



Methodological report Industrial production surveys



Methodological report

Industrial production surveys

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Content-related works

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Objective scope of the survey/area	Survey on production of industrial products – manufactured and sold production of goods, the value of manufacturing and subcontracting services provided, stocks of finished products and selected goods, stocks of raw materials of plant origin and the use of embedded systems, including elements of the Internet of Things in industrial products Survey on sold production of industry – value of sold production of industry
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Presentation of survey/area results	Statistics Poland / Topics / Industry, Construction, Fixed Assets
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Preface

We would like to present the Readers with the "Methodological report Industrial production surveys", which discusses the statistical surveys on industrial production carried out in accordance with the annual Statistical survey program of official statistics within the framework of the surveys 1.46.04 *Manufacture of industrial products* and 1.46.01 *Sold production of industry*.

The purpose of the publication is to familiarize users with the area of survey on industrial production conducted by Statistics Poland and the information they can obtain on the basis thereof.

The report has been divided into two parts. The first part contains information on surveys conducted with the product method in object approach (survey 1.46.04), the second part concerns survey with the enterprise method in subject approach (survey 1.46.01).

The Methodological report presents information on data sources used in monthly and annual surveys of industrial production, their scope of surveyed units and data, adopted survey methods and survey organization, as well as on methods of analysis and forms of presentation of results of the surveys. This report is intended to be a compendium of knowledge for people who use the results of industrial production surveys in the analysis of the Polish economy.

We hope that this way of presenting the methodology of conducted surveys will be welcomed by the Readers. We will appreciate any comments and suggestions for changes, which in the coming years will help to enrich the content of the Report and even better adapt its thematic scope to the needs of users.

/-/ Katarzyna Walkowska
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Symbols and main abbreviations

anhyd.	– anhydrous
BIW	– Product Identification Database
BJS	– Statistical Unit Database
C-01	– Report on producer prices of products and services
CIS	– Statistical Computing Center
CN	– Combined Nomenclature
CPA	– Classification of Products by Activity
DG-1	– Report on economic activity
EC	– European Community
EEA	– European Economic Area
EEC	– European Economic Community
EKD	– European Classification of Activity
EP	– European Parliament
Eurostat	– Statistical Office of the European Union
EU	– European Union
F-01/I-01	– Report on revenues, costs and financial result and on outlays on fixed assets
FAO	– Food and Agriculture Organization of United Nations
G-02b	– Balance report on energy carriers and heating infrastructure
G-03	– Report on consumption of energy carriers and energy
GUS	– Statistics Poland
HS	– Harmonized Commodity Description and Coding System
IMF	– International Monetary Fund
JWW	– Single List of Products
KAU	– Kind-of-Activity Unit
MIGs	– Main Industrial Groupings
MEI	– Main Economic Indicators
MPa	– megapascal
NACE	– Statistical classification of Economic Activities in the European Communities
NTS	– Polish classification of territorial units, functioning until the end of 2017
NUTS	– Common Classification of Territorial Units for Statistics
OECD	– The Organization for Economic Co-operation and Development
P-01	– Report on production
P-02	– Report on production and stocks of industrial products
PBSSP	– Statistical Survey Program of Official Statistics
PEEIs	– Principal European Economic Indicators

PKD	– Polish Classification of Activities
PKWiU	– Polish Classification of Goods and Services
PRODCOM	– European Product Statistics
PRODPOL	– Industrial product survey nomenclature for monthly and annual reporting
REGON	– National Official Register of National Economy Entities
SDDS	– Special Data Dissemination Standard of the International Monetary Fund
SIB	– Survey Information System
SP	– Annual enterprise survey
SP-3	– Survey on economic activity
STS	– short-term statistics
SWW	– Systematic Product List
UN	– United Nations
USSR	– Union of Soviet Socialist Republics
VAT	– Value Added Tax
WWP	– Industrial Product List
Z-06	– Survey on persons employed, wages, salaries and hours worked

Introduction

Industrial production surveys, which consist of two surveys: production of industrial products and sold production of industry, provide users with information that allows them to analyze one of the main areas of economy, which is industrial activity, in terms of both value and quantity.

The objective of the survey on production of industrial goods is to provide information on production of industrial goods in physical units of measurement and on industrial services provided. The compiled data show the quantities of manufactured and sold production (monthly and annual surveys) and the value of sold production (annual surveys) of selected industrial products representing all industrial activities. The product survey covers data on the structure of industrial production, showing its development trends, and it is also an important set of information re-used in many surveys, such as product balances or supply of goods on the domestic market, as well as surveys on producer prices of goods and services in industry.

The survey on sold production of industry, conducted with the use of the enterprise method, provides information on sold production of industry, enabling current (monthly) and annual assessment of the production activity of industry, one of the important branches of the economy. The value of sold production is also used as a weight in the monthly indices of changes in producer prices, and is a fundamental element in the system of national accounts.

The annual and monthly results of surveys of industrial production and surveys of sold production of industry are used for the purposes of:

- social-and economic information of GUS,
- annual and quarterly national accounts,
- other surveys conducted by GUS,
- government bodies, local governments and other institutions,
- universities and research centers,
- enterprises, business self-government,
- foreign data users, including the European Union, the United Nations (UN), the Organization for Economic Co-operation and Development (OECD) and the International Monetary Fund (IMF),
- media.

The legal bases for both surveys presented in the Methodological Report are:

- Act of 29 June 1995 on official statistics (Journal of Laws of 2019, item 649, as amended),
- Ordinance of the Prime Minister on the Statistical Survey Program of Official Statistics (PBSSP), issued every year and determining the scope of surveyed units and data for a given year, as well as types, forms and deadlines for making available the resulting statistical information.

The surveys described in this Methodological Report are included in the Statistical Survey Program of Official Statistics in the area "Industrial Activity" (1.46).

The scope of the survey is influenced by the needs of users, as well as the need to fulfill the obligations arising from the regulations of European Union.

The following EU regulations apply to the annual surveys on production of industrial products presented in this Methodological Report:

- Regulation (EU) 2019/2152 of the European Parliament and of the Council of 27 November 2019 on European business statistics, repealing 10 legal acts in the field of business statistics,
- Commission Implementing Regulation 2020/1197 laying down technical specifications and arrangements pursuant to Regulation (EU) 2019/2152,
- Commission Implementing Regulation (EU) 2022/791 of 19 May 2022 amending Implementing Regulation (EU) 2017/1185 as regards the notification of levels of stocks of cereals, oilseeds and rice,
- Commission Implementing Regulation (EU) 2019/1746 of 1 October 2019 amending Implementing Regulation (EU) 2017/1185 laying down rules for the application of Regulations (EU) No 1307/2013 and (EU) No 1308/2013 of the European Parliament and of the Council as regards notifications to the Commission of information and documents.

Based on the results of monthly survey of sold production of industry, the methodology of which is presented in this Methodological Report, the monthly indices of industrial production are also calculated according to the European concept of the statistical unit – KAU¹ (Kind-of-Activity Unit), under the requirements of the mentioned-above EU regulations (2019/2152 and 2020/1197).

Due to the complexity of the surveys, in order to present various aspects related to industrial production, the necessary information on the monthly and annual surveys on production of industrial products and the monthly and annual surveys on sold production of industry are presented in two separate chapters in this Methodological Report. Each chapter contains a description of:

- the scope of surveyed units and data,
- surveys method,
- the variables present in the surveys and their definitions as well as the measures and indicators used,
- the organization of surveys.

In addition, this Methodological Report contains a description of the history of surveys, as well as information on the forms of sharing and publishing results, which is particularly important from the point of view of data users.

¹ The concept and method of implementation of kind-of-activity unit are described in the Methodological Report entitled "Short-term statistics by European concept of the Kind-of-activity unit"

1. The latest history of industrial production surveys²

The history of survey on industrial production has a very long tradition and can be traced back to the mid-16th century. The survey of the production of industrial products is also one of the oldest statistical surveys conducted by the Statistics Poland. The most recent history of industrial production surveys dates back to the 1990s, when national surveys were adapted to the classification and methodological requirements of Eurostat, thus ensuring comparability of data between countries at European level.

The survey on production of industrial products since 2000 has been based exclusively on the Polish Classification of Products and Services (PKWiU) harmonized with the European classifications, which was introduced on 1 July 1997 for use in statistics, records, documentation and accounting, as well as in official registers and information systems of public administration. In 1998-1999, the survey was conducted in two classification systems, according to the old SWW classification and the new PKWiU. In the transitional period, which allowed the reporting units to adapt to the new classification standards, the data were published only in the old classification system. The change of classification resulted in modification of then existing list of presented groupings, and the lack of coherence between PKWiU and SWW made it impossible to publish longer time series for all products surveyed so far according to SWW.

Since its introduction to statistical reporting, the PKWiU classification has been modified several times (PKWiU 2004, PKWiU 2008 and currently in force PKWiU 2015) due to the necessity to take into account the needs of data users and changes in European classifications: NACE for activity and CPA for products, with which PKWiU is related. The largest classification changes took place in the product survey for 2009 and consisted in changing the symbols of particular items and moving products between divisions. The changes in PKWiU resulted from the introduction of significant changes in the classification of activities (NACE Rev. 2), which resulted in extensive changes in CPA 2008 compared to CPA 2004. On the basis of PKWiU, the nomenclature of products for surveying industrial production PRODPOL is developed. PRODPOL nomenclature is updated every year, taking into account classification changes in PKWiU and the changing needs of users.

A significant change in the way of collecting data on the production of products took place in 2004, when the personalization of the annual form P-01 - Report on production was introduced, consisting in pre-filling the form with symbols, names and units of measurement of products and services, which had been reported by the unit in previous reporting period. Subsequently, since 2007, both the monthly and annual product surveys have introduced the possibility of submitting reports in electronic form via the Reporting Portal (since 2009 it has been the only way of submitting these reports). In 2009, issues related to the production of electricity and heat were removed from the survey and included in the surveys Fuel and energy balance sheets (1.44.01) and Electricity and heating (1.44.02). In the same year, the form P-01 mutation, so far addressed to non-industrial reporting entities, was combined with the annual report P-01, so far intended only for industrial entities. In 2011, the monthly P-02 form - Report on production and stocks of industrial products was personalized.

The scope of surveyed units and the scope of data is being gradually adapted to the changing needs of national users of product statistics and to European requirements. Since 2018, the survey additionally covers the use of embedded systems in manufactured products, including elements of the Internet of Things; this extension of the scope was preceded by a pilot survey conducted in 2017 among selected reporting units. In 2019, the form was extended to include information on the quantity of production of products manufactured under subcontracting, which were then transferred to the principal. In the same year, metallic and non-metallic secondary raw materials were included in the annual survey. Due to the COVID-19 pandemic, from May 2020 production of industrial products related

² History of industrial production surveys up to 1990s is presented in appendix 5.

to the prevention of spreading / combating COVID-19 was included in the survey, initially on voluntary basis and then in obligatory questionnaire. After the outbreak of war in Ukraine in February 2022, from April 2022 the monthly survey was extended to include products useful in crisis situations. From January 2023, the monthly survey covers milk-fat preparation and, in extended group of economic entities, stocks of selected cereals, seeds and oilseed meal as well as of crude oils.

The survey on sold production of industry in its present form has been conducted since 1991, when the process of adjustments related to the transformation of the Polish economy and changes in legal regulations resulting from the need to adapt to the rules of the market economy, began in the Polish statistics. The survey on sold production of industrial enterprises, apart from the change in legal regulations, among others, in accounting, was also significantly influenced by the change in the territorial division of the country, subsequent changes in the classification of activities (Classification of the National Economy, European Classification of Activities and revisions of the Polish Classification of Activities - PKD 2004 and PKD 2007), as well as by changes related to the improvement and development of the statistical register of economic entities (introduced obligation to register entities of the national economy in the National Official Business Register REGON, the establishment of the statistical business register BJS – Statistical Unit Database).

Changes in the methodology of the monthly survey on sold production of industry were also introduced due to Polish adjustment to the requirements of European short-term statistics, especially since Poland's accession to the European Union in May 2004. The changes resulted in, among others, the extension of the publication offer at the national level by additional aggregates, the so-called main industrial groupings (MIGs). Since 2024, the monthly survey of industrial sold production has been extended to additional calculations based on the European concept of the kind-of-activity unit, which is compliant with the EU Regulations 2019/2152 and 2020/1197³.

In the annual survey on sold production of industry, in 1995 the so-called integrated system was created, with the aim to collect basic information from various surveys on the activity of industrial enterprises, i.e. on the number of entities, sold production, persons employed and paid employed, as well as on wages and salaries. The use of results of annual survey developed within the integrated system allows for the publication of consistent data on the Polish industry, concerning the same units.

³ Monthly indices of industrial production by Kind-of-activity unit are available in Eurostat database and in national database – Knowledge Database (DBW) – Short-Term Statistics – data by Kind-of-activity unit

2. Surveys of production of industrial products

2.1. Scope of products

The scope of collected data in the survey on production of industrial products covers industrial products or assortment groups of products, raw materials and industrial services specified in the PRODPOL nomenclature, resulting from the activity of national economy entities employing 10 persons or more and, from 2022 also of entities employing up to 9 people in the case of pellets, briquettes made of pressed and agglomerated wood and plant waste (including straw briquettes).

The PRODPOL nomenclature for annual surveys, contains a list of products or assortment groups classified, according to PKWiU 2015, to divisions 05-08 and 10-32, a list of secondary raw materials within the class 38.32 and a list of industrial services classified to divisions 05-33 and selected services from other divisions of PKWiU, e.g. transport services, services related to the sale of goods, such as sorting, repackaging and bottling, which are provided by entities manufacturing products.

The PRODPOL nomenclature for monthly surveys covers products classified according to PKWiU 2015 in divisions 05-08 and 10-32 as well as cereals and oilseeds belonging to class 01.11 (only stocks are observed in this class). The monthly PRODPOL nomenclature contains fewer products than the annual survey nomenclature, it does not contain e.g. services and most 3- and 4-digit groupings corresponding to PKWiU groups and classes.

Finished products are products not further processed within the same enterprise in which they were produced, therefore products which are finished and complete after all production stages, conform with defined standards and in case of absence of standards – with technical specifications or terms of contract between contractor and client.

Finished products may be intended for:

- sale outside the enterprise,
- intra-corporate transfers (for production and non-production purposes) for:
 - production activity (intended for the production of other products in the enterprise, in a different production cycle),
 - investment activities,
 - financially separated activities,
 - factory shops, own catering establishments or other retail outlets operated by the enterprise,
 - other non-production uses of the enterprise not directly linked to the technological process.

Finished products may be both final (market) products and products subject to further processing in other enterprises. Finished products also include assemblies, components, parts and semi-finished products not further processed in the enterprise where they are manufactured, intended to be sold outside the enterprise (they are included in sold production at the time of sale rather than at the time of placing on stock) or used for other purposes of enterprise.

An **assortment group of products** is a relatively homogeneous product group created according to one or more criteria such as: intended use, purpose, properties of components or elements, type of material or raw material, content of a common component.

A **raw material in product surveys** is an unprocessed material of animal, plant or mineral origin or resulting from waste processing, which can be used for the production of finished products, energy or intermediate materials for the production of new products.

Strategic raw materials for the Polish economy - are raw materials that are not sufficiently obtained (at least 90%) from domestic sources or whose possibilities of permanently obtaining from these sources are limited or threatened, and other raw materials not obtained in the country (deficit) necessary for defense country and national security and the development of innovative technologies.

Critical raw materials for the Polish economy - are strategic raw materials, the possibility of obtaining them from both primary and secondary sources is either high risk or very difficult to obtain, and the possibilities of their substitution are low.

Strategic raw materials for the European Union are raw materials of high strategic importance for the functioning of the internal market, taking into account their use in strategic technologies underpinning the green and digital transformation, or for defense, or aerospace applications that are characterized by a potentially significant gap between global supply and projected demand, and for which increase in production is relatively difficult, for example due to the long long lead-times for new projects increasing supply capacity.

Critical raw materials for the European Union are strategic raw materials and any other raw materials of high importance for the entire economy of the Union, for which there is a high risk of supply disruption.

Secondary raw materials - materials resulting from processing (mechanical or chemical) of production wastes, pre-sorted municipal wastes or scrap and used products, suitable for direct use in industrial production (replacing the primary raw material), not being a new final product.

Metallic secondary raw materials - undergone mechanical or chemical processing: steel and iron scrap, scrap of non-ferrous metals and their alloys, discards of metallurgic metals and their alloys, and post-consumption materials mainly obtained from procurement.

Non-metallic secondary raw materials - undergone mechanical or chemical processing – wastes from industrial processes and post-consumption materials mainly obtained from procurement.

Production (industrial) services are all activities provided by business entities to other business entities, which are cooperation in the production process but do not directly create new material goods.

Industrial services are in particular:

- repair, reconstruction and maintenance activities performed for third persons, excluding warranty repairs performed by the manufacturer on his own,
- services rendered on order of manufacturers of products consisting in the performance of a specific technical treatment on the object supplied by the customer, such as heat treatment, applying coatings to metals.

The concept of industrial services does not include activities related to the manufacture of a product (including semi-finished products, elements, parts, processing of elements) from the company's own materials, on order of other units of the national economy, intended for production purposes or for further resale and, as a rule, does not include the manufacture of products on individual orders from the public – from contractor's own materials.

The service under sub-contracted operations is the production of products made on order of another company from provided materials.

The production by a manufacturing enterprise of products ordered by another enterprise, e.g. commercial or construction, and made from own materials, is not treated as a subcontracting service, but as own production.

2.2. Scope of data

The scope of data collected in the survey on the production of industrial products results from the information needs of the government administration, Eurostat and other international statistical institutions, scientific and research institutions, enterprises and business self-government, industry associations and organizations, as well as media.

The survey provides information on manufactured and sold production of goods, the value of manufacturing and subcontracting services provided, stocks of finished products and selected goods, stocks of raw materials of plant origin and the use of embedded systems, including elements of the Internet of Things in industrial products and also recovery of secondary raw materials.

In order to obtain comparable data on production and stocks of industrial products as well as on production and subcontracting services, the PRODPOL nomenclature is used, which contains the list of goods and services including the symbol and name of the product, assortment group or service with the assigned units of measurement in which the product should be reported. This allows respondents to report in a single PRODPOL grouping (under the same name and unit of measure) data on the manufacture of products and services provided which belong to the same category but are traded under different names.

It is the responsibility of the reporting producer or service provider to assign the product to the relevant PRODPOL grouping. This is because it is the manufacturer or service provider who has all the information necessary to correctly assign the product to the relevant PRODPOL grouping, i.e. information on the type of raw material used, manufacturing technology, construction, intended use of the product or the nature of the service.

Since the scope of the majority of 8-digit PRODPOL groupings is closely linked to the Combined Nomenclature (CN), the respondents should use the 'General Rules for the interpretation of the Combined Nomenclature' when classifying goods in those groupings.

The classification of the product according to the PRODPOL nomenclature should be as detailed as possible, at the lowest level of aggregation available, i.e. in final groupings with the longest digital symbol and, when determining the appropriate grouping to which a given product belongs, respondents should follow the rules of the structure and logic of the nomenclature. In addition, when classifying a product in a particular PRODPOL grouping the respondents should use:

- the methodological principles of PKWiU 2015 classification,
- the descriptions of the PRODPOL final groupings,
- the explanations and guidelines contained in the Explanatory Notes to the Harmonized Commodity Description and Coding System (HS) and in the Explanatory notes to the Combined Nomenclature of the European Union published in the C series of the Official Journal of the European Union,
- comments on the particular headings of the PRODPOL nomenclature.

Product classification is also facilitated by the Product Identification Database (BIW)⁴ search engine, which helps to assign products to correct PRODPOL nomenclature item. BIW search engine uses the database, which contains trade names and customary names of products, which do not appear directly in the descriptions of nomenclature groupings, which have been assigned to relevant PRODPOL items.

⁴ BIW is available at website of Statistics Poland https://stat.gov.pl/Klasyfikacje/doc/prodpol/wysz_biw.html.

2.2.1 Production of industrial products

Manufactured production is the result of manufacturing processes, interrelated and conditioned, taking place at a certain time.

Manufactured production covers the total quantity of finished products manufactured during the reporting period, either from own raw material or from raw material provided by another enterprise or individual person. It also includes the total volume of semi-finished products, parts, assemblies and machinery and equipment, regardless of whether these are intended for sale outside the enterprise, to the parent company, to other plants of the same company or for further processing (assembly) within the company. The manufactured production thus includes products manufactured by the enterprise which conform to certain standards, technical specifications or contractual arrangements between the contractor and the customer. Products made from secondary raw materials are considered as production if they are of a utility nature and directly result from the manufacturing work of the enterprise. Production also includes the so-called by-products, which were manufactured in the production process at the same time as the main product.

Manufactured production does not include:

- rejected products, i.e. products which do not have full value in use (in which deviations from the standards in force were found; in the absence of standards – from the technical specifications or terms and conditions of contract concluded between the contractor and the customer),
- deficient products, i.e. products whose utility value is lower than the value set by quality requirements, by marketing demands or by product designation – e.g. products manufactured in violation of standards in force, technical documentation or formulae, which results in quality lower than the quality specified in documentation for the lowest quality class; items damaged or incomplete in the way which makes their designated use impossible,
- waste, i.e. the remainder of raw material, created in the production process as an unintentional result,
- client-provided raw material – both in the enterprise which commissions the production and in the enterprise which manufactures products from this raw material.

Sold production of industrial products is the volume and value of goods sold outside the enterprise during reporting period, manufactured as own production or made by subcontracting in other unit from materials provided by the enterprise, regardless of the time of their production.

The quantity of sold production is expressed in physical units of measurement.

Sold production value of goods is presented at selling prices (realization prices) including excise duty, but excluding value added tax (VAT). The value of sold production includes:

- received and receivable amounts for products of own production sold outside the enterprise during the reporting period, for products manufactured by the enterprise as subcontractor from enterprise's own materials, and for products manufactured by another producer – subcontractor – from materials provided by the enterprise – adjusted for additional payments due, granted rebates, reductions, discounts or contractual due payments for the sale of products,
- value of goods not classified as sale, but treated as sales, i.e. the value of own products supplied to own retail outlets, as well as to own catering establishments and own wholesalers,
- value of products manufactured and treated as sales, i.e.: transferred free of charge to enterprise's benefit fund, used for enterprise's investment, for the purpose of representation and advertisement, provided for the taxpayer's and staff's personal needs, and donated free of charge.

Value of sold production in the European survey PRODCOM is presented without VAT and excise duty.

The value of sold production of products containing embedded systems and elements of the Internet of Things is also collected.

The embedded system is a digital equipment consisting of a processor, memory and input-output devices (microcontroller), designed for real time control of the product which it is a part of. Personal computers, laptops, tablets, telephones and smartphones and other communication network equipment are not considered to be products incorporating embedded systems.

The Internet of Things element is a product with an embedded system with an Internet connection.

2.2.2 Stocks

The manufacturer's stock of finished products is the quantity of manufactured finished products in stock at the manufacturing facilities of the units, either intended for sale or to be used in further production processes.

Stocks of goods in trading units is the quantity of commercial goods stored in wholesale warehouses or in retail distribution warehouses (excluding inventories located in retail outlets) in units classified, according to PKD 2007, as Wholesale and retail trade, repair of motor vehicles, including motorcycles (section G).

Stocks of raw materials are the amount of unprocessed material of animal, plant, mineral origin or resulting from waste processing, stored in warehouses of entities conducting production activities or warehousing and storage activities, which is intended for the production of finished products, energy or intermediate materials that are the building elements for new products.

2.2.3 Services

Industrial (production) services are activities provided by economic entities to other economic entities, being cooperation in the production process, not directly creating new material goods, but aimed at restoring the lost value of products through repairs and renovations, increasing the value of products through operations related to material processing (e.g. grinding), finishing operations (e.g. nickel plating, galvanizing), assembly of products and packaging (or cutting).

Subcontracting services are activities aimed at manufacturing products on order from another company from materials provided by the ordering company and products manufactured under sub-contracted operations and transferred to the ordering company.

Production under subcontracting from provided material occurs when:

- the value of provided materials constitutes over 80% of the value of materials used in production,
- the provided material (raw material) has a lower value than 80% of the value of materials used in production, but constitutes the basic material (raw material) for the manufacture of a new product.

2.2.4 Recovery of secondary raw materials

Recovery means any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfill a particular function, or by which waste being prepared to fulfil that function, in the plant or in the wider economy.

In order to recover secondary raw materials from waste, mechanical or chemical processes are used, which include, among others: cleaning, sorting, mechanical crushing, pelleting, mechanical reduction of large elements, removal of reusable parts from used items, removal of harmful substances from used items.

The moment of recovery is the last in a series of mechanical or chemical processes that result in obtaining a secondary raw material. Once this process has been carried out, the amount of secondary raw material should be reported in the industrial product production survey.

Table 1. The status of the metallic raw material and the stage of its recovery at which it is to be reported in the industrial products production survey

Metallic raw materials	Raw material status*		Recovery after the stage of	
	Critical raw material	Strategic raw material	Shredding/ crushing/ chopping	separating/ segregation/ sorting
Aluminium		△	X	
Beryllium	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$			X
Cermets				X
Chromium	△	△		X
Tin		△	X	X
Zinc		△		X
Zirconium			X	
Germanium	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$		X
Indium				X
Iridium			X	
Cadmium				X
Cobalt	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$		X
Lithium	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	X	
Copper	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	△ $\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$		X
Nickel	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	△ $\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$		X
Niobium	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$			X
Lead		△	X	
Palladium	△ $\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	△ $\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	X	
Platinum	△ $\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	△ $\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	X	
Rare earth metals	△ $\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	△ $\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$		X
Rhenium				X
Silver		△		X
Tantalum	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$		X	
Titanium	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	△ $\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$		
Vanadium	$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$			X
Tungsten	△ $\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	△ $\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$	X	
Iron		△	X	

* △ - critical or strategic raw material for domestic economy

$\begin{smallmatrix} x & x & x \\ x & x & x \end{smallmatrix}$ - critical or strategic raw material for EU economy

In the case of slag sands, waste intended for obtaining or producing metal should be reported as secondary raw material recovery (e.g. zinc ash from galvanization process, to be used for zinc production).

Table 2 Non-metallic raw material recovery stage

Raw materials	Recovery after the stage of
Wood	chipping
Rubber	shredding
Paper	sorting
Cullet	cleaning
Plastics	sorting

2.3. Variables and nomenclatures used in surveys

2.3.1. Variable characteristics

Surveys on industrial products provide the following information:

1. Domestic surveys
 - a) in annual survey (data set P-01)
 - the quantity of finished products manufactured on own account or on order, from material provided by the customer, as of the end of the reference year,
 - the quantity of secondary raw materials recovered from waste and scrap involving a mechanical or chemical transformation process, among others, sorting, cutting, grinding, crushing processes, e.g. granulate obtained from recycled plastic bottles,
 - the quantity and value of sold production of products of own production or of production ordered to another enterprise from materials provided to them, which have been sold outside the enterprise,
 - the quantity and value of secondary raw materials that are suitable for reuse sold outside the company or transferred free of charge, e.g. to related entities. In the case of free transfer of secondary raw materials, the value will be zero.
 - value of excise duty on own products,
 - the quantity of products manufactured under subcontracting and transferred to the principal,
 - value of production (industrial) services,
 - application of embedded systems in the manufactured products,
 - application of elements of the Internet of Things in manufactured products,
 - value of industrial products containing embedded systems,
 - value of industrial products containing elements of the Internet of Things,
 - value of the service of manufacturing industrial products containing embedded systems from the provided material,
 - the value of the service of manufacturing industrial products containing elements of the Internet of Things from the provided material.

b) in monthly survey (data set P-02)

- the quantity of finished products manufactured on own account or on order, from material provided by the customer, as of the end of the reference year,
- the quantity of sold production of own-produced products or of production ordered to another enterprise from materials provided to them and which have been sold outside the enterprise,
- value of own sold production or production ordered to another enterprise from materials provided to them, which have been sold outside the enterprise – this information is collected for a limited number of groupings containing heterogeneous products,
- the quantity of stocks of finished products in manufacturing units,
- the quantity of stocks of selected goods (food products or plant-derived products) in trading enterprises,
- the quantity of stocks of raw materials of plant origin in manufacturing enterprises, trading enterprises, enterprises with activities classified under 01.11 "Cultivation of cereals, legumes and oilseeds for seeds, except rice", 52.10 "Storage and storage of goods" and in port warehouses.

2. European survey – PRODCOM

- Variable 251001 sold production – value, in national currency (converted by Eurostat to EUR) and volume (except for industrial services and products without a defined unit of measure)
- Variable 251002 production under sub-contracted operations (except for industrial services) – value, in national currency (converted by Eurostat to EUR) and volume (except for products without a defined unit of measure)
- Variable 251003 actual production – volume

Quantity of production of industrial products, recovered secondary materials and stocks of products and goods and are expressed in physical units of measurement.

In the survey, it is extremely important to establish the unit of measurement for each grouping of the PRODPOL nomenclature, corresponding to the physical characteristics and intended use of each type of product.

In most cases, data are collected in basic physical units.

Where one unit of measurement is not sufficient to fully determine functional features of a product as well as the volume of its production, several units of measurement are used for the product. The list of units of measurement is set out in Appendix 4.

For heterogeneous product groupings, if they have at least one common feature that defines their characteristics, conventional units of measurement are used. A typical example of the use of conventional units is chemical products where the quantity is expressed in terms of the pure component.

For groupings involving a wide variety of products, such as pharmaceuticals, it is not possible to use physical units of measurement. In such a case, data are collected only on the value of production sold in current prices expressed in thousands of PLN.

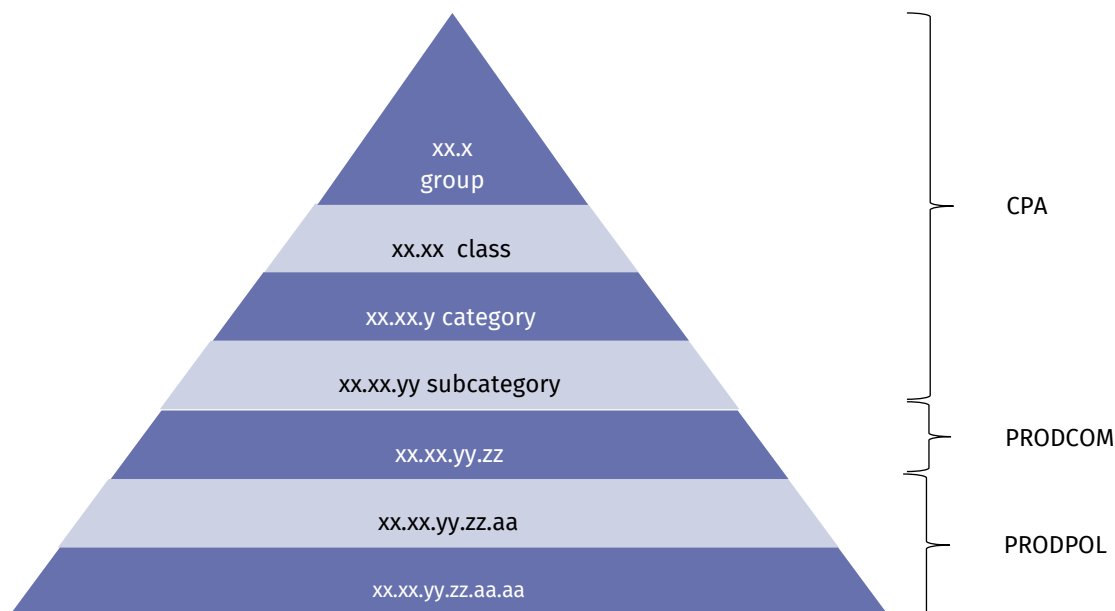
2.3.2. Nomenclatures

The PRODPOL nomenclature⁵ used in the survey on the production of industrial products is based on the Polish Classification of Goods and Services (PKWiU 2015) introduced on 1 January 2016 for use in statistics, records, documentation and accounting, as well as in official registers and information systems of public administration (Regulation of the Council of Ministers of 4 September 2015, Journal of Laws of 2015, item 1676) and on the PRODCOM List recommended by Eurostat for the survey on industrial production in the Member States of the European Union. The nomenclature is an appendix to the annual report on production (P-01) and the monthly report on production and stocks of industrial products (P-02).

Each PRODPOL item is identified by 3-, 4-, 5-, 6-, 8-, 10-, 12-digit symbol constructed in accordance with the following pattern:

XX.XX.YY-ZZ.AA.AA

PRODPOL nomenclature is compliant at the level of three, four, five and six characters with PKWiU 2015 classification and at the level of eight characters with PRODCOM List. The 10- and 12-character groupings are based on the demand from national users.



Each grouping (item) in the PRODPOL nomenclature is described by a symbol, grouping name, unit of measurement and additional marks indicating the need to report data within a certain range and time frame, i.e.:

W - items for which data should be provided in the annual survey by voivodship, according to the actual location of production (i.e. data according to the establishment method),

Z - items for which data on stocks of finished products or goods for resale should be provided in the monthly survey, only for the indicated unit of measurement,

B - items covered by the monthly survey on the P-02 form.

⁵ The PRODPOL nomenclature is available at GUS website <https://stat.gov.pl/Klasyfikacje/>

Additionally, the PRODPOL nomenclature provides rules for calculating data in conversion units of measurement.

Mass of pure or dried component or product:

The mass is calculated using the formula:

$$y = (X \cdot r) / 100$$

where:

y – mass of the specific component,

X – mass of the product containing the component concerned (in kg, t, thousand t),

r – a numerical value of the percentage of the content of the component in the product (chemical element, chemical compound, active substance, concentrate) or of the concentration of the component in solution, determined by laboratory methods in accordance with the applicable standards.

Mass of anhydrous product (kg anhyd., t anhyd., thousand t anhyd.):

The mass is calculated using the formula:

$$y = X \cdot [(100 - w) / 100]$$

where:

y – mass of anhydrous product

X – mass of the product containing the component concerned,

w – numerical value of water content in the product expressed as a percentage, determined by laboratory methods.

Product conversion mass:

The conversion is carried out according to the formula:

$$z = (X \cdot r) / n$$

where:

z – mass of the conversion product,

X – mass of the product containing the component concerned,

r – a numerical value of the percentage content of the given component in the article (chemical element, chemical compound, active substance, concentrate) or the concentration of the component in solution, determined by laboratory methods in accordance with the applicable standards,

n – a numerical value of the percentage of the pure component content conventionally assumed for the product.

Contractual fuel is fuel with a fixed net calorific value of 29307.6 kJ/kg calculated according to the formula:

$$y = (x \cdot r) / 29307.6$$

where:

y – mass of the contractual fuel,

x – mass of actual fuel in operating condition,

r – net calorific value in the operating condition.

Net calorific value is the amount of joules generated from the mass unit of fuel burned in a constant volume under normal pressure (0.1013 MPa) in an oxygen atmosphere.

Conversion brick of wall materials – for data in the unit of measurement with the number 29830 (thousands of conversion bricks) a conversion factor should be applied taking into account the dimensions of a standard ordinary brick, i.e. 250mm x 120mm x 65mm.

Example: The company produced 1000 pieces of ceramic wall blocks of the following dimensions: 188mm x 288mm x 220mm.

The volume of one brick block is equal to: $0.188\text{m} \times 0.288\text{m} \times 0.220\text{m} \approx 0.011912 \text{ m}^3$

The volume of one standard ordinary brick is: $0.250\text{m} \times 0.120\text{m} \times 0.065\text{m} = 0.00195 \text{ m}^3$

$0.011912 \text{ m}^3 / 0.00195 \text{ m}^3 \approx 6$

Therefore, the equivalent of a ceramic wall brick with dimensions of 188mm x 288mm x 220mm is approximately 6 conversion bricks.

Thus, approximately $1000 \times 6 = 6\,000$ conversion bricks of wall materials were produced.

The PRODPOL nomenclature is updated annually. The updating of the nomenclature results from the need to take into account the changing information needs of users of product statistics and to ensure consistency with the PRODCOM list and the Combined Nomenclature CN modified each year. Every year the correspondence table between the previous year's and the current version of the PRODPOL nomenclature is prepared, and the list of changes in the nomenclature is published on GUS website, which facilitates, among others, the preparation of reports by respondents in the case of products affected by changes.

The PRODPOL nomenclature is developed separately for the annual and monthly surveys due to the timing of official adopting of the PRODCOM List for a given reporting year. The monthly nomenclature is prepared on the basis of the draft version of the PRODCOM List, which may not include all the changes introduced in the finally approved version.

The PRODPOL monthly survey nomenclature for the current reference year (year t) and the PRODPOL annual survey nomenclature for the previous reference year (year t-1) are published each year by mid-January.

The PRODPOL nomenclature for annual surveys contains a list of products or assortment groups classified according to PKWiU 2015 into divisions 05-08, 10-32, into class 38.32 and a list of industrial services classified into divisions 05-33 and selected services from other divisions of PKWiU. At least one physical unit of measurement is defined for the majority of products, in which data on the quantity of production should be provided. The corresponding symbols of the Combined Nomenclature (CN) used in international trade are given for most of 8-digit items of the nomenclature. The CN symbols are shown in order to clarify the scope of the PRODPOL groupings, to facilitate the classification of products and to link production data with exports and imports data.

In addition, comments have been provided for certain items containing additional methodological guidance or information to clarify the scope of the grouping.

The PRODPOL nomenclature for monthly surveys covers fewer products than the annual survey nomenclature and does not include services and most 3-digit and 4-digit groupings corresponding to PKWiU groups and classes. According to PKWiU 2015 products are classified into divisions 05-08 and 10-32 and to class 01.11.

On the basis of the PRODPOL nomenclature for monthly surveys, an additional 'List of goods for survey on stocks in trading enterprises' is compiled, which is a list of goods comprising cereals, oilseeds and food products, together with the allocated units of measurement, which are covered by the survey on stocks in trading enterprises.

The PRODCOM list is a list of products and services used in the Community survey on industrial production introduced by the European Commission Regulation. It includes the list of industrial products and services classified according to the CPA classification into divisions from 07 to 33 excluding division 09 and, starting from reference year 2019, certain items of class 38.32. Within Division 19, PRODCOM list covers only one item, i.e. pitch and pitch coke.

Each PRODCOM item is identified by an 8-digit symbol structured according to the following pattern:

XX.XX.YY.ZZ

XX.XX – NACE symbol

XX.XX.YY – CPA symbol

XX.XX.YY.ZZ – PRODCOM symbol

For majority of items unit of measurement is provided and for all items symbols indicating the scope of the data to be transmitted are given:

S – sold production is reported in quantity and value terms; in case of the items for which no physical unit of measurement is attributed, only the value is reported

T – actual production (manufactured) in terms of quantity, in addition to which sold production in terms of quantity and value is reported,

V – actual production (manufactured) in terms of quantity; it is not required to report the sold production,

I – Industrial services reported in terms of value.

Table 3. Comparison of PRODCOM List with PRODPOL nomenclature (for annual survey)

PRODCOM List	PRODPOL nomenclature (annual)
used in the Community survey on industrial production PRODCOM	- used in the national annual survey on production of industrial products - used to prepare data according to PRODCOM
non-hierarchical structure	hierarchical structure with exceptions (some 12-digit items outside the structure)
- number of items – approx. 4000 - CPA divisions: 07-33 except 09 (for division 19 only 1 item) and selected items of the class 38.32	- number of items – approx. 5500 - PKWiU divisions: 05-33, selected items of the class 38.32 and selected services from other PKWiU divisions
includes: - industrial products - selected secondary raw materials - industrial services (approx. 4% of items)	includes: - industrial products - selected secondary raw materials - industrial services and selected non-industrial services (approx. 5.5% of all items, of which 3% are non-industrial services)
nomenclature levels and item coding: XX.XX.XX.XX the first 4 digits in accordance with NACE Rev. 2 the first 6 digits according to CPA	nomenclature levels and item coding: XX.XX.XX-ZZ.AA.AA PKWiU - 3-, 4-, 5-, 6-digit (level 1-4) PRODCOM - 8-digit (level 5) PRODPOL - 10-, 12-digit (level 6-7)
- for majority of the items the sold production (quantity and value) is surveyed and from 2021 sold production under subcontracted operations - for approx. 18% of the items additionally manufactured production is surveyed	for majority of the items the production manufactured and sold (quantity and value) is surveyed
- at most one physical unit of measurement per item - production surveyed in 41 different units of measurement (mainly kg or unit)	- there may be several physical units of measurement allocated to each item - one unit of measurement for approx. 83% of the items - two units of measurement for approx. 18% of the items - three units of measurement for 24 items - four units of measurement for 2 items - production surveyed in 75 different units of measurement (mainly t, kg, units, thousand units)

Table 4. Comparison of PRODPOL nomenclature for monthly survey and PRODPOL nomenclature for annual survey

PRODPOL nomenclature (monthly)	PRODPOL nomenclature (annual)
used in the monthly national survey on production of industrial products	- used in the annual national survey on production of industrial products - used to prepare data according to PRODCOM
hierarchical structure (some 12-digit items outside the structure)	
- number of items – approx. 1700 - PKWiU divisions: 05-32 ,excluding 09, and class 01.11	- number of items – approx. 5500 - PKWiU divisions: 05-33, selected items of division 38 and the selected services from other PKWiU divisions
includes: - industrial products - stocks (surveyed quarterly or for certain items - monthly)	includes: - industrial products - industrial services and selected non-industrial services (approx. 3% of the items)
nomenclature levels and item coding: XX.XX.XX-ZZ.AA.AA PKWiU – 3-, 4-, 5-, 6-digit (level 1-4) PRODCOM - 8-digit (level 5) PRODPOL - 10-,12-digit (level 6-7)	
- for most items, manufactured and sold production (quantity) is surveyed - for heterogeneous groupings, the value of sold production in thousand PLN is surveyed	for most items, manufactured and sold production (quantity and value) is surveyed
several physical units of measurement may be assigned to an item	

2.4. Survey methodology description

2.4.1. Survey of industrial products production according to PRODPOL

The survey on the production of industrial products is a permanent survey, carried out monthly and annually. It is a complete survey, which means that all reporting units meeting the criteria for the survey are obliged to report the data.

Survey on production of industrial products is conducted with the use of the so-called product method, in which the data aggregation is based on the type of product classified to the appropriate grouping of the PRODPOL nomenclature, regardless of the main type of activity declared by the reporting unit manufacturing the product or providing industrial services.

At the same time, the basic method of collecting data on the manufacturing of products is the enterprise method (one legal unit is considered to be an enterprise), i.e. all reported production is assigned to the voivodship in which the headquarters of the enterprise is located.

In addition, in order to obtain information on the actual place of manufacture of products, in the annual survey for selected industrial products, the establishment method is also applied, i.e. information is collected on the manufacture of products carried out in individual establishments of a given enterprise, which allows to allocate this production to voivodships in which it is actually carried out.

Data on the production of industrial products at the level of voivodships are presented by statistics both by the enterprise method and the establishment method. If an enterprise has production establishments in voivodships other than the one in which its headquarters is located, data on production in these voivodships prepared on the basis of the enterprise method and the establishment method may differ.

The data provided by the reporting entities on electronic questionnaires are then aggregated according to the symbols of the PRODPOL nomenclature and presented at the level of the country or voivodship.

The reporting obligation applies to legal persons, organizational units without legal personality (excluding budgetary units and establishments) and natural persons conducting economic activity.

The survey on the production of industrial products does not apply to:

- trading units, which have ordered the manufacture of products in a production enterprise and have not transferred the raw materials for manufacture of these products,
- units conducting exclusively publishing activities and not participating directly in the process of preparing for printing and printing,
- units which are engaged exclusively in activities linked to the production of films, videos, television programs, sound and music recordings and which are not directly involved in the reproduction of sound recordings, video recordings or computer media.

Reporting obligations in the annual survey on production of industrial products are determined on the basis of information contained in the Database of Statistical Units (BJS) as of November of the year preceding the survey year. The annual survey covers entities:

1. employing 10 or more persons, with a type of main or secondary activity classified according to PKD 2007 into:

- Mining and quarrying (Section B),
- Manufacturing (Section C),
- Marine fishing (class 03.11),
- Sorted materials recovery services; secondary raw materials (class 38.32)

2. for which information is confirmed by other sources (e.g. press, enterprise websites, industry websites) on the production of the industrial products specified in the PRODPOL nomenclature valid for the reference year.

The reporting obligations for the monthly survey on production of industrial products are determined on the basis of information contained in the monthly BJS register. Monthly surveys involve units:

1. employing 50 or more persons with main or secondary activity classified according to PKD 2007 into:

- divisions 05-32
- divisions 45-47

2. for which information is confirmed by other sources on the production of certain industrial products specified in the PRODPOL nomenclature valid for the reference year.

3. units having stocks of cereals, oilseeds, crude oils and oilseed meal:

- employing 50 or more persons with main or secondary activity classified according to PKD 2007 into:
 - class 01.11
 - class 52.10
- employing 10-49 persons with main or secondary activity classified according to PKD 2007 into:
 - class 46.21
 - class 46.22
 - class 01.11
 - class 52.10
- employing 10-49 persons selected according to the target list on the basis of the criterion of manufacturing products (oils, margarine, grain mill products, flour, groats, rice (husked, milled or broken), bread, prepared feeds for farm animals, beer, malt, distillate of agricultural origin)
- warehouses in sea ports

2.4.1.1. Recovery of secondary raw materials according to PRODPOL

The amount of recovery of secondary raw materials is reported by the producer at the recovery stage indicated in the detailed guidelines for a given secondary raw material, included in the PRODPOL nomenclature. The production stage at which the recovery of secondary raw materials should be reported is the last in a series of mechanical or chemical transformation processes resulting in the given secondary raw material.

The recovery of secondary raw materials should be reported only under one PRODPOL item. In the case where the recovered metallic secondary raw material contains several kind of metals, the respondent must classify it under one PRODPOL item, taking into account the recovery of which metal its activity is directed towards. If such an approach is not possible, the respondent should take into account the percentage share of individual metals in the secondary raw material and report the recovery under the PRODPOL heading in which the recovery of the metal with the highest percentage share in the given raw material is classified. When classifying the recovery of metallic raw materials for the PRODPOL heading, the respondent should first of all be guided by the scope designated by the explanations to the relevant CN codes.

Recovery of metallic secondary raw materials from wastewater after industrial processing (e.g. galvanization, leaching) should be reported in the PRODPOL items for the relevant metals.

However, recovery of metals from mine waters and similar sources should not be reported as recovery of secondary raw materials.

The entity generating waste that was subsequently recovered should demonstrate the production of the secondary raw material, e.g. in the form of defective plastic products that can be granulated and reused in the production process.

It should be noted that waste that has only been selectively collected into appropriate fractions should not be reported.. However, the report should include waste prepared so that it can be reused without any other pre-processing operations (e.g. segregated, non-greasy, non-wet paper or cardboard should be reported, but not paper and cardboard waste that has not undergone any segregation stages; cut and pressed aluminium chips ready for melting should be reported, but not aluminium scrap that has not undergone any segregation).

2.4.2. PRODCOM survey

Data for the European PRODCOM survey is compiled by each country on the basis of national surveys and submitted according to the established items of the PRODCOM List nomenclature. Eurostat sets the minimum requirements, i.e. data must come from entities having a type of activity classified in PKD section: B, C and E (in the scope of class 38.32) with the number of employees of 20 and more. Eurostat does not estimate the data provided by the member states in any way, it only converts the value data from national currencies into euros.

However, depending on the size of the economy and its specificity, each country may additionally extend this survey, e.g. by lowering the threshold of the number of employees and covering a larger number of entities in a full or representative survey. It is assumed that the data on production collected and submitted to EUROSTAT should cover at least 90% of production in each class.

In Poland, the basis for collecting and processing PRODCOM data is the national survey of the production of industrial products, covering entities whose type of primary or secondary activity is classified according to PKD to sections B and C and class 38.32, with the number of employees of 10 or more persons; beginning from the survey of reference year 2022 also entities employing up to 9 persons that produce pellets, briquettes made of pressed and agglomerated wood and plant waste. It is a census survey and all entities that meet these criteria are required to participate in the survey and provide data on production or information that they did not produce in a given year. The data provided by the respondents are then aggregated.

In most cases, the Polish items in the PRODPOL nomenclature coincide with the items in the PRODCOM List. In some cases, the PRODPOL nomenclature has more detailed groupings than the PRODCOM nomenclature, therefore the data must be aggregated to obtain data for the PRODCOM groupings. Data are transferred to EUROSTAT according to PRODCOM List items indicated for a given year.

PRODCOM data can be used for international comparisons; however, for analyses of domestic production, it is recommended to refer to the national survey based on PRODPOL, which is more detailed than the European survey.

Information on the PRODCOM survey conducted in various member states of the European Union can be found at https://ec.europa.eu/eurostat/cache/metadata/en/prom_esms.htm.

2.5. Basic principles for survey organization

The Enterprises Department is responsible for the methodology of surveys on the production of industrial products and for the analysis, preparing and presentation of their results. Based on the collected data, the Department conducts and provides data on the production of industrial products according to the PRODPOL nomenclature, based on the PKWiU classification and PRODCOM List, responding to the needs of users, including those related to the fulfillment by Poland of the requirements imposed by the relevant EU regulations.

Statistical Office in Wrocław, specializing in this survey is responsible for collecting data from respondents in accordance with the methodology developed by the Enterprises Department.

The basic form of data collection is an electronic form published on the Reporting Portal on the GUS website.

Table 5. Reporting obligation deadlines in survey on production of industrial products

Annual survey	
Report on production (P-01)	the report is submitted by 28 February of the year following the reporting year
Monthly survey	
Report on production and stocks of industrial products (P-02)	the report is submitted once a month by the 5th working day of the month following the reporting month in the case of stocks surveyed quarterly report is submitted by the 5th working day of the month following the month ending the quarter

The entities covered by the survey receive a notification of the reporting obligation by e-mail. The respondent has an individual account, to which it logs in using the login and password assigned by the Portal system (the procedure of creating an account is described on the Portal's website).

The information about the reporting obligation reaches the recipient in advance, enabling timely fulfillment of this obligation. The forms are available on the website of the Reporting Portal. Acquiring data via the Reporting Portal makes the process of quality control of collected data faster and allows the respondents to be informed on an ongoing basis about possible errors in the completed report.

During the collection process, reminders are sent about the necessity to prepare or complete the report which has been started. Reminders are sent to respondents who have not completed the report on time, reminding them of the obligation imposed.

In order to reduce the burden on respondents, the following improvements have been made to the electronic form:

- personalization – consisting in pre-filling the form with symbols, names and measurement units of goods and services that were reported by the reporting unit in the previous reporting period. In annual reports and in monthly reports for January, the symbols, names and units of measurement are also updated where changes of nomenclature occurred,
- linking the PRODPOL items with the relevant Combined Nomenclature (CN) codes used for tax purposes
- dictionaries – allowing to select items from a list of products and services according to the current PRODPOL nomenclature which are not included in the personalized form,
- filtering questions – allowing the relevant report sections to open up and display a field in which the unit can enter comments on its production activities.

In order to reduce errors, the following improvements have been made to the electronic form:

- active explanations and definitions,
- link to the current reporting list of products (PRODPOL),
- logical and arithmetic control,

and, additionally, in the annual survey:

- comparison of selected variables with data provided in the monthly report on products and stocks (P-02) and in quarterly report on revenues, costs and financial result and on outlays on fixed assets (F-01/I-01),⁶
- information on the median domestic unit price for the product and on unit price of the product in a given reporting unit for the previous year.

In the course of the survey, data from the Reporting Portal are periodically transferred to the Survey Information System (SIB). SIB is used by statisticians to analyze and control the quality of the data obtained. Every year, SIB updates are prepared in order to adjust it to the changes introduced in the scope of collected data and to supplement it with additional, necessary control assumptions.

Data correctness and quality control is carried out in three stages. Initial control is done at the stage of filling in the report by reporting units, during which the logical and arithmetic correctness of the entered data is checked, as well as the consistency of the related elements, including those from various sections of the form. Next, the SIB performs an analysis of the consistency of the data set, comparison with data from the previous period or with data for 12 months from the monthly survey, analysis of entities whose data differ from the assumed correct situation. The data set is also compared with the relevant data from the reports: Report on revenues, costs and financial result and on outlays on fixed assets (F-01/I-01), Balance report on energy carriers and heating infrastructure (G-02b), Report on consumption of energy carriers and energy (G-03). In the third stage, selected data are verified in terms of the correct classification of products into the relevant groups of the PRODPOL nomenclature using expert knowledge and available non-statistical materials, e.g. press releases, information from the websites of producers or distributors of products.

In case of doubts as to the correctness of the reported data or the possibility of misclassification of products by the enterprise, the Statistical Office in Wrocław asks the reporting units to confirm or verify the information provided earlier.

Once the survey has been completed and the national data set has been validated, the data are disseminated to internal and external users for analysis and publication on the basis of the survey results. In addition, the results of the monthly surveys are used to supplement the missing annual data (imputations), i.e. available monthly surveys data on production in physical units of entities which have not submitted annual reports are inserted in imputed annual reports.

Due to the specificities of the survey on production of industrial products, related to difficulties in classifying certain goods in the relevant PKWiU/PRODPOL groupings and to reporting data in different measurement units, annual data on the manufacture of industrial products may be revised three times a year within a period of four years after the end of the reference year; and in exceptional cases even within a longer period. Monthly data on the manufacture of industrial products may be revised monthly up to 14 months after the end of the year to which the monthly reference periods relate.

⁶ The quarterly survey on revenues, costs and financial result as well as outlays on fixed assets is presented in the "Methodological report survey on Non-Financial Enterprises".

3. Survey on sold production of industry

3.1. Scope of units

The scope of units surveyed in monthly and annual surveys on sold production of industry includes entities conducting economic activity classified by main type of activity, according to the Polish Classification of Activities (PKD), in the following sections:

- Mining and quarrying (Section B),
- Manufacturing (Section C),
- Electricity, gas, steam and air conditioning manufacturing and supply (Section D),
- Water supply, sewerage, waste management and remediation activities (Section E).

Due to the legal form, the survey covers partnerships, capital companies, civil law partnership conducting activity on the basis of the contract concluded pursuant to of the Civil Code, companies provided for in the provisions of acts other than the code of commercial companies and the civil code or legal forms to which regulations on companies apply, branches of foreign entrepreneurs, state-owned enterprises, cooperatives, state organizational units, communal, poviats (district) and provincial self-government organizational units, natural persons conducting economic activity.

The survey is conducted using the so-called enterprise method, which means accepting whole enterprises (one legal unit is considered as an enterprise) as the basis for grouping all data characterizing their activity according to particular classification levels and territorial divisions. The enterprise method assumes that the results of the whole activity of the enterprise, recorded in its profit and loss account, are assigned to the main activity of this enterprise and, at the same time, to the region in which its seat is located.

In the case of monthly survey, the scope of coverage includes the units employing 10 persons or more, while in the annual survey – the full population regardless of the number of employed persons.

3.2. Scope of data

The scope of data collected in the surveys, both monthly and annual, is the value of sold production of industry at current basic prices.

The value of sold production is a variable calculated on the basis of data obtained in the survey:

- Evaluation of the current economic activity of enterprises (1.61.04) - monthly data collected as part of the data set Report on economic activity (DG-1),
- The annual survey on economic activity of enterprises (1.61.05) – annual data collected within the data set Annual enterprise survey (SP) covering entities employing 10 or more persons and the Survey on economic activity (SP-3) – covering entities employing up to 9 persons.

The following variables, derived from the DG-1 data set, are used to calculate the monthly value of sold production:

- net revenue from sale of products (goods and services),
- value of manufactured products not categorized as sale, but included in sales,
- excise tax on self-manufactured products (producer),
- subsidies received for the products.

The following variables are used to calculate the annual value of sold production:

- data set Annual enterprise survey (SP) – entities employing 10 or more persons
 - net revenue from sale of products (goods and services),
 - cost of manufacturing products for the entity's own needs,
 - excise tax linked to the sale of products.
- Data set Survey on economic activity (SP-3) – entities employing up to 9 persons until 2017.

- net revenues from all activities,

since 2018.

- net revenue from sale of products (goods and services),
- cost of manufacturing products for the entity's own needs,
- excise tax linked to the sale of products.

In addition, the survey uses variables from the data set:

- Report on the producer prices of goods and services (C-01) – in annual and monthly surveys
 - Producer Price Index – to convert the value of sold production in current prices into constant prices,
- Survey on persons employed, wages, salaries and hours worked (Z-06) – in annual survey
 - employment and persons employed (in the main workplace) – to calculate imputation rates (labor productivity) for units that did not report data.

3.3. Variables

3.3.1. Variable characteristics

The subject of the study is the value of sold production of industry, which is the basic measure of economic activity of industrial enterprises, i.e. economic units classified in sections B, C, D, E according to PKD 2007.

The **value of sold production** includes:

- The value of products sold outside the enterprise (regardless of whether due payments for them have been received or not), i.e:
 - finished products, semi-finished products and a parts of own production,
 - performed services and works including construction and assembly works realised without subcontractors,
 - research and development,
 - design, geodetic and cartographic works,
 - derived as a result of multiplying the number of sold goods and services sold by the unit selling price adjusted by due extra charges, granted rebates, reductions, discounts or contractual due payments for the sale of products (goods and services), excluding value added tax (VAT),

- the value of the manufactured products not categorised as sale, but included in sales, i.e., the value of
 - own products supplied to own retail sales outlets, own catering establishments, own warehouses,
 - benefits transferred to the social benefits fund,
 - own products (goods and services) manufactured and transferred for increasing the value of own fixed assets,
 - goods and services transferred free of charge for the purpose of representation and advertisement,
 - goods and services provided for the tax payers' and staff's personal needs,
 - donations of goods and services rendered free of charge.
- flat agent's fee for conducting economic activity, using fixed assets etc., in the case of concluding an agreement on commission terms, or full agent's fee in the case of concluding an agency agreement.

Sold production is expressed in terms of realisation prices, i.e. prices actually obtained in sales transactions with direct clients, in net value, i.e. without value added tax (VAT) due on the sales. Depending on the client category, these may be selling prices wholesale, retail, transactional and other prices, taking into account extra charges, reductions, discounts provided for in the terms and conditions of the contract.

The value of sold production expressed in this way is the value at producer's prices.

The sold production is presented in current basic prices, i.e. exclusive of value added tax (VAT) and excise tax, together with the value of subsidies received, i.e. subsidies on products (goods and services).

The adoption of a basic price category for the valuation of the value of sold production is in line with Eurostat recommendations on short-term indicators and the principles of the system of national accounts.

3.3.2. Measurements and indicators and method of their calculation

The value of sold production is a variable calculated on the basis of the formula below:

$$Sa = Sw + Sz - Da + Dp$$

Sa – value of sold production of industry in current basic prices

Sw – revenues from sales of products (goods and services)

Sz – value of manufactured products not categorized as sale, but included in sales

Da – excise tax on own production (producer)

Dp – subsidies received for the products

Data on sold production of industry are presented in absolute figures – value in current basic prices and as a structure, as well as in the form of indicators of dynamics in constant prices.

The basis for calculating indices of growth at different bases shall be values in constant prices which result from deflating⁷ the value of production in current prices by a producer price index.

Due to the obligation to introduce a new base year into the statistical compilation, the value of sold production is converted into value in new constant prices every five years for a year ending with 0 or 5. To this end, a new price index chain shall be created on a fixed basis.

A start-up index with a fixed base year for January of the base year shall be transferred from the C-01 system. Then, in the following months, price indices are created on a fixed basis for a given month, using the price index on the basis of the previous month=100 from DG-1 survey for preliminary data and C-01 survey for final data.

The calculation of the price index with a fixed base for the current month ($Ia1_n$) is made by means of a chain-linking according to the formula:

$$Ia1_n = \frac{Ia1_{n-1} \times Ia5_n}{100}$$

where:

$Ia1_n$ – price index with fixed basis for the current month

$Ia1_{n-1}$ – price index with fixed basis for the previous month

$Ia5_n$ – price index on the basis of the previous month=100 from DG-1 survey (preliminary data) or C-01 survey (final data)

Deflating the value in current prices with the price index calculated in this way is done at the level of the PKD group. The value of sold production at the higher levels of aggregation (divisions, sections and total industry) in constant prices is the sum of the values of lower aggregations.

To convert incremental and annual values in current prices into constant prices, an incremental price index is used, which is calculated according to the formula below:

$$Ia2_n = \frac{\sum_{k=1}^n Sa1_k}{\sum_{k=1}^n Sc1_k} \times 100$$

where:

$$Sc1_k = \frac{Sa1_k}{Ia1_k} \times 100$$

$Ia2_n$ – incremental price index on a fixed basis

$Ia1_k$ – monthly price index on a fixed basis

$Sa1_k$ – monthly value of sold production in current prices

$Sc1_k$ – monthly value of sold production in constant prices

n – month number

⁷ Deflating is the dividing of the value in current prices by the producer price index of the base year in order to eliminate the impact of price changes.

Deflating incremental values and annual values in current prices with the index calculated in such a way is done at the level of PKD group. The value of sold production at the higher levels of aggregation (divisions, sections and total) in constant prices is the sum of the values of lower aggregations.

The annual value of sold production of industry in current prices is calculated according to the following formula:

$$Sa = Sw + Sz - Da$$

Sa – value of sold production of industry in current basic prices

Sw – revenues from sales of products (goods and services) including subsidies in kind (Dp)

Sz – cost of manufacturing products for the entity's own needs

Da – excise tax on self-manufactured products (producer)

The value thus obtained at current basic prices shall be published and shall constitute the basis for the calculation of indices in constant prices, after having been deflated by a price index.

3.4. Survey method description

Surveys of sold production of industry are conducted using the so-called enterprise method, in which it is assumed that the results of the entire activity of the enterprise recorded in its profit and loss account are attributed to the principal activity and, at the same time, to the region in which the head office of the enterprise is located. The results of these surveys are compiled on the basis of the following data sets⁸:

- monthly survey:
 - Report on economic activity (DG-1)
 - Report on the producer prices of goods and services (C-01)
- annual survey:
 - Survey on persons employed, wages, salaries and hours worked (Z-06)
 - Annual enterprise survey (SP)
 - Report on revenues, costs and financial result and on outlays on fixed assets (F-01/I-01)
 - Report on economic activity (DG-1)
 - Survey on economic activity (SP-3).

The main source of information to determine the population of legal units for which data are obtained from the primary surveys used in monthly and annual surveys of sold production of industry is the Statistical Unit Database (BJS). The target population for these surveys is created on the basis of

⁸ A detailed description of the surveys, the results of which are used in the surveys on sold production of industry, is included in the methodological reports:

- "Methodological report Non-financial enterprises surveys" - SP, SP-3 and F-01/I-01 surveys,
- "Methodological report Statistics on labour market, wages and salaries" - Z-06 survey,
- "Methodological report Monthly activity report of enterprises" - DG-1 survey.

information about a given enterprise recorded in the BJS as the state for the surveyed month (monthly survey) and the survey year (annual survey). Units are selected for the survey mainly on the basis of information concerning the size class of the enterprise (the basis is the number of persons employed determined as of 31 December of the previous year – in the case of monthly survey and as of 30 November of the surveyed year – in the case of annual survey), the principal activity, primary and specific legal form, type of financing, state of legal and economic activity.

3.4.1. Monthly survey

The main source of monthly data on sold production of industry is the data set from DG-1 form – Report on economic activity, in which by the 5th working day after reporting month, the selected units report data for the reference month and for cumulative period from the beginning of the year, inter alia, data used in the monthly survey on sold production of industry. The report is completed by the respondents in electronic form. The population of the units covered by the monthly survey is selected on the basis of formulas consistent with the scope of the DG-1 survey and updated monthly. On the basis of the results of the units which submitted the DG-1 report (units with 50 or more persons employed and a sample of units with 10-49 persons employed⁹), there is grossing-up of data in the scale of a voivodship made for the whole population defined in the survey, i.e. for units with 10 or more persons employed, at the level of the PKD division.

In the first place, micro-data are aggregated according to groups of PKD from the group level, through divisions, sections, to total industry, creating a database of aggregated micro-data, the so-called intermediate database. The rationale for creating such a database, in which in addition to absolute values also indices are calculated, is creation of:

- a tool enabling the substantive analysis of data quality and data completeness (analysis of indices at aggregated level makes it easier to identify irregularities, not always visible at the individual level),
- a weighting system for a separate system for calculating monthly producer price indices (producer price indices are then used as deflators of the value of sold production expressed in current prices).

Grossing-up is made at the level of PKD divisions using the grossing-up index¹⁰.

Data on sold production of industry expressed in current prices do not take into account the impact of price changes on the level and dynamics of production, and therefore do not reflect the real scale of development, stagnation or regression of production. Data expressed in values are therefore converted into comparable price conditions using producer price indices on a constant basis.

The value base at constant prices is revised every five years, in the third year of the five-year period, with a simultaneous conversion of the three-year time series. The base years are usually years ending with 5 or 0, however, currently the base year applicable in EU is 2021 due to adaptation to the requirements of Commission Regulation (EU) 2020/1197 and Regulation of the European Parliament and of the Council (EU) 2019/2152. Therefore, the value of sold production of industry is expressed in constant prices of 2021. The values obtained are used to calculate the indices on different bases. The data deflation process takes place at the voivodship level and at the national level through automatic inclusion of producer price indices from voivodship and national systems of collecting and processing data on producer prices in industry.

⁹ The principles for selecting the sample for the DG-1 survey were described in the "Methodological report Monthly activity report of enterprises".

¹⁰ The process of grossing-up data on sold production of industry is the same as for other variables in the DG-1 survey and is described in the "Methodological report Monthly activity report of enterprises".

For each reporting month, the price and value indices of sold production in constant prices are calculated twice:

- for the first time, based on preliminary price indices collected in the DG-1 survey – as so-called preliminary reporting data,
- for the second time, based on the final price indices determined in C-01 survey – as so-called final data (calculated in the second month after the reporting period).

The indices of industrial production, calculated on the basis of values at constant prices for publication needs in the country and abroad, are seasonally¹¹ and working-day adjusted using the JDEMETRA+ scheme and the TRAMO/SEATS procedure.

3.4.2. Annual survey

In the framework of the annual survey on sold production of industry, the so-called integrated system is created, which is the result of a combination of surveys listed in the chapter concerning the survey method description. Based on the population of units covered by Z-06 survey on persons employed, wages, salaries and hours worked, the set of units covering industry scope is created, employing 10 or more persons employed. For such a set of units, data from SP survey (listed in the chapter concerning the scope of the survey) are collected, which are necessary to calculate the data on sold production.

For enterprises that have not submitted SP report, data from F-01/I-01 and DG-1 reports are used, while for units for which no data have been obtained, data are imputed.

For data imputation, the labour productivity is used, measured as sold production per employee in a given voivodship and in a given class of PKD, in which there is a unit for imputation. If there are no units with reporting data at the class level in a given voivodship, the labour productivity of the same group level of PKD is used.

After imputation of data for missing units and analysis including, among others, comparison of obtained annual data with the accruing data from the monthly survey, the tables with data at national and voivodship level are calculated, based on the prepared final dataset.

Data on sold production are converted into constant prices by using the incremental price indices, prepared for the needs of the monthly DG-1 survey:

- national data – at the level of groups, divisions and sections of PKD,
- voivodship data – at the level of divisions and sections of PKD.

3.5. Basic principles for survey organization

The Enterprises Department is responsible for the methodology of surveys of sold production of industry, both monthly and annual, as well as for the analysis, development and presentation of results. On the basis of collected data, it conducts survey that meets the needs of national and foreign users. Due to the fact that this is a survey using the results of other surveys, the team of the survey authors in GUS participates in selected stages of the organization of the surveys, on the basis of which the data are collected.

¹¹ Seasonal adjustment consists in eliminating the effects of calendar and working day variability (differences in working time in subsequent months) and seasonality (annual, regular deviations from the trend observed in the annual cycle).

In the case of the monthly DG-1 survey, the Enterprises Department is responsible for the methodology of the survey in the area of industry and closely cooperates with the Statistical Office in Poznań (specializing in this survey) and the Statistical Office in Łódź (specializing in seasonal adjustments) in the scope of:

- preparation of the survey schedule,
- development of a form,
- preparation of assumptions for control and mock-ups of result tables together with formulas of data processing and validation,
- calculation of the output data, analysis and acceptance of the output tables at voivodships and country level,
- elaboration of calendar and seasonal adjusted time series at country level.

Table 4. Schedule for compilation of monthly data on sold production of industry

Item	Work stage	Contractor	Deadline
1.	Submitting reports in line with the PBSSP	Reporting units	Once a month until the 5th working day after the reference month, with data for the previous month
2.	Monitoring and completeness analysis of the collected data. Control, analysis, error clarification and correction of micro-data, monitoring of reporting units	Statistical Office in Poznań	From the 5th to the 9th working day of the month following the reporting month
3.	Analysis and approval of regional and national datasets	Enterprises Department	The 9th working day of the month following the reporting month
4.	Preparation of data, calculation of output tables at national level and their analysis	Enterprises Department	From the 10th to the 13th working day of the month following the reporting month
5.	Elaboration of calendar and seasonal adjusted time series at country level	Statistical Office in Łódź	From the 11th to the 16th working day of the month following the reporting month
6.	Publication of monthly data on sold production of industry - News release	Enterprises Department	The 14th working day of the month following the reporting month
7.	Preparation of data on monthly sold production of industry for publication in the Statistical Bulletin	Enterprises Department	From the 16 to the 17th working day of the month following the reporting month
8.	Transmission of data on sold production of industry to Eurostat	Enterprises Department	Until the last calendar day of the month following the reporting month

In the case of the annual survey on sold production of industry, the Enterprises Department combines data from the surveys listed in the chapter on the survey method, after approval by the authors of these surveys, and creates on this basis an integrated system – as a basis for further work.

Table 5. Schedule for compilation of annual data on sold production of industry

Item	Work stage	Contractor	Deadline
1.	Preparation of the dataset and calculation of control and output tables according to the formulas and mock-up tables prepared by the Enterprises Department	Statistical Computing Center	From the 1st half of October to the 2nd half of November of the year following the reporting year
2.	Analysis of control and output tables, data processing (including imputation, deflation), calculation of control tables, analysis and validation of control tables	Enterprises Department	
3.	Preparation of data on sold production of industry at national and voivodship level for the needs of publications of GUS and regional statistical offices.	Enterprises Department	
4.	Preparation of the preliminary data on annual sold production of industry to be published in the Concise Statistical Yearbook of Poland	Enterprises Department	The beginning of July of the year following the reporting year
5.	Preparation of the final data on the annual sold production of industry for publication in the Statistical Yearbook of the Republic of Poland.	Enterprises Department	The end of December of the year following the reference year

4. Presentation of resulting information

The data are made available in accordance with the cross-sections assumed in the Statistical survey program of official statistics. The level of aggregation of data on sold production of industry and the production of goods and services available to users may be limited due to statistical confidentiality resulting from the provisions of the Act on Official Statistics.

According to Article 10 of the Act, the collected individual data are subject to absolute protection and "may only be used to prepare statistical studies, compilations and analyses, as well as to create a statistical survey sampling frame by the President of Statistics Poland".

Article 38 of the Act contains the principles of imposing statistical confidentiality:

- „1. Identifiable unit data obtained in statistical surveys may not be published nor made available.
- 2. Statistical data obtained in statistical surveys that can be linked and identified as data concerning a specific natural person, as well as information and statistical data characterizing economic and financial results of national economy entities conducting economic activity, may not be published nor made available if the given aggregation consists of fewer than three entities or the share of one entity in a given compilation is greater than three-fourths of the whole.
- 3. In the case of national economy entities, the information and statistical data referred to in paragraph 2 may be published if the person authorized to represent a given entity has consented to the publication of specific data characterizing the economic and financial results of that entity.”

4.1. Method of presentation of the information resulting from surveys on production of products

The information resulting from the survey on the production of industrial products is presented according to the PRODPOL nomenclature, Polish Classification of Goods and Services (PKWU 2015) and PRODCOM List.

Data from the annual survey refer to the calendar year. Data from the monthly survey refer to the calendar month, and in the case of inventories – to the status on the last day of the quarter, i.e. 31 March, 30 June, 30 September and 31 December.

Monthly data cover entities employing 50 or more persons and are presented according to PRODPOL nomenclature groupings or additional groupings constituting the sum of PRODPOL groupings.

The annual data cover entities employing 10 or more persons and are compiled according to:

- PRODPOL nomenclature groupings or additional groupings that are the sum of PRODPOL groupings,
- groupings of the Polish Classification of Goods and Services – at the level of sections, divisions, groups, classes and total grouping comprising the sections Mining and Quarrying (section B) and Manufacturing (section C),
- PRODCOM List groupings.

Data in current monthly and annual publications for longer time series are presented according to the latest version of PRODPOL nomenclature and classification PKWU 2015. Long time series are obtained using correspondence tables between different versions of the nomenclature, developed annually by the Enterprises Department.

In many cases, abbreviated names of the PRODPOL groupings are used in publications, as the names in the PRODPOL nomenclature can be very extensive.

Product data are presented in physical units of measurement indicated in the PRODPOL nomenclature or their multiples and in current prices (in thousands PLN). Data on services and groupings of PKWiU at the level of totals, sections, divisions, groups and classes are published in current prices in thousands PLN without VAT.

Due to the specificities of the survey on production of industrial products, related to difficulties in classifying certain goods in the relevant PKWiU/PRODPOL groupings and to reporting data in different measurement units, annual data on the manufacture of industrial products may be revised three times a year within a period of four years after the end of the reference year; and in exceptional cases even within a longer period. Monthly data on the manufacture of industrial products may be revised monthly up to 14 months after the end of the year to which the monthly reference periods relate.

4.2. Method of presentation of the information resulting from surveys of sold production of industry

The information resulting from the survey on sold production of industry is presented according to the Polish Classification of Activities (PKD) for the "Industry" grouping created for analytical purposes, which includes four sections of PKD:

- Mining and quarrying (section B),
- Manufacturing (section C),
- Electricity, gas, steam, hot water and air conditioning manufacturing and supply (section D),
- Water supply, sewerage, waste management and remediation activities (section E).

Data are published for:

- full population of entities (annual data) at the level of sections and divisions of PKD,
- entities employing 10 or more persons (monthly data) – at the level of sections and divisions of PKD,
- entities employing 50 or more persons (monthly data – incremental quarter) – at the level of sections, divisions and groups of PKD.

The data are presented in territorial breakdowns:

- administrative breakdown – voivodship, powiat
- statistical breakdown of NUTS 2016¹² – macro-region, region, subregion and powiat.

Moreover, the data are presented according to 5 main industrial groupings (the so-called MIGs)¹³, i.e.:

- intermediate goods,
- capital goods,
- consumer durables,
- consumption nondurables,
- energy.

¹² Regulation (EC) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS)

¹³ Annex II of Commission Implementing Regulation 2020/1197 laying down technical specifications and arrangements pursuant to Regulation (EU) 2019/2152

Data are presented in a form of:

- values and structure – in current prices,
- indices – in constant prices, on a variety of bases, non-adjusted, working-day and seasonally adjusted.

Annual data are presented in accordance with the organizational structure as at 31 December of the reporting year.

The dynamics of sold production of industry is presented in constant prices.

4.3. Publication of results for domestic needs

Data on the sold production of industry and the production of industrial products are published in the following news releases and publications of the Enterprises Department:

- **"Index numbers of sold production of industry"**

Monthly news release, until 2018 was combined with news release concerning the construction and was published under the title "Index numbers of industrial and construction-assembly production". Currently it is a news release containing monthly indices for the following breakdowns: total industry, sections and divisions of PKD, presented in the form of graphs, tables and a brief analytical description.

Publication deadline – 14th working day after the reference month.

- **"Production of industrial products"**

The annual news release, published since 2017, contains information on the sold production of own products at the level of total grouping and divisions of classification PKWiU 2015 and sold and manufactured production of the major industrial products.

Publication deadline – 9th working day of July.

- **"Production of major industrial products"**

The Production of major industrial products is a monthly publication, published since 1994 and since 2004 in electronic form with tables available in Excel format. It contains data on the manufactured and, since 2022, on sold production of major industrial products, together with the production indicators of dynamics in relation to the previous month and to the corresponding period of the previous year. Additionally data on the manufactured and sold production of products by months for the current and previous year are presented in the publication. Since July 2022 the publication is supplemented with information on production of industrial products related to the prevention of spreading / combating COVID-19 that earlier (since May 2020) were presented as a separate news release (the separate news release was finished in June 2022).

Publication deadline – 17th working day after the reference month.

- **"Outlays and results in industry"**

The publication "Outlays and results in industry" is a quarterly publication, published since the 1990s, available also in electronic form since 2004. The aim of the publication is to present basic data on industry by sections, divisions and groups of PKD, enabling the analysis of the economic situation of industrial enterprises and changes in this area.

The publication contains information on the value and dynamics of sold production, quantities of major products, employment, average gross wages and salaries, price indices of sold production, new orders and turnover, working time, investment outlays and financial results and relations in industry. The analytical text, enriched with graphs, is supplemented by a tabular part, containing basic information on total industry and broken down by type of activity – sections, divisions and groups of

PKD. The data presented in this publication have been prepared on the basis of the monthly Report on economic activity (DG-1), monthly Report on production and stocks of industrial products (P-02), monthly Report on producer prices of goods and services (C-01) and quarterly Report on revenues, costs and financial result and on outlays on fixed assets (F-01/I-01).

Publication deadline – 2 months after the reference quarter.

- **"Production of industrial products"**

The production of industrial products is an annual publication, published under this title since 1969 and a continuation of publications prepared since the 1950s under the name "Statistics on the production of industrial products". Until 1988, it was created only for the needs of government administration and was not made available to external users. Since 2003, it has been available in electronic form with tables in Excel format. It contains data on the production of major industrial products in physical units of measurement for the reference year, together with data for 2000 and from 2005 onwards. Moreover, data on the sold production of own products of manufacturers are presented, broken down into divisions, groups and classes according to the Polish Classification of Goods and Services (PKWiU 2015) and groupings of PRODCOM List.

Publication deadline – last working day of July after the reference year.

- **"Production of industrial products in the years ..."**

"Production of industrial products in the years ..." is an analytical publication, published since 2019. It presents information on the production of industrial products in Poland in terms of quantity and value, taking into account individual industries and the type of enterprises manufacturing products. The publication also contains data on the production of products in Poland compared to production in other European Union countries. The analytical part is supplemented with a tabular annex in Excel format containing data updated in relation to the data published in July - in line with the revision policy.

Publication deadline – November after the reference year.

- **"Industry - results of activity"**

The publication "Industry - results of activity" is an annual analytical publication, which appeared for the first time in 2018 and presents information characterizing the activity of one of the important segments of the national economy, i.e. industry. The aim of this publication is to present basic data on industry by type of activity, i.e. by sections, divisions and groups of PKD, and by territory, i.e. by voivodships, as well as to present an analysis of the results, relations and changes in industry.

The information contained in the publication concerns mainly the value and indices of sold production, the volume of production of major products, employment, average gross wages and salaries, prices indices of sold production, new orders and turnover in industry, investment outlays and financial results and relations in industry.

The data presented in this publication have been compiled on the basis of the monthly Report on economic activity (DG-1), monthly Report on production and stocks of industrial products (P-02), monthly Report on producer prices of goods and services (C-01) and quarterly Report on revenues, costs and financial result and on outlays on fixed assets (F-01/I-01).

Publication deadline – by the end of June of the year following the reporting year.

- **"Statistical Yearbook of Industry".**

The Statistical Yearbook of Industry is an annual publication published since the mid-1960s, since 2012 it has been published in its entirety in electronic version in PDF format and tables – in Excel format (in the years 2007-2010 the website of the GUS contained selected tables).

The publication contains a wide range of data concerning the industry. The collected data concern various aspects of the activity of industrial enterprises: production, finance, labour market, investment

activity, foreign trade in industrial products, fuel, energy and material management, research and development activity, use of information and communication technologies and environmental protection. The data are presented in 13 sections and 2 annexes, which are preceded by methodological notes containing definitions and principles of data presentation.

Publication deadline – the end of December of the year following the reporting year.

Moreover, monthly and annual data on industrial survey are presented in the following publications and databases of the GUS published on the website of Statistics Poland at <https://stat.gov.pl/en/publications/>:

- Statistical Bulletin,
- Socio-economic situation of the country,
- Socio-economic situation of voivodships,
- Concise Statistical Yearbook of Poland,
- Statistical Yearbook of the Republic of Poland,
- Statistical Yearbook of the Regions,
- Statistical Yearbook of Agriculture,
- Statistical Yearbook of Forestry,
- Regional Statistics,
- Poland in figures,
- [Knowledge database \(DBW\) – subject area: Industry](#),
- [Local Data Bank](#),
- [Macroeconomic Data Bank](#),
- [STRATEG](#)
- [API DBW](#)
- [Data Bank Poland - subject area: Industry \(archived data until 1999\) - in Polish only](#)

Data from industrial surveys may also be compiled on request of users, in desired breakdowns.

5. Transfer of results to international organizations

Data on industry, prepared within the framework of the surveys discussed in this Methodological Report, are also prepared for the needs of foreign recipients and presented by them.

5.1. The European Union – Eurostat

The annual data on industrial production PRODCOM till reference year 2020 were compiled on the basis of Council Regulation (EC) No 3924/91 of 19 December 1991 on the establishment of a Community survey on industrial production; from reference year 2021 - on the basis of Regulation (EU) 2019/2152 of the European Parliament and of the Council of 27 November 2019 on European business statistics, repealing 10 legal acts in the field of business statistics, and on the basis of Commission Implementing Regulation (EU) 2020/1197 of 30 July 2020 laying down technical specifications and arrangements pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council. The regulations define the scope, level of detail and deadlines for the transmission of data. Data on the quantity and value of sold production, on the quantity of manufactured products and on the value of industrial services according to the PRODCOM List are transmitted to Eurostat. From the reference year 2021 data on the production under sub-contracted operations are also transmitted. The PRODCOM data are available in the Europroms database (along with external trade data), on Eurostat website <https://ec.europa.eu/eurostat/web/prodcom/database>.

Annual data from product surveys on selected products of the wood and paper industry are provided via Joint Forest Sector Questionnaire (joint initiative of Eurostat, UNECE, FAO, ITTO) and are available on [Eurostat website](#).

Monthly data on sold production of industry that are presented in the Eurostat database are compiled according to the concept of kind-of-activity unit (KAU), under the Commission Implementing Regulation 2020/1197 laying down technical specifications and arrangements pursuant to Regulation (EU) 2019/2152, which specifies the coverage, the form of data transmission, the level of detail and the deadlines for data transmission for, inter alia, the Production variable (code 140101). Information on Production in industry is published in the Industry Short-term business statistics database, available on Eurostat website <https://ec.europa.eu/eurostat/data/database>. Monthly data are provided in the form of indices on a fixed basis (currently 2021=100), as non-adjusted data, working-day adjusted and seasonally adjusted data. A detailed description of the methodology for developing data on sold production of industry by the kind-of-activity unit (KAU) is included in the Methodological Report "Short-term statistics by European concept of the Kind-of-activity unit".

In addition, information on sold production of industry for individual EU countries and for the whole EU is presented in Eurostat publications, including the series News release euroindicators – "Industrial production", available on the website under the following link

<https://ec.europa.eu/eurostat/news/euro-indicators>.

5.2. The International Monetary Fund (IMF)

Data on sold production for total industry are reported monthly and are stored in an IMF database <http://data.imf.org/?sk=388DFA60-1D26-4ADE-B505-A05A558D9A42>.

They are also published on the GUS website in the SDDS database – Bulletin of Data Dissemination Standard (Economic and Financial Data for Poland – basic sector).

<https://stat.gov.pl/en/databases/sdds/economic-and-financial-data-for-poland/>

5.3. Organization for Economic Cooperation and Development (OECD)

The OECD publishes monthly, within the Main Economic Indicators (MEI), data on sold production of industry (extracted from the Eurostat database) and on the production of selected industrial products (reported separately by GUS in the questionnaire).

Data on quarterly and annual sold production of industry are calculated by Eurostat on the basis of monthly data provided by GUS.

The MEI database is available at <http://www.oecd.org/sdd/oecdmaineconomicindicatorsmei.htm>

5.4. The United Nations

Till the first half of 2022, monthly data on the production of selected products, and till the end of 2021 monthly data on sold production of industry were transmitted to the United Nations via questionnaire of the Monthly Bulletin of Statistics <https://unstats.un.org/unsd/mbs/app/mbssearch2.aspx>.

In addition, annual data on the volume and value of sold production were provided via the Industrial Commodity Statistics Questionnaire <https://unstats.un.org/unsd/industry/>

For the purposes of the Food and Agriculture Organization of the United Nations (FAO), data are transmitted annually:

- food production – via FAO questionnaires on crops and livestock production and utilization data, on prices received by farmers, on government expenditure on agriculture and on food losses from production to the retail stages,
- production of fertilizers – via the Questionnaire on fertilizers.

5.5. The United States Geological Survey

Once a year, data for the "Mineral Yearbook – International Review" published by the United States Geological Survey is provided via the Minerals Questionnaire

<https://www.usgs.gov/centers/nmic/minerals-yearbook-metals-and-minerals>.

5.6. The Aluminum Association

The Aluminum per capita consumption survey questionnaire is used to transmit annual data on aluminum production for the preparation of the "Aluminum Statistical Review (annual fact book)"

<https://www.aluminum.org/resource-library>

5.7. The International Road Federation

Every year, data on the production of motor vehicles are transmitted to the International Road Federation via the World Road Statistics questionnaire.

6. Survey evaluation

6.1. Survey on production of industrial products

During the implementation of the survey, particular efforts are taken to ensure high data quality, including completeness. The list of target enterprises is drawn up in such a way as to secure representative results at the level of the national economy and of each product covered by the PRODPOL nomenclature. According to European standards, at least 90% of the production in each four-digit class of PKD should be recorded in the annual survey. The PKD codes defining the predominant type of enterprises are only used to identify economic units that are most likely to produce the observed products for the purposes of the survey on the production of industrial products. It should be noted that the type of activity of a manufacturer's PKD may differ from the grouping of PRODPOL into which its products are classified. In order to meet the PRODCOM requirements at EU level, it is assumed that all enterprises whose activities are classified under the headings 'Mining and quarrying' and 'Manufacturing' with 20 or more persons employed should be included in the survey on production of manufactured goods. Due to the specificity of the national economies, the EU Member States may lower the threshold for the number of employed, which in Poland is assumed at the level of 10 or more persons.

The data obtained are controlled and corrected according to the established validation rules on the Reporting Portal during the reporting period and additionally in the Survey information system, in order to eliminate the following errors.

Measurement errors – the main reason for measurement errors is the company's misclassification of products into the PRODPOL nomenclature. Enterprises do not use the PRODPOL nomenclature for their own purposes and may have difficulties in adapting their internal records for reporting purposes in accordance with the requirements of the production of industrial products survey. A measurement error made by the respondent may concern:

- reporting of the product under an incorrect PRODPOL nomenclature symbol,
- entering data in the wrong unit of measurement or lack of data for the unit of measurement required by PRODPOL due to lack of quantitative records,
- reporting of inappropriate production type, e.g. subcontracted production is declared instead of own production,
- incorrect distinction between production and provision of industrial services.

In order to minimize measurement errors, electronic forms are personalized by pre-filling in PRODPOL symbols based on the previous year's report. In addition, explanatory notes for filling in the forms, guidelines and methodological comments available in the PRODPOL nomenclature are prepared for the respondents and they also have the possibility to contact public statistics staff to get help from them in filling in the form.

Processing errors – in order to eliminate processing errors, controls are carried out at different levels of aggregation, between historical and current data, as well as comparisons with other statistical and non-statistical data sources. These operations are closely linked and interdependent and can be grouped as follows:

- logical controls,
- consistency check at the level of a single product (i.e. PRODPOL grouping),
- checking consistency between different variables (i.e. manufactured and sold production at the level of the reporting unit and the PRODPOL grouping),
- checking the consistency of monthly and annual data,
- verification of consistency with data from other statistical reports.

In addition, in some cases, the data are individually verified by experts on the basis of their experience and publicly available information, including in the press and on the Internet, on individual reporting units and on a particular branch of the economy.

Processing errors are to a large extent minimized by the use of electronic forms with defined dictionaries of products and units of measurement, online checks when the form is filled and additional logical and arithmetical checks in the SIB (Survey Information System).

Non-response errors – unit non-response is corrected using methods of deductive imputation or estimation on the basis of auxiliary information from statistical sources, i.e. report P-02 Report on production and stocks of industrial products and F-01/I-01 Report on revenues, costs and financial result and outlays on fixed assets.

In accordance with Eurostat recommendations, imputation and estimation methods are not used for units surveyed first time if no data are available for them.

Missing data are also filled on the basis of additional explanations from reporting units, either by telephone or e-mail. In addition, economic units who have not fulfilled their reporting obligations at all are contacted in order to get them to fulfill their obligations.

Time series analysis – comparisons over time are made by checking whether the data on production of the products are sufficiently consistent with those of the previous years, considering the following factors:

- changes in the population of the surveyed units;
- the evolution of industrial production as a consequence of the emergence of innovative products;
- changes in the PRODPOL nomenclature (merging or splitting the observed groupings in subsequent editions of the survey).

In order to monitor and improve the quality of the survey, a completeness report is prepared after each edition of the survey, and once a year a broader report is prepared containing an assessment of the basic quality components: usefulness, accuracy, timeliness, comparability and coherence of the obtained results.

6.2. Survey on the sold production of industry

The annual and monthly surveys of sold production of industry are surveys using data collected from other surveys (listed in points 3.2 of the Report), which are subject to procedures to ensure the quality of the data collected. The data are controlled and corrected according to the established validation rules on the Reporting Portal during the filling in the individual reports by respondents and additionally, by statisticians after a proper analysis carried out in the IT systems of individual surveys. These IT systems include the functionalities of searching, filtering and generating reports, which enables the analysis of the completeness and consistency of sets, detection of untypical cases, deviating from the assumed in the control data correctness.

Monthly data on the sold production of industry are prepared on the basis of the DG-1 survey, the evaluation of which is described in the "Methodological Report Monthly report on the economic activity of enterprises".

Within the framework of the annual survey on sold production of industry, a set of industrial units is created on the basis of the Z-06 survey file and data obtained from the SP survey, which is then subject to additional verification of correctness and completeness at the national and voivodship levels. The output tables are also subjected to detailed analysis of data correctness. In order to reduce the missing data, imputations are made from various available sources (tests F-01/I-01 and DG-1). The completeness rate of the annual survey on sold production of industry is approximately 96%.

Literature:

- Gaziński R., Gut P. *Historische Büchlein i Geheime Finanz Bücher jako przykłady źródeł do dziejów społeczeństwa miejskiego na Pomorzu Pruskim w II połowie XVIII wieku*, *Przeszłość Demograficzna Polski* 36, 2014
- Łazowska B. *Statystyka na ziemiach polskich pod panowaniem pruskim*, *Wiadomości Statystyczne* 5(684), 2018
- Praca zbiorowa *Historia Polski w liczbach t. IV. Statystyka Polski* Główny Urząd Statystyczny, Warszawa 2017
- Praca zbiorowa *Uprzemysłowienie ziem polskich w XIX i XX wieku* Polska Akademia Nauk, Kraków 1970

Appendix 1. List of reports used in industrial production surveys

C-01	Reports on producer prices of goods and services
DG-1	Report on economic activity
F-01/I-01	Report on revenues, costs and financial result and on outlays on fixed assets
P-01	Report on production
P-02	Report on production and stocks of industrial products
SP	Annual enterprise survey
SP-3	Survey on economic activity
Z-06	Survey on persons employed, wages, salaries and hours worked

The above data sets (forms) are available on the GUS website at the following address

<http://form.stat.gov.pl/formularze/formularze.htm>

Appendix 2. Sections, divisions, classes according to NACE Rev.2 (PKD) used in industrial production surveys

DIVISION	class	GROUPING NAME
SECTION A		
AGRICULTURE, FORESTRY, HUNTING AND FISHING		
	01.11	Growing of cereals (except rice), leguminous crops and oil seeds
	03.11	Marine fishing
SECTION B		
MINING AND QUARRYING		
05		Mining of coal and lignite
06		Extraction of crude petroleum and natural gas
07		Mining of metal ores
08		Other mining and quarrying
09		Mining support service activities
SECTION C		
MANUFACTURING		
10		Manufacture of food products
11		Manufacture of beverages
12		Manufacture of tobacco products
13		Manufacture of textiles
14		Manufacture of wearing apparel
15		Manufacture of leather and related products
16		Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
17		Manufacture of paper and paper products
18		Printing and reproduction of recorded media
19		Manufacture of coke and refined petroleum products
20		Manufacture of chemicals and chemical products
21		Manufacture of basic pharmaceutical products and pharmaceutical preparations
22		Manufacture of rubber and plastic products
23		Manufacture of other non-metallic mineral products

DIVISION	class	GROUPING NAME
24		Manufacture of basic metals
25		Manufacture of fabricated metal products, except machinery and equipment
26		Manufacture of computer, electronic and optical products
27		Manufacture of electrical equipment
28		Manufacture of machinery and equipment n.e.c.
29		Manufacture of motor vehicles, trailers and semi-trailers
30		Manufacture of other transport equipment
31		Manufacture of furniture
32		Other manufacturing
33		Repair and installation of machinery and equipment
SECTION D ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY		
35		Electricity, gas, steam and air conditioning manufacturing and supply
SECTION E WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES		
36		Water collection, treatment and supply
37		Sewerage
38		Waste collection, treatment and disposal activities; materials recovery
39		Remediation activities and other waste management services
SECTION G WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES		
45		Wholesale and retail trade and repair of motor vehicles and motorcycles
46		Wholesale trade, except of motor vehicles and motorcycles
47		Retail trade, except of motor vehicles and motorcycles

Appendix 3. Sections, divisions, classes and categories according to PKWiU used in survey on production of industrial products

Symbol	Name
Section A PRODUCTS OF AGRICULTURE, FORESTRY AND FISHING AND SUPPORTING SERVICES	
Class 01.11	Cereals (except rice), leguminous crops and oil seeds
Section B PRODUCTS OF MINING AND QUARRYING	
Division 05	Hard coal and lignite
Division 06	Crude petroleum and natural gas
Division 07	Metal ores
Division 08	Other mining and quarrying products
Section C MANUFACTURED PRODUCTS	
Division 10	Food products
Division 11	Beverages
Division 12	Tobacco products
Division 13	Textiles
Division 14	Wearing apparel
Division 15	Leather and related products
Division 16	Wood and products of wood and cork, except furniture; articles of straw and plaiting materials
Division 17	Paper and paper products
Division 18	Printing and reproduction services of recorded media
Division 19	Coke, briquettes and similar solid fuels manufactured from coal or peat and refined petroleum products
Division 20	Chemicals and chemical products
Division 21	Basic pharmaceutical products, medicaments and other pharmaceutical preparations
Division 22	Rubber and plastic products
Division 23	Other non-metallic mineral products
Division 24	Basic metals
Division 25	Fabricated metal products, except machinery and equipment
Division 26	Computer, electronic and optical products
Division 27	Electrical equipment

Symbol	Name
Division 28	Machinery and equipment not elsewhere classified
Division 29	Motor vehicles, trailers and semi-trailers
Division 30	Other transport equipment
Division 31	Furniture
Division 32	Other manufactured goods
Division 33	Repair and installation services of machinery and equipment
Section E WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION SERVICES	
38.32.2	Metal secondary raw materials
38.32.3	Non-metal secondary raw materials

Appendix 4. List of physical units of measurement used in survey on production of the industrial products

Letter indication	Numerical indication	Name
PLN thous.	10130	thousand of the Polish zlotys
kg	00100	kilogram
g	00103	gram
t	00130	tonne
ct	00400	metric carat
m	01100	meter
km	01130	kilometer
m ²	02100	square meter
thous. m ²	02130	thousand square meters
m ³	03100	cubic meter
hl	03101	hectoliter
dam ³	03130	cubic decameter
l	03303	liter
GJ	05290	gigajoule
kW	05330	kilowatt
MW	05360	megawatt
kVA	05830	kilovolt-ampere
MVA	05860	megavolt-ampere
unit	11000	unit
thous. units	11030	thousand units
mln pcs.	11060	million pieces
pair	11100	pair
thous. pairs	11130	thousand pairs
hl 100%	20520	hectolitre of the product's conversion volume with 100% pure component content
t Pb	20830	tonne of conversion content of lead in lead ores and concentrates of lead and zinc-lead ores
t P ₂ O ₅	21330	tonne of phosphorous pentoxide (phosphoric anhydride) converted content in phosphoric and compound fertilizers
t K ₂ O	21430	tonne (megagram) of potassium oxide conversion content in potassium and compound fertilizers
kg Cl	21500	kilogram of chlorine
t Cl	21530	tonne of chlorine
t HCl	21830	tonne of hydrogen chloride
kg Ag	22000	kilogram of silver

Letter indication	Numerical indication	Name
kg B ₂ O ₃	22100	kilogram of boron trioxide
kg HF	22200	kilogram of hydrogen fluoride
kg H ₂ O ₂	22300	kilogram of hydrogen peroxide
kg SiO ₂	22400	kilogram of silicon dioxide
t Al ₂ O ₃	22530	tonne of aluminum trioxide
t CaO	22730	tonne of calcium oxide
t CH ₃ COOH	22830	tonne of acetic acid
t CH ₃ OH	22930	tonne of methanol
t C ₄ H ₉ OH	23030	tonne of butanol
t C ₆ H ₅ OH	23130	tonne of phenol
t Cu	23330	tonne of copper
t CuSO ₄	23430	tonne of copper sulphate
t F	23530	tonne of fluorine
t NaOH	23630	tonne of sodium hydroxide (caustic soda)
t HNO ₃	23730	tonne of nitric acid
t H ₂ SO ₄	23830	tonne of sulphuric acid
t N	23930	tonne of nitrogen
t KOH	24030	tonne of potassium hydroxide (caustic potash)
t NaCl	24130	tonne of sodium chloride
t NH ₃	24230	tonne of ammonia
t Na ₂ CO ₃	24330	tonne of sodium carbonate
t Na ₂ S ₂ O ₅	24430	tonne of sodium pyrosulphite
t S	24630	tonne of sulfur
t SO ₂	24730	tonne of sulfur dioxide
t TiO ₂	24830	tonne of titanium dioxide
t Zn	24930	tonne of zinc
t 42%	25030	tonne of conversion product weight with a fructose content of 42% by weight
t 60%	25130	tonne of product conversion weight with 60% soap and/or surfactants content
t 75% CaC ₂	25230	tonne of conversion product weight of 75% calcium carbide content
t 25% N	25330	tonne of conversion product weight with a nitrogen content of 25% by weight
t 46% N	25430	tonne of conversion product weight with a nitrogen content of 46% by weight
t 96% NaOH	25530	tonne of conversion product weight of 96% sodium hydroxide content

Letter indication	Numerical indication	Name
t 90% sdt	25730	90% dry matter tonne (ton of conversion product weight with 90% dry matter content)
t palum	26200	tonne of conventional fuel
kg akt. s.	26600	kilogram of active ingredient (activated substance)
t P ₂ O ₅ + t K ₂ O + t N	26900	tonne of pure component
hl 6%	27820	hectolitre of the product's conversion volume with 6% pure component content
hl 10%	27850	hectolitre of the product's conversion volume with 10% pure component content
CGT	28400	Compensated Gross Tonnage of a vessel
GT	28600	Gross Tonnage of a vessel
ce/el	29200	number of cells
thous. ceg	29830	thousand of conversion bricks of wall material
t 100%	33030	tonne of the product's conversion volume with 100% pure component content

Appendix 5. History of industrial production surveys up to 1990s.¹⁴

The beginnings of industrial statistics in Poland can be considered as the so-called lustrations of royal lands (royal estates) adopted by the Sejm in the years 1562-1664. The purpose of this was to estimate the income from these goods, which was important because 1/4 of this income went for the maintenance of a standing army. Inspectors registered all sources of state treasury income in towns and villages, including rents from houses and roles, customs revenues, as well as revenues from inns, mills, breweries, and fulling mills, and also from craft enterprises, i.e. activities that could be regarded as then industry equivalent. Lustrations were to be carried out every 5 years, but in practice they were carried out only twice in the 16th century, three times in the 17th century and twice again in the 18th century.

During the short existence of the Duchy of Warsaw, the census conducted in 1808 included questions concerning the production of selected industrial products – vodka and beer. The census was repeated in 1810 due to the enlargement of the territory (incorporation of the lands of the former Western Galicia). The next census was to be launched in 1812, but due to the fall of the Duchy it was not completed.

During the period of partitions, statistical survey on the Polish lands was carried out by statistical institutions of the partitioning countries. However, due to the weak industrialization of these lands and the generally low level of development of this type of statistical survey at that time, industrial statistics in the present sense of the term can be referred to only in the second half of the nineteenth century. In 1885 in London, a group of prominent European mathematicians and statisticians established the International Statistical Institute, which aimed to create and develop theoretical foundations for statistics and to promote uniform methods of survey and publication of statistical data in order to ensure their comparability, which also had an impact on the shaping of statistics in the partitioned Poland.

The worst situation in this respect was in the Russian partition. A separate statistical institution for the Kingdom of Poland, established and liquidated many times, never possessing sufficient resources and powers, could not do much. Data on particular governorates were collected annually within the framework of the so-called "obzors" – however, the data submitted to the Emperor by the governors in the field of industry were completely inconsistent and therefore of little use. The scope of surveyed units and data was different in particular governorates, e.g. craftsmen's workshops were included in industry in some governorates but not in others, and the classification of industrial plants in particular industries was quite arbitrary. The data collected were for administrative purposes only and were generally not published.

In the Prussian partition, as in the whole of Prussia, the statistical survey was carried out by the Royal-Prussian Statistical Office in Berlin, established in 1805. It continued the annual survey conducted since 1730, covering the most important Prussian cities. It recorded mainly the state of the population and income, but also included data on the production of selected products – beer, vodka, broadcloth, and later also other fabrics. With the development of industry, the scope of the products surveyed increased.

¹⁴ Gaziński R., Gut P. *Historische Büchlein i Geheime Finanz Bücher jako przykłady źródeł do dziejów społeczeństwa miejskiego na Pomorzu Pruskim w II połowie XVIII wieku*, *Przeszłość Demograficzna Polski* 36, 2014

Łazowska B. *Statystyka na ziemiach polskich pod panowaniem pruskim*, *Wiadomości Statystyczne* 5(684) 2018

Praca zbiorowa *Historia Polski w liczbach t.IV. Statystyka Polski* wyd. Głównego Urzędu Statystycznego, Warszawa 2017

Praca zbiorowa *Uprzemysłowienie ziem polskich w XIX i XX wieku* wyd. Polskiej Akademii Nauk Kraków 1970

Przykłady klasyfikacji towarowych w portalu eduteka.pl <http://www.eduteka.pl/doc/przyklady-klasyfikacji-towarowych>

In the Austrian Empire, the Statistisches Büro der Rechnungs-Kontrollbehörde (Statistisches Büro der Rechnungs-Kontrollbehörde – Accounting and Control Statistics Office) was established by Emperor Franz in 1829. Data collection was carried out by statistical offices at state offices. Censuses of population and livestock were the main surveys carried out. Censuses and industrial surveys were also conducted. As part of the administrative reform in 1867, connected with the establishment of the Austro-Hungarian monarchy, national statistical offices for individual provinces were established, including the National Statistical Office in Lviv in 1873, which dealt with Galician statistics. Industrial survey was carried out by the Department of Industry and Trade Statistics. The "Yearbook of Industry and Domestic Trade Statistics" published there dealt with a different issue each year (e.g. "Sugar Industry in Galicia", "History and Statistics in 1885", "Wood Industry in 1888", "Leather Industry in 1889"). In the Austrian partition there were also municipal statistical offices (from 1872 in Lviv, from 1882 in Krakow) dealing with local statistics.

In free Poland, the Statistics Poland, established by the Regency Council in July 1918, took over the statistical surveys. The subject matter of industry was the responsibility of the Department of Labor Statistics (later the Department of Labor and Industry Statistics) established on 1 January 1920. In October 1920, industrial plants were registered, and in 1923, together with the Ministry of Industry and Trade, a pilot questionnaire survey was conducted in 6500 plants, covering industrial production, consumption of raw materials, technical equipment and employment. Since 1927 GUS conducted independent industrial surveys. They covered establishments employing 5 and more persons, which submitted relevant annual reports (establishments employing 20 and more persons – monthly reports). Information was collected on employment, wages, working time and production, sales and stocks, by quantity and value of major industrial products. For the purposes of the survey, the first industrial classification was also established, with a division into mineral, metal, electrotechnical, chemical, textile, paper, leather, wood, food, clothing, construction and printing industries; it did not include mining of ores and coal, as well as metallurgy of iron, power plants, waterworks and match factories. This classification was later updated and expanded several times. In the version from 1937, it covered 13 branches of industry, 207 kinds of activity and 1,750 products.

During the German occupation, the Statistical Office of the General Government was established in the General Government on 1 October 1940 (its position in the administrative structure was later changed several times). Industrial matters were dealt with by the Department of Economic Statistics. On 15 October 1941, it carried out a census of the work establishments, including data on their production, type of activity, number of employees and equipment in machines and vehicles. Statistical surveys on the lands incorporated into the Third Reich was conducted in accordance with German rules. Their documentation and data collected at the headquarters in Berlin were destroyed in May 1945. The situation was similar in the Polish lands incorporated into the USSR, where statistical data were collected according to the general principles adopted in the USSR.

The Statistics Poland was reactivated in Warsaw on March 12, 1945. Its first and most urgent task was to estimate war losses and the general condition of the Polish economy. The first census of industrial establishments was prepared in July and carried out in September 1945. It included industrial and craft enterprises employing more than 5 workers. Data were collected on the location of the plant, its production, the degree of destruction of buildings, technical equipment, employment and the power of power generating equipment. In 1946, the classification of industrial products was introduced and, pursuant to a resolution of the Economic Committee of the Council of Ministers, a systematic study of industrial production began. Every month, data on the quantity and value of production of major industrial products, investments and equipment failures were collected and telegraphically transmitted. Starting from 1949, the yearbook "Industrial Statistics" was published.

At the beginning of the 1950s GUS was subordinated to the State Commission on Economic Planning and was obliged to conduct very detailed reporting, not only monthly, but also two-week, ten-day, and even daily, from enterprises, industrial complexes, central management boards and ministries. Due to the later confiscation of source data, there is a time gap in the resources of GUS. After 1956, new survey on the management of fuels and raw materials was introduced in the field of industry.

In the following years, in the surveys on industrial production in GUS, more and more computational devices, initially mechanical, then electronic, were used for data processing. The methods of data collection changed and the classification of products was modified periodically. In 1971, the Systematic Product List (SWW) was introduced in order to unify planning and statistical nomenclatures and the basis for accounting records of enterprises. It replaced the previously binding JWW (Single List of Products) and became a binding classification in industrial production survey. On the basis of the SWW, the nomenclature Industrial Products List (WWP) was prepared, containing the list of products covered by statistical reporting.

Appendix 6. Changes to the Methodological report Industrial production surveys

Year	No of chapter in the edition where the change is introduced	No of chapter in the new edition	Description of the change
2019	first edition of the Methodological report		
2023	Preface	Preface	Updating EU regulations being into force
	1	1	Supplementing information on the changes introduced since the previous edition of the Methodological report
	2.1	2.1	Adding definition of raw materials and information on expanding the range of units covered by the survey
	2.2	2.2	Adding information about the variable stocks of raw materials; updating information on the threshold above which production is considered as production under subcontracting from provided materials
	2.3.1	2.3.1	Adding information about variables in the European PRODCOM survey
	2.3.2	2.3.2	Table 1 and 2 – updating information on PRODPOL nomenclature
	2.4	2.4.1	Updating list of units obliged to participate in surveys
	-	2.4.2	Adding information about European survey PRODCOM
	3.4.1	3.4.1	Updating the base year currently used in short-term statistics (2021=100)
	3.5	3.5	Updating applicable EU regulations; adding information on calendar and seasonal adjustments
	4.3	4.3	Updating information on the content of released publications
	5.1	5.1	Updating applicable EU regulations
	5.4	5.4	Updating information on data transmitted to Eurostat and the UN; adding information on the European concept of kind-of-activity unit (KAU) used in European short-term statistics
	App. 3	App. 3	Information on including class 38.32 in the survey