dry matter state  $\leq 5\%$  of sugars and  $\leq 5\%$  of fat (excluding with added honey, eggs, cheese or fruit); upholstered seats with wooden frames (including three piece suites) (excluding swivel seats); beer made from malt; cloth washing and drying machines, of the household type; brakes and servo-brakes and their parts (excluding unmounted linings or pads); other medicaments of mixed or unmixed products, p.r.s., n.e.c.; fresh or chilled pig meat; herbal infusions, food supplements, perishable food, other prepared dishes and meals, other food preparations n.e.c. (excluding based on insects); other articles of plastic n.e.c.; grated, powdered, blue-veined and other non-processed cheese; waters, with added sugar, other sweetening matter or flavoured, i.e. soft drinks.

## Manufactured production of industrial products

Out of 732 presented products and assortment groups of products, increase in manufactured production was noted for 215 items, among others for: unwrought aluminium for steel deoxidation, technically pure (by 205.1%), optical fibre cables (by 117.5%), glues based on synthetic resins (by 102.3%), polishes, creams and similar preparations, for the maintenance of

wooden furniture, floors or other woodwork (excluding artificial and prepared waxes) (by 101.8%), passenger cars with engine of cylinder capacity 1001 - 1500 cm<sup>3</sup> (by 92.7%), continuous-action elevators and conveyors, for underground use (by 76.6%), direct current motors and generators (by 57.6%), lifts (by 51.8%), frozen sea fish (48.4%), heaters (by 46.1%), road tractors for semi-trailers (by 45.1%), machines for cleaning or sorting seed, grain or dried leguminous vegetables (by 45.0%), reciprocating displacement compressors (by 44.3%), white chocolate (by 44.0%), fixed resistors (by 37.9%), pile fabrics, terry towelling and other special fabrics (by 37.2%), lorries (by 37.1%), structural-floor clay hollow bricks (by 36.7%), table, kitchen articles or buckets of tin-plated sheet, including varnished or painted (by 34.6%), overhead travelling cranes on fixed support (by 33.6%), road paving natural stone setts (by 33.4%), sorting, screening, separating, crushing, grinding, mixing machines for mining (by 31.9%), handbags of leather (by 29.9%), paints and varnishes, based on polyesters dispersed/dissolved in a non-aqueous medium, weight of the solvent more than 50% of the weight of the solution including enamels and lacquers (by 29.1%), women's or girls' jackets not knitted or crocheted not knitted or crocheted (by 28.6%), self-ignition internal combustion piston engines for vehicles (by 27.3%), rail wagons (by 25.6%), rubberized textile fabrics, except tyre cord fabric (by 25.2%), plastic reservoirs, tanks, vats, intermediate bulk and similar containers, of a capacity > 300 litres (by 25.0%).

Decrease in manufactured production was noted for 515 products including, among others for: vacuum pumps (by 80.5%), toilet and kitchen linen (by 70.3%), self-propelled bulldozers and angledozers (by 69.4%), pickled mushrooms (by 69.2%), bricks made of clay (by 66.2%), domestic food grinders, mixers and fruit or vegetable juice extractors (by 65.0%), preparations for perfuming or deodorising rooms, including odoriferous preparations used during religious rituals (by 55.2%), refined sunflower-seed oil and its fractions, for human consumption (by 51.2%), sprayers designed to be drawn by agricultural tractors, of a kind used in forestry and orcharding (by 51.1%), wired sheets or profiles, of cast or rolled glass whether or not with absorbent, reflecting or non-reflecting layer, but not otherwise worked (by 51.0%), mountain bikes (by 49.6%), portable automatic data-processing machines weighing ≤ 10 kg, such as laptop and notebook computers; personal digital assistants and similar computers (by 46.8%), assembled parquet panels of wood for mosaic floors (by 46.4%), telephone sets (by 45.1%), women's or girls' suits and ensembles, not knitted or crocheted (by 44.4%), compression-ignition engines for industrial use (by 44.3%), wire of stainless (by 44.3%), aluminium plates, sheets and strip, of a thickness > 0,2 mm (by 43.6%), harrows excluding disc harrows (by 43.5%), polyvinyl chloride not mixed with any other substances (by 43.5%), furniture of plastics (by 43.3%), tourist / city bikes (by 43.2%), non-wired sheets of cast or rolled glass, whether or not with absorbent, reflecting or non-reflecting layer, but not otherwise worked (by 43.2%), chaff cutter for cutting green forage and straw (by 43.1%), sorting, screening, separating, washing, crushing, mixing machines for earth, stone, ores and other mineral substances (by 42.3%), table, kitchen or household articles of steel, enamelled (by 42.3%), concrete mixers (excluding for road construction) (by 41.8%), yarn of synthetic staple fibres, not packaged for retail sale (by 41.3%), quartzite (by 40.9%).

## Methodological notes

The data were compiled on the basis of a annual survey of production of industrial products on the P-01 form "Questionnaire on production ". In case of electricity and thermal energy from steam or hot water, the data are derived from specialist surveys conducted by Ministry of Climate and Environment and Energy Regulatory Office. The survey of the production of industrial products is carried out in accordance with the requirements of the Community industrial production survey PRODCOM.

Data are collected according to groupings indicated in the PRODPOL nomenclature for annual surveys in the reporting year. The nomenclature is based on the Polish Classification of Goods and Services (PKWiU 2015) – introduced on January 1, 2016 for use in statistics, registration, documentation and accounting, and also in official registers and public administration information systems (Regulation of the Council of Ministers of 4 September 2015, Journal of Laws, item 1676) and on the PRODCOM List used in the European Union. For longer time series, the data has been obtained thanks to the use of keys between PRODPOL nomenclatures used for subsequent reporting years.

### 1. Subject and scope of the study

The annual survey covers legal entities, organizational units without legal personality (excluding budgetary units and establishments) and natural persons conducting business activities, with 10 or more persons employed. The survey also covers entities with 9 or less persons employed producing pellets and briquettes of pressed and agglomerated wood and of wood waste and scrap. Units producing electricity and thermal energy from steam or hot water are included in the survey regardless of the number of persons employed. The survey applies to all business entities which manufacture products specified in the PRODPOL nomenclature for a given reporting year, regardless of the kind of economic activity classified according to the Polish Classification of Activities (PKD 2007).

The survey of production of industrial products does not include the following units:

- trade units, which ordered the manufacture of goods in a production company and did not provide raw materials for the manufacture of these goods,
- running only publishing activities and not directly involved in the printing preparation process or printing process,
- engaged only in activities related to the production of films, video recordings, television programs, sound and music recordings and not directly involved in the process of reproduction of sound recordings, video recordings or reproduction of computer storage media.

The survey provides data on:

- the quantity of production of finished products manufactured on own account or under subcontracting, from material provided by the customer, as of the end of the reporting year; the processing or modification of a purchased product, which did not change the characteristics of its use and purpose, is not considered as production,
- quantity and value of output sold of own production or output outsourced to another enterprise from materials provided by it, which were sold outside the enterprise.

Sold production value of products at current prices without VAT includes:

- received and due amounts for sold during the year - outside the enterprise - own finished products, semi-finished products and parts of own production, resulting from multiplying

the number of sold products, semi-finished products and parts by unit sales price, adjusted for due subsidies, rebates, discounts or contractual amounts due for sales,

- the value of products not included in the sale, treated equally with sales, i.e. the value of own products transferred to own retail outlets, as well as to its own catering establishments and its own warehouses,
- value of manufactured goods, treated equally with sales, i.e. products transferred free of charge to the social fund and own investments, for the purposes of representation and advertising, personal needs of the taxpayer and employees, and donations of products and services without payment.

The amount of production of industrial products is expressed in physical units of measurement. The basic principle in determining the quantity of production is its homogeneity which allows aggregation of particular product ranges.

In order to obtain comparable data on the production of industrial products, the PRODPOL nomenclature is used. It contains a list of products with the symbol and the name of the product or assortment group and assigned to them units of measure in which production should be reported. This allows the units to report the data on production of products which belong to the same category but are traded under different own names, in one PRODPOL grouping under the same name and in the same unit of measure.

The PRODPOL nomenclature is compliant at three, four, five and six-digit level with the PKWiU 2015 classification and at eight-digit level with the PRODCOM List. 10- and 12-digit groupings result from the demands reported by domestic users. The PRODPOL nomenclature is updated annually and is available on the Statistics Poland website

[https://stat.gov.pl/Klasyfikacje/doc/prodpol/opis\\_r2023.html](https://stat.gov.pl/Klasyfikacje/doc/prodpol/opis_r2023.html)

It is very important to determine the unit of measurement for each grouping that corresponds to physical characteristics and intended use of particular type of product.

In most cases, the data is collected in the physical units of measure. For non-homogeneous product groupings, if they have at least one common feature defining their properties, conventional units of measure are used. A typical example of the use of conventional units of measure are chemical products in which the quantity is expressed in terms of pure ingredient. For groupings containing products of considerable diversity, e.g. pharmaceutical products, it is not possible to use physical units of measure. In this case, data are collected only on the value of sold production in current prices expressed in thousands zloty (PLN).

In cases where one unit of measure does not specify sufficiently the functional features of a given product as well as the volume of its production, several units of measure are used at the same time.

The annual data on the production of industrial products may be reviewed three times a year for a period of four years after the end of the reporting year. In exceptional cases, the data may be subject to revision in the long term, due to the specificity of the survey on production of industrial products related to the difficulties in classifying certain products to the relevant groupings of PKWiU / PRODPOL.

## 2. Main definitions

**Manufactured production** is the result of manufacturing processes, mutually interrelated and conditioned, occurring at a given time.

Manufactured production includes the total quantity of finished products produced in the reporting period, both from manufacturer's own raw material and from raw material provided by another enterprise or individual person. It also includes the total volume of semi-finished

products, parts, sets of machinery and equipment, regardless of whether they were intended for sale or to the parent company, to other plants of the same company, or intended for further processing (assembly) in the enterprise. Therefore, manufactured products include products manufactured by the enterprise, meeting certain standards, technical conditions or contractual terms concluded between the contractor and the recipient. Products made of secondary raw material are considered as production, if they are of utility and are a direct result of the manufacturing work of the enterprise. The production also includes the so-called by-products, created in the production process simultaneously with the main product.

**Sold production of industrial products** is the quantity and value of products of own production or production ordered in another enterprise from provided materials, sold outside of the enterprise in the reporting period, regardless of the moment of their production.

**Finished products** are products that are not further processed within the same enterprise in which they were produced, that means products completely finished and completed, after passing the entire production process. Finished goods should comply with certain standards, and in case of lack of such requirements – with specifications or contractual conditions concluded between the manufacturer and the recipient.

**PRODCOM** – the European Community industrial production survey, which provides information on the production of products manufactured by enterprises located on the territory of each country. It is carried out on the basis of an annually updated PRODCOM List, including products from the sections of mining and quarrying products and products of industrial processing, from which energy resources, coke from coal as well as fuels and oils obtained from crude oil are excluded. The source of PRODCOM data are surveys carried out by individual Member States of the European Union. These surveys are designed to provide comparable results at European level. The survey covers annual periods and covers a slightly narrower range of products than the survey on the production of industrial products conducted in Poland.