

## Chapter 3 - Choice of Elementary Series

### 1- What is an Elementary Series?

Since it is impossible to monitor the production of all the products in a branch on a monthly basis, product groupings are defined in advance. These groupings are known as elementary series (or control series) and form the basis upon which the industrial production index is calculated and analysed.

Elementary series correspond to the aggregation of EMB products (“ProdEMB”; see Chapter 2). ProdEMBs are product codes corresponding to groups of detailed products tracked as part of the annual structural surveys (“ProdEAP” code from the EAP).

Ideally, the elementary series should consist of relatively homogeneous products and be representative of the branches covered. By design, unless an activity is not monitored, there will be at least one elementary series per NAF Rev. 2 subclass (5-digit level of the classification).

### 2- Distribution and Main Characteristics of the Elementary Series with Base Year 2015

#### 2.1- A Little Over 500 Elementary Series

Currently, 530 elementary series are used to monitor 232 items of the NAF 700 (58 industry items are not tracked by a series; see below). The number of elementary series is identical to that of the 2010 base<sup>20</sup> although marginal changes are expected from 2019 with the introduction of the annual re-basing process, which will result in the boundaries of series being revised at a rate of up to a fifth each year (see below).

The number of elementary series per NAF subclass varies widely. In cases where the range of products is very broad, a subclass is generally represented by several elementary series (the chemical industry being one example). Conversely, some items in the NAF 700 can be more easily monitored using a single series.

The number of elementary series per NAF also depends on the choice of monitoring variables; within a series, all products (ProdEMB) must be monitored based on a single variable (e. g. quantity in kg) so that the individual data collected for the series can be summed up. By opting for monitoring based on invoicing, the number of elementary series can be reduced since it is then easy to sum them up.

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<sup>20</sup>The transition to the 2015 base in March 2018 was accompanied by a number of methodological improvements (such as the shift to chained indices with annually updated weights) but did not initially lead to changes in the boundaries of series. This is the purpose of the annual re-basing process launched in conjunction with the 2015 base year, the first wave of which will end in January 2019.

*Table 1: Number of Elementary Series by Major NAF Item*

	<b>Number of Elementary Series</b>
C1 Manufacture of food products, beverages and tobacco	103
C2 Manufacture of coke and refined petroleum products	1
C3 Electrical and electronic equipment	75
C4 Transport equipment	21
C5 Other manufactured goods	306
DE Mining and quarrying, energy, water	21
FZ Construction	3
<b>Total</b>	<b>530</b>

## **2.2- Branches Not Monitored in the IPI**

Some branches are not monitored with the 2015 base year either because of specific difficulties or because of their limited significance (or non-significance in the case of some NAF items). For example, the mining of coal and lignite, the mining of metal ores and mining support service activities are not monitored since they account for a very small proportion of French industrial activity (see Table 2).

Other branches within the craft sector (most businesses of which have fewer than 20 employees; see Chapter 2 for details of the inclusion criteria), such as “bakery and bakery confectionery” and “confectionery”, are not covered.

Neither the nuclear industry nor the manufacture of military fighting vehicles are included in the IPI. In other manufacturing industries, jewellery, the manufacture of musical instruments, sporting goods and toys are not covered, although their status will be reviewed in the coming years.

In the electricity, gas, steam and air conditioning supply branch, there is no series on the manufacture of gas on account of its small size. Steam and air conditioning supply is not monitored, there being no requirement to do so under the European regulation. The same applies to some branches falling under Section E (“water, sewerage”).

In total, non-monitored branches represent less than 10% of the value added of industry as a whole (sections B to E; see Table 2). Some of the activities that are not currently monitored are due to be introduced in the coming years as part of the annual re-basing process (see below), particularly if they are significant or if survey data have already been collected (in anticipation of future inclusion) since the last base change. Thus, three branches that were not previously monitored were already incorporated into the IPI in the March 2019 publication. These are: “10.71A - Manufacture of bread; manufacture of fresh pastry goods and cakes”, “18.13Z - Pre-press and pre-media services” and “17.29Z - Manufacture of other articles of paper and paperboard”. Other branches may be introduced in 2020, such as the “manufacture of jewellery and related articles” and the “manufacture of other products of wood”.

**Table 2: List of Industry Subclasses Not Tracked in the IPI with Base 2015 (Following the Implementation of the First Wave of Annual Re-Basing in March 2019)**

<b>NAF Codes</b>	<b>Branch Name</b>	<b>Estimated weight in Industrial VA in 2016 (in %)</b>
05.10Z	Mining of coal	0.00
05.20Z	Mining of lignite	0.00
07.10Z	Mining of iron ores	0.00
07.21Z	Mining of uranium and thorium ores	0.00
07.29Z	Mining of other non-ferrous metal ores	0.01
08.91Z	Mining of chemical and fertiliser minerals	0.01
08.92Z	Extraction of peat	0.00
09.10Z	Support activities for petroleum and natural gas extraction	0.02
09.90Z	Support activities for other mining and quarrying	0.00
10.13B	Meat products	0.13
10.71B	Baking of bakery products	0.39
10.71C	Bakery and bakery confectionery	1.64
10.71D	Confectionery	0.26
10.84Z	Manufacture of condiments and seasonings	0.12
11.02B	Wine-making	0.37
11.03Z	Manufacture of cider and other fruit wines	0.01
11.04Z	Manufacture of other non-distilled fermented beverages	0.00
13.94Z	Manufacture of cordage, rope, twine and netting	0.01
14.11Z	Manufacture of leather clothes	0.01
14.20Z	Manufacture of articles of fur	0.01
16.10A	Sawmilling and planing of wood, excluding impregnation	0.32
16.10B	Impregnation of wood	0.04
16.22Z	Manufacture of assembled parquet floors	0.01
16.29Z	Manufacture of other products of wood	0.07
18.11Z	Printing of newspapers	0.03
18.14Z	Binding and related services	0.05
18.20Z	Reproduction of recorded media	0.01
19.10Z	Manufacture of coke oven products	0.00
20.13A	Enrichment and reprocessing of nuclear fuel	0.18
23.43Z	Manufacture of ceramic insulators and insulating fittings	0.00
23.44Z	Manufacture of other technical ceramic products	0.02
23.49Z	Manufacture of other ceramic products	0.00
23.52Z	Manufacture of lime and plaster	0.05
23.64Z	Manufacture of mortars	0.07
23.65Z	Manufacture of fibre cement	0.01
23.69Z	Manufacture of other articles of concrete, plaster and cement	0.03
23.70Z	Cutting, shaping and finishing of stone	0.11
24.41Z	Precious metals production	0.01
24.46Z	Processing of nuclear fuel	0.03
26.80Z	Manufacture of magnetic and optical media	0.00
28.24Z	Manufacture of power-driven hand tools	0.01
28.49Z	Manufacture of other machine tools	0.03
30.40Z	Manufacture of military fighting vehicles	0.00
30.99Z	Manufacture of other transport equipment n.e.c.	0.01
32.11Z	Striking of coins	0.00
32.12Z	Manufacture of jewellery and related articles	0.20
32.13Z	Manufacture of imitation jewellery and related articles	0.05

32.20Z	Manufacture of musical instruments	0.03
32.30Z	Manufacture of sports goods	0.10
32.40Z	Manufacture of games and toys	0.05
32.91Z	Manufacture of brooms and brushes	0.02
33.17Z	Repair and maintenance of other transport equipment	0.07
33.19Z	Repair of other equipment	0.05
35.21Z	Manufacture of gas	0.00
35.30Z	Steam and air conditioning supply	0.46
37.00Z	Water collection, treatment and supply	1.71
38.11Z	Collection of non-hazardous waste	0.41
38.12Z	Collection of hazardous waste	0.08
38.21Z	Treatment and disposal of non-hazardous waste	0.38
38.22Z	Treatment and disposal of hazardous waste	0.16
38.31Z	Dismantling of wrecks	0.03
38.32Z	Recovery of sorted materials	0.94
39.00Z	Remediation activities and other waste management services	0.19

### **2.3- The Quality of Subclass Monitoring per NAF Subclass**

Even if some activities are not monitored, the scope of the elementary series tracked ensures that most of the subclasses of the activity classification are covered. Within the subclasses monitored, however, not all the products manufactured (and identified using the list of ProdEAPs included in the subclass) are surveyed. Reasons may include a low cost/benefit ratio (i.e. cost of monitoring versus gain in accuracy) for the IPI, difficulties in retrieving information on the manufacture of a product on a monthly basis or if the product accounts for a limited volume of output in the subclass.

It is then possible to calculate coverage rates for each branch tracked by the IPI to reflect the representativeness of the index branch by branch based on data from the annual production survey, which, by design, covers all products manufactured within a branch. Coverage rates vary according to the branch considered. However, more than 80% of the branches monitored in industry have a coverage rate of more than 75% (see Table 3a), allowing for accurate estimates of changes in activity. The coverage rate increased significantly with the implementation of the first wave of the annual index review process in March 2019 (see below), as illustrated by the difference with the situation that had prevailed until then (see Table 3b for the coverage rates before the implementation of these changes). Finally, construction activities are well covered.

These coverage rates play no role in the calculation of aggregated indices<sup>21</sup>. Within a given branch, the process of selecting products is intended to identify products that are representative of other activities in this branch. The underlying assumption is to consider that the uncovered portion of the products is negligible or changes in a similar manner.

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<sup>21</sup>They have sometimes played a role in the past. To calculate the aggregated indices, VA adjusted by the coverage rate rather than the total VA of the branches monitored was used.

**Table 3a: Distribution of Branches (NAF Subclass Level) Based on Current Coverage Level (Excluding Construction)**

Coverage Rate	Number of Branches (Subclasses)	Weight of Branches in Industrial VA (%)
> 90%	149	56.8
75% to 90%	38	21.0
50 to 75%	27	8.5
25 to 50%	10	4.1
Less than 25%	4	0.5
NAFs not monitored or with no output in France	63	9.0
<b>Total</b>	<b>291</b>	<b>100.0</b>

**Table 3b: Distribution of Branches (NAF Subclass Level) based on Coverage Level Before the Introduction of the First Wave of Annual Re-Basing in March 2019 (Excluding Construction)**

Coverage rate	Number of Branches (Subclasses)	Weight of Branches in Industrial VA (%)
> 90%	139	53.8
75% to 90%	36	17.8
50% to 75%	34	12.2
25% to 50%	11	4.8
Less than 25%	5	0.9
NAFs not monitored or with no output in France	66	10.5
<b>Total</b>	<b>291</b>	<b>100.0</b>

### 3- Updating the Products Surveyed and the Monitoring Method

As explained above, because of structural changes in industry, the list of activities tracked needs to be updated at regular intervals to ensure the IPI accurately represents French industrial output. Other factors may result in revisions being made to the tracked series and the method of collection. Examples include a retrospective statistical analysis showing responses of medium quality and new recommendations issued by international bodies. Previously, a review of the relevance of the series monitored was carried out every 5 years at the time of the base change (base years 2005, 2010, etc.). No such review took place at the time of the transition to base year 2015 but will now be conducted on an ongoing basis as part of the annual re-basing process.

#### 3.1- Major Guidelines

The UN's recommendations relating to indices of industrial production focus on elementary series and the choice of production indicators to be used. It is on the basis of these recommendations that work on the re-basing of the IPI using 2010 as the base year was undertaken. In particular, the UN often recommends (for a well-identified list of products) monitoring in invoicing terms to better incorporate changes in product quality into the measurement of production. One of the first issues in examining series therefore relates to the choice of monitoring variable.

A second issue is the choice of products to be monitored (within a branch in order to provide a satisfactory estimate of the output of that branch) and the revision of the boundaries of the elementary series, i.e. the list of products forming it (ProdEMB). Given current developments in French industrial activity, products may disappear, their economic significance may decrease considerably or they may no longer be manufactured in France. In such cases, it may be appropriate to remove certain monitored products (for example, if the cost seems too high in relation to the expected gain in accuracy of the IPI) or to group series together. These changes generally lead to a decrease in the branch's coverage rate. To offset the drop in coverage, it is often necessary to introduce new products that have become more important. By way of anticipating these developments, some

products may be surveyed even if they are not yet included in the IPI (the term used is “future IPIs”), waiting for the time series to be long enough.

A third issue concerns the correction of any existing distortions in the boundaries of the elementary series, which may result from changes in classifications or, more rarely, from changes to product classifications. For example, these appear when a product tracked in a given IPI series is classified in a new branch. Though initially intended to track a set of products belonging to the same branch, the IPI series in question continues to be made up of the same products, but after the nomenclature is revised (such as the revision that took place in 2008), they correspond to different NAF codes. At the time of re-basing, any series subject to distortion are corrected to restore the overall consistency between the branch that the series represents and the classification of the products that make it up.

### **3.2- Example of Product Review at the Time of the 2010 Re-Basing**

Apart from the reasons already mentioned, the 2010 base change was an opportunity to optimise the sample of elementary series and to rebalance the number of series by NAF code. Ideally, the number of elementary series in each branch should be roughly proportional to its weight, unless the branch has a particularly homogeneous production (in which case a single product may be sufficient) or a particularly heterogeneous production (i.e. many sub-branches with very specific production or price trends).

To meet the recommendation to develop indicators in terms of deflated values, it is necessary to have series of industrial producer price indices (PPI) defined along the same lines as the IPI series. To ensure convergence between the IPI and PPI series, it was sometimes necessary to change the boundaries of the IPI series.

In the 2005 base, 592 elementary series were used to monitor production in industry, construction and waste treatment. In the 2010 base, the number of series was reduced to 520 (see Table 4) while representing, as in the 2005 base, around 80% of total value added.

In food and agriculture, new series were introduced to improve the coverage of the IPI. A new branch was added: Processing and preserving of fish, crustaceans and molluscs (1020Z). The processing and preserving of potatoes (1031Z) and the distilling, rectifying and blending of spirits are better monitored in the 2010 base as a result of the addition of 3 new series in each of the two branches.

**Table 4: Breakdown of the Decrease in the Number of Elementary Series between the 2005 and 2010 Bases**

Number of series with base year 2005	592
+ Series newly introduced in 2010	+ 21
– Series discontinued in 2010	– 44
– Series from a grouping (87 series in 2005 grouped into 34 series in 2010)	– 53
+ Series arising from a splitting (4 series in 2005 split into 8 series in 2010)	+ 4
= Number of series with base year 2010 (including construction)	520

Since the French textile and clothing industry has decreased significantly in terms of output, the number of elementary series within the branch has been adjusted and reduced. The number of series in the chemical industry has decreased significantly (from 60 to 37) as a result of the removal of many series relating to the manufacture of basic chemicals, fertilisers and nitrogen compounds, basic plastics and synthetic rubber in primary forms, many of which accounted for very little of the branch’s value added. The number of series was also reduced in the other branches relating to the manufacture of chemicals, the manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations and the manufacture of other chemical products.

In the electricity, gas, steam and air conditioning supply branch, a series on the transport of electricity was introduced in the 2010 base with the use of data on high voltage. Data on medium and low voltage feed into the trade and supply series.

Lastly, the 2010 re-basing was an opportunity to reduce the distortions that had become apparent with the previous base, particularly following the revision of the classification of activities in 2008<sup>22</sup>. In total, not all elementary series were reviewed in depth as part of the 2010 five-year re-basing. A number of lower priority branches were not assessed. Similarly, the series relating to branches surveyed by approved professional bodies (OPAs) generally underwent no changes. The introduction of annual re-basing is intended to improve this process over the long term.

### **3.3- Introduction of an Annual Series Review Process**

#### **3.3.1-Principle**

Under base year 2015, the industrial branches monitored by the IPI are reviewed at a rate of one fifth of the series each year. The annual update process helps to improve responsiveness and to better adapt the monitoring of the branches to economic or technical developments. It also ensures that all industrial activities are reviewed over a 5-year period, something that was not always possible under the five-year re-basing approach since examining all branches at once would have represented too great a burden. The rate at which series are revised may be adjusted, as the case may be, to take better account of differentiated changes in the production processes of different branches: while the gap between two reviews for the same series will be 5 years on average, it may be shortened in some cases.

Given the different processes involved in review operations, work on each review wave begins approximately 20 months before the actual implementation: for example, for the implementation in March 2019 of the first wave (dissemination of the January 2019 indices), the initial exploratory work (choice of field in particular) began in June 2017. The main objectives pursued, allowing a selection of the branches to be re-based, and the operations to be carried out are as follows:

- to maximise the coverage of the IPI (value-added share of monitored products in relation to the total value added of the branch);
- to improve the relevance of the set of elementary series used to calculate the IPI: the point is to redefine, within each re-based branch, a set of series adapted to the monitoring of the economic situation of that branch; it may also be desirable to modify the method used to measure production by taking into account, as far as possible, the United Nations recommendations applicable to the branch in question;
- to introduce new industrial products into the monthly surveys (or products not previously monitored on a monthly basis) that can be incorporated in a subsequent re-basing into the calculation of the IPI (once there is sufficient perspective on the data);
- to remove any distortions.

#### **3.3.2-The First Wave (2019) of Annual Re-Basing**

The first wave conducted between mid-2017 and the end of 2018 involved a revision of 44 NAF subclasses (see Table 5 for the exhaustive list), corresponding to approximately 19% of the 2015 value added of industry. Overall, these branches were covered by the IPI up to a rate of initially 55%, compared to 75% at

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<sup>22</sup>The corrections of distortions made as part of the 2010 re-basing concerned the following branches:

- manufacture of arms and ammunition;
- manufacture of air and spacecraft and related machinery, manufacture of electronic components;
- manufacture of loaded electronic boards;
- manufacture of other electronic and electric wires and cables;
- manufacture of electrical installations, manufacture of scientific and technical instruments;
- manufacture of other general-purpose machinery;
- printing machinery, manufacture of electric lighting equipment;
- manufacture of electrical and electronic equipment for motor vehicles;
- manufacture of other parts and accessories for motor vehicles, manufacture of non-domestic cooling and ventilation equipment;
- manufacture of other general-purpose machinery, manufacture of medical, surgical and dental equipment.

the end of the review process. During this first wave, nearly 38% of the portion of industry not covered by the IPI was addressed. The overall coverage of industry by the IPI thus rose from 77% of the 2015 VA to more than 80%.

As part of this first wave, 3 branches were included in the IPI monitoring: 1071A - “Manufacture of bread; manufacture of fresh pastry goods and cakes”; 1813Z - “Pre-press and pre-media services”; and 1729Z - “Manufacture of other articles of paper and paperboard”. These branches were backcast to provide sufficient perspective and are available since 2015 in the data published on the INSEE website. Two other branches were included within the field of the monthly branch surveys (EMBs) from 2019, without being included in the IPI. These are: branch 2364Z - “Manufacture of mortars” and branch 3317Z - “Repair and maintenance of other transport equipment”. They will be taken into account in the calculation of the IPI at the time of a subsequent review wave after several years of surveys providing sufficient perspective on the quality of the data.

In total, this first stage resulted in nearly 100 elementary series being reviewed. The total number of elementary series has changed little despite significant developments, in particular as a result of the incorporation of activities that were monitored without, however, being taken into account in IPI calculations, with a view to future incorporation in order to improve the coverage of the indices (see Table 5).

***Table 5: Breakdown of Changes in the Number of Elementary Series with the Implementation of the First Wave of the Annual Re-Basing Process (Implemented in March 2019)***

Number of series with base year 2010	520
+ Series newly introduced in 2016	+ 20
- Series discontinued in 2016	- 2
- Series from a grouping (25 series grouped into 16 series)	- 13
- Series from a splitting (13 series split into 18 series)	+ 5
Total (including construction)	530

Beyond the changes made to the scope applied and method used to monitor the series, the implementation of re-basing requires a major backcasting of the series, the link-up between the old and the new boundaries being a sensitive operation for obtaining series of the highest possible quality. In particular, where possible, it can be useful to introduce the new boundaries over a sufficient temporal depth (in cases where the redefined products were already being monitored in parallel)<sup>23</sup>. However, this may lead to significant revisions to the revised years. These revisions may be deemed acceptable if the revision of the series allows a significant improvement in the quality of monitoring of the branch.

The implementation of chained indices since the 2015 base (see following chapters) makes it easier to link old and new product boundaries: the switch from the old to the new monitoring method can be managed directly using the weights applied to these series (the weight of the old boundary changing to zero at the time of the switchover).

***Table 5: List of NAF Subclasses Reviewed as Part of the First Wave of the New Annual Re-Basing Process (Implemented in March 2019)***

NAF Code	Name of Branch
1020Z	Processing and preserving of fish, crustaceans and molluscs
1031Z	Processing and preserving of potatoes
1032Z	Manufacture of fruit and vegetable juice

<sup>23</sup>A number of products have been surveyed since the 2010 base year but are not yet included in the IPI (sufficient perspective being required). Therefore, when incorporating these products into a review wave, it is possible to produce long series since the year of their creation.



1039A	Other processing and preserving of fruit and vegetables
1071A	Industrial manufacture of bread; manufacture of fresh pastry goods and cakes
1071B	Baking of bakery products
1071C	Bakery and bakery confectionery
1071D	Confectionery
1072Z	Manufacture of rusks and biscuits; manufacture of preserved pastry goods and cakes
1073Z	Manufacture of macaroni, noodles, couscous and similar farinaceous products
1085Z	Manufacture of prepared meals and dishes
1101Z	Distilling, rectifying and blending of spirits
1102A	Manufacture of sparkling wines
1102B	Wine-making
1103Z	Manufacture of cider and other fruit wines
1104Z	Manufacture of other non-distilled fermented beverages
1105Z	Manufacture of beer
1106Z	Manufacture of malt
1107A	Production of mineral water
1107B	Production of soft drinks
1623Z	Manufacture of other builders' carpentry and joinery
1729Z	Manufacture of other articles of paper and paperboard
1813Z	Pre-press and pre-media services
2013A	Enrichment and reprocessing of nuclear fuel
2059Z	Manufacture of other chemical products n.e.c.
2110Z	Manufacture of basic pharmaceutical products
2229A	Manufacture of plastic-based technical parts
2319Z	Manufacture and processing of other glass, including technical glassware
2364Z	Manufacture of mortars
2399Z	Manufacture of other non-metallic mineral products n.e.c.
2410Z	Manufacture of basic iron and steel and of ferro-alloys
2432Z	Cold rolling of narrow strip
2752Z	Manufacture of non-electric domestic appliances
2841Z	Manufacture of machine-tools for metal work
2849Z	Manufacture of other machine tools
2899B	Manufacture of other special purpose machinery
2920Z	Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers
2932Z	Manufacture of other parts and accessories for motor vehicles
3311Z	Repair of fabricated metal products
3312Z	Repair of machinery
3316Z	Repair and maintenance of aircraft and spacecraft
3317Z	Repair and maintenance of other transport equipment
3320A	Installation of metallic, boiler structures and pipes
3320D	Installation of electrical equipment, electronic and optical equipment or other equipment

### 3.3.3-The Second Wave (2020) of Annual Re-Basing

Work associated with the second wave of the annual product review began in the summer of 2018 with the definition of the branches to be examined (see Table 6). As in the previous wave, this should result in the coverage of the IPI being significantly improved, even if work is still ongoing. Implementation is scheduled for March 2020. In particular, new branches may be introduced, such as the “Manufacture of other products of wood” (1629Z) and the “Manufacture of jewellery and related articles” (3212Z).

*Table 6: List of NAF Subclasses Reviewed as part of the Second Wave of the New Annual Re-Basing Process (Implemented in March 2020)*

NAF Code	Name of Branch
1012Z	Processing and preserving of poultry meat
1013A	Industrial production of meat products
1013B	Cooked meats production and trade
1051A	Manufacture of liquid milk and of fresh dairy products
1051B	Manufacture of butter
1051C	Manufacture of cheese
1051D	Manufacture of other dairy products
1061A	Flour milling
1061B	Other manufacture of grain mill products
1081Z	Manufacture of sugar
1082Z	Manufacture of cocoa, chocolate and sugar confectionery
1083Z	Processing of tea and coffee
1086Z	Manufacture of homogenised food preparations and dietetic food
1089Z	Manufacture of other food products n.e.c.
1512Z	Manufacture of luggage, handbags and the like, saddlery and harness
1629Z	Manufacture of other products of wood: manufacture of articles of cork, straw and plaiting materials
2014Z	Manufacture of other organic basic chemicals
2016Z	Manufacture of plastics in primary forms
2030Z	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
2120Z	Manufacture of pharmaceutical preparations
2211Z	Manufacture of rubber tyres and tubes: retreading and rebuilding of rubber tyres
2223Z	Manufacture of builders' ware of plastic
2361Z	Manufacture of concrete products for construction purposes
2442Z	Aluminium production
2443Z	Lead, zinc and tin production
2444Z	Copper production
2445Z	Other non-ferrous metal production
2562B	Industrial mechanical engineering
2599B	Manufacture of other fabricated metal articles
2651B	Manufacture of scientific and technical instruments
2652Z	Manufacture of watches and clocks
2670Z	Manufacture of optical instruments and photographic equipment
2740Z	Manufacture of electric lighting equipment
2813Z	Manufacture of other pumps and compressors
2822Z	Manufacture of lifting and handling equipment
2825Z	Manufacture of non-domestic cooling and ventilation equipment
2830Z	Manufacture of agricultural and forestry machinery
3109B	Manufacture of other furniture and industry closely related to furnishing
3212Z	Manufacture of jewellery and related articles
3213Z	Manufacture of imitation jewellery and related articles
3299Z	Other manufacturing n.e.c.
3313Z	Repair of electronic and optical equipment
3314Z	Repair of electrical equipment
3320B	Installation of machinery and mechanical equipment
3700Z	Sewerage