







#### 1. General characteristics of the Polish chemical market

The Polish chemical industry is basically divided into three production segments:

The chemical industry is one of the most automated sectors. It requires much more investment than most other sectors. The chemical industry also requires highly-qualified personnel including scientists and engineers. The number of staff is not as important in this sector as their qualifications and know-how. Chemical production is focused on semi-processed products which are then used in other industrial sectors. One of the biggest issues that this sector faces is its negative external effect on the environment, as it produces tons of aggressive and dangerous wastes and pollutants.

#### 2. Sold production of chemical industry in Poland

The total value of sold production of Polish industry in 2005 was PLN 715,558 million, of which 10.84% came from the chemical sector. The sold production of chemicals in 2005 grew by 5% in comparison with 2004.

#### 3. Polish chemical industry's position on the EU market

#### 4. Chemical production in Europe

The chemical industry in Europe is one of the most important sectors of the economy. Production of basic chemicals is dominant in the sector, followed by production of plastic goods, and the last main sub-sector is the pharmaceutical industry. The European Union is the biggest chemical goods producer in the world, followed by the United States and Japan, which results from the high volume of chemical production in such European Union countries as Germany, France, Italy and the United Kingdom. Those countries combined contribute as much as 67% of the total EU chemical production in volume.

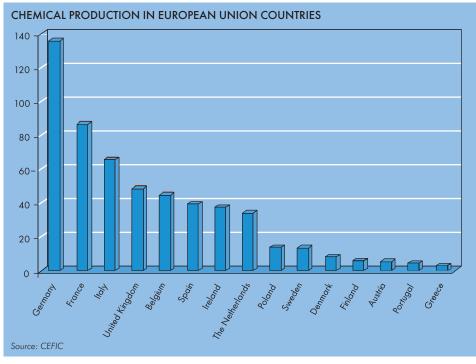
In total there are about 36,000 chemical businesses registered in Europe, most of which are small and medium-sized companies employing fewer than 250 people.

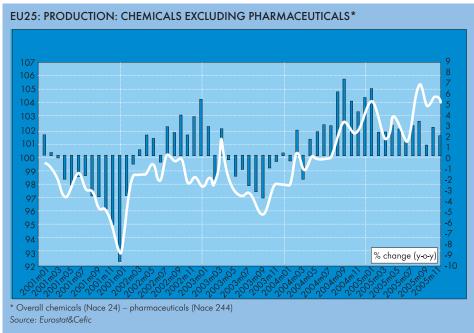
2005 witnessed an increase in chemical production in EU countries by 1.8% in comparison with 2004. This resulted from the growth in production of basic chemicals (petrochemicals and inorganics). However, a significant decrease was noted in the specialty and fine chemicals sector (fall of 1.2% in 2005 in comparison with 2004) due to lower global demand, fiercer competition and higher manufacturing costs resulting from exceptionally high oil prices and energy costs.

Large-tonnage chemistry	Low-tonnage chemistry	Chemical processing
Petrochemical industry	Pharmaceutical industry	Rubber industry
Soda industry	Cosmetics industry	Plastic goods processing
Sulphuric acid industry	Supportive agents industry	industry
Fertilizers industry		Paints and varnishes
Artificial fibres industry		industry

#### SOLD PRODUCTION OF POLISH CHEMICAL INDUSTRY (MILLION PLN)

	2001	2002	2003	2004	2005
Industry overall	513,218.00	527,907.90	564,622.00	678,521.00	715,558.00
Production of chemical goods	29,286.80	31,299.10	35,584.00	40,989.00	43,062.00
Production of rubber and plastic goods	20,848.90	23,149.00	27,295.00	31,625.00	34,538.00





#### General characteristics of Poland's chemical sector

The Polish chemical sector is divided into two main sub-sectors (see the table on the right):

In Poland there were 1,615 companies registered in the chemical industry in 2004, which is 49 companies more than were listed in 2003. Moreover, the number of employees in the sector rose from 181,810 in 2003 to 189,368 in 2004.

Sold production of chemical goods in value in 2004 grew by 15.5% in comparison with 2003, to PLN 72,641 million. The highest growth was noted in the production of pesticides, paints and varnishes, rubber goods (especially tires) and caustic soda. On the other hand there was a slight decrease in ethylene, propylene, polypropylene and caprolactam production.

Export of chemical goods in 2004 was USD 7,542.6 million, and imports were USD 15,385.8 million. This negative trade balance highlights the need for further investment in this sector.

#### Share of the chemical industry in overall industrial production in Poland in 2005

Value of sold chemical production increased by 6.8% in 2005 compared to 2004. Total chemical production was PLN 77,600 million, which constituted 10.8% of overall industry production in 2005.

### 7. Profile of Polish and European chemical industry

The Polish chemical industry is at a significantly lower level of development than its counterparts in other EU countries. Poland is trying to improve both production technology and management in the chemical industry sector, however. By participating in UNECE legislative works, Poland is striving to implement EU directives in chemical goods production, and to implement quality management systems in chemical production businesses.

#### 8. Chemical production in Poland

The graph below presents production of selected chemical goods in Poland in 2005. The predominant segment of production is paints and varnishes.

## 9. Production of principal types of chemical goods (thousand tonnes)

The highest increase of production was noted in the mineral and chemical fertilizer segment. On the other hand, the production of polyethylene and polypropylene faced a slight decrease in volume. The growth of production of other chemicals, however, contributed to the increase in overall chemical goods production (see the table on the page 3).

#### 10. Producers of chemical goods in Poland

According to a Ministry of Economy report, 1,615 companies were registered in the chemical production sector in 2004. There were 511 companies operating in the chemical goods production and 1,104 in rubber and plastic goods production.

Poland 2005, Industry report (Raport o stanie przemysłu),
Ministry of Economy (former Ministry of Economy and Labour).

#### I. Production of chemical goods

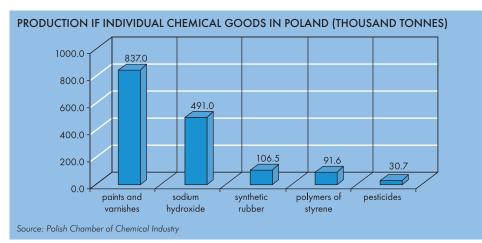
- Basic chemicals (organic and inorganic semi-finished products, plastic goods, fertilizers, rubber, pigments, technical gas)
- Pesticides and other agricultural chemical agents
- Paints and varnishes
- Pharmaceutical goods
- Consumer chemical goods
- Explosive materials, glues, gelatine, photo chemicals
- Artificial fibres (chemical)

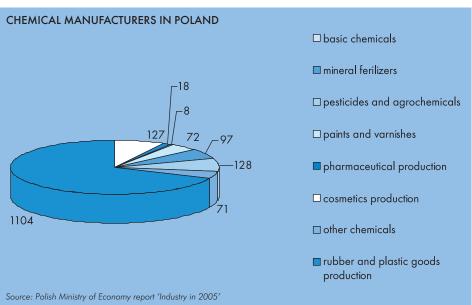
# II. Production of rubber and plastic goods

- Rubber goods
- Plastic goods (manufacturing)

#### CHEMICAL PRODUCTION IN POLAND

		2000	2001	2002	2003	2004	2005
Industry ov	verall	488,800.8	500,780.7	527,907.9	564,622.0	678,521.0	<i>7</i> 15,588.0
Chemical production	1	47,140.3	50,135.7	54,448.1	62,879.0	72,641.0	77,600.0



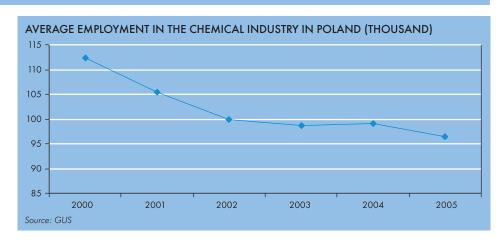


Name of the product	2002	2003	2004	2005
Sodium hydroxide (caustic soda) in terms of 96%	395.0	386.0	452.0	491.0
Soda ash in terms of 96%	1,904.0	1,133.0	1,191.0	1,212.0
Batudiene	51.4	44.1	46.0	40.9
Toluene	102.0	94.0	86.2	89.9
Phenol	50.7	52.5	53.0	43.5
6-heksaonolaktam (epsilon-caprolaktan)	153.0	152.0	149.0	160.0
Technical nitric acid in terms of 100%	1,687.0	1,028.0	2,117.0	2,245.0
synthetic gaseous ammonia in terms of pure ingredient	893.0	1,083.0	1,090.0	2,519.0
Synthetic ammonia (condensed) in terms of pure ingredient	718.0	1,237.0	1,319.0	160.0
Mineral and chemical fertilizers in terms of pure ingredient	2,076.0	2,399.0	2,545.0	2,607.0
Polyethylene	168.0	157.0	150.0	152.0
Polymers of styrene, ind.	86.4	80.5	96.3	91.6
Expandable polystyrene	53.3	58.9	57.6	59.3
Polyvinyl chloride not mixed	248.0	256.0	268.0	215.0
Polypropylene	143.0	143.0	138.0	148.0
Synthetic rubber	84.1	88.8	106.6	106.5
Pesticides	21.5	22.6	30.7	30.7
Paints, varnishes and similar coating materials, printing inks and off-the shelf siccatives	800.0	748.0	979.0	837.0
Soaps and surfactants	43.1	47.1	50.6	51.4
Synthetic chemical fibres	96.0	97.9	102.0	98.7

Source: Polish Chamber of Chemical Industry

#### 11. Employment in the chemical industry

In 2005 average employment in the chemical industry fell by 3% from 2004. During the last five years, employment in this sector has fallen steadily, except for a small increase in 2004. This is the result of automation and introduction of other technological solutions into chemical production processes.



#### 12. Labour productivity, salary

Labour productivity in the chemical sector is growing steadily, with a 13.5% increase in 2004 in comparison to 2003 and a slight drop by 0.08% in 2005. The average monthly gross salary in the chemical industry in 2005 was PLN 3,386 in production of chemical products, which was nearly PLN 130 more than in 2004, and PLN 2,310 in production of plastic and rubber goods.

### LABOUR PRODUCTIVITY IN THE CHEMICAL INDUSTRY (THOUSAND PLN PER PERSON)

Labour productivity	Year							
Labour productivity	2001	2002	2003	2004	2005			
manufacturing industry	183.0	191.8	221.2	269.4	N/A			
chemical industry	230.3	251.4	293.8	333.4	333.13			

Source: Polish Chamber of Chemical Industry

#### AVERAGE MONTHLY GROSS SALARY IN CHEMICAL INDUSTRY (PLN)

Type of production	Average g	ross salary
	2004	2005
Production of chemical products:	3,256.32	3,386.0
- basic chemicals	2,006.07	3,263.0
- pesticides and agrochemicals	3,139.59	3,213.0
- paints and varnishes	3,548.08	3,409.0
- pharmaceuticals	4,153.88	4,232.0
- detergents and cleaners, cosmetic and toiletries	3,285.04	3,393.0
- other chemical products	2,005.61	2,040.0
- chemical fibres	1,920.54	2,092.0
Production of rubber and plastic goods:	2,246.17	2,310.0
- rubber products	2,697.47	2,771.0
- plastic products	2,144.71	2,189.0
Source: GUS, Polish Chamber of Chemical Industry		

#### 13. Environmental protection in the chemical industry

The chemical industry is commonly considered to be one of the most damaging sectors for the environment. Chemical companies, however, are making efforts to introduce modern and environment-friendly solutions in order to protect the environment, and are allocating substantial funds to diagnosis and research which will result in a decrease of pollutants and wastes.

According to national statistics, 992 companies were listed as the most harmful for the environment, only 69 of which operated in chemical goods production and 32 in rubber and plastic goods production. Many more companies having a nega-

#### AIR POLLUTION BY TYPE

	air pollution emission in thousand tonnes				
	dust	gas			
Industry overall	119.3	212,656.7			
Production of chemical goods	6.2	7,904.8			

tive influence on the environment belonged to the groceries production sector (243), production of machinery and equipment (96), and production of metallic raw materials (128).

The scale of the influence of the chemical industry on the natural environment can be assessed by such indicators as air pollution, water consumption, and volume of wastewater disposal. These indicators in the chemical goods production sector for 2004 are listed in the tables below.

#### WATER CONSUMPTION IN CHEMICAL INDUSTRY

	water revenue (hm³)				water expenditure		
	total	own water into		take	total	of which production	
	loidi	total	surface	underground	ioidi	total	of which from water pipe
Industry overall	7,874.5	7,750.2	7,476.5	184.8	7,727.5	7,647.7	37.0
Production of chemical goods	344.1	335.4	320.0	15.4	312.6	307.0	1.3

#### LIQUID INDUSTRIAL WASTES

Total carried off					Of which clearing required					
	Direc		Directly into water			Filtered				
	total	total	of which cooling waters	Into municipal sewerage	total	total	mechanically	chemically	biologically	infiltrated
Industry overall	7,686.0	7,775.8	6,982.6	110.3	793.2	747.9	510.2	100.2	127.3	45.3
Production of chemical goods	295.3	277.5	190.4	17.8	87.1	85.4	30.1	42.0	10.2	1.7
Source: GUS										

#### 14. Foreign trade

Export and import of chemical products both grew in 2004. Polish exports were PLN 2,525.9 million higher, and imports PLN 2,725.7 million higher, than in 2003. This was the result of an insufficient level of chemical production in the home market in comparison to demand.

The majority of Poland's chemical production was exported to European Union countries, which accounted for 67% of the total value of chemical exports in 2004. The EU predominates also in imports. Imports of chemical goods from EU countries in 2004 were 79% of the total value of imported chemical goods.

#### 15. Accession to the EU and regulations relevant for the chemical sector

The most important EU regulations concerning the chemical sector include:

- Directive 96/61/EC on integrated prevention and pollution control (IPPC),
- Directive 85/337/ EEC on the assessment of the effects of certain public and private projects on the environment.
- Directive 97/11/EC amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment.

#### 16. Most important challenges facing the chemical industry

- More investment in technological processes,
- Reduction of foreign trade deficit,
- Closer cooperation with R&D centres,
- Privatization of the biggest chemical enter-
- Creation of good economic conditions for small and medium-sized companies operating in the chemical sector.

#### 17. Production of principal goods supplied by Poland's largest chemical enterprises

Regardless of company size or number of employees, chemical goods production in 2005 was dominated by the production of rubber and plastic products. The second biggest production group was plastic products.

#### 18. "Great Chemical Synthesis" programme

The Great Chemical Synthesis programme is a contractual arrangement between businesses representing organics, inorganics, fertilizers, sulphur manufacturing, and the coke-chemical branch. It includes the largest and most important businesses of the chemical industry sector in Poland.

One of the main goals of the programme is restructuring and privatization of the Great Chemical Synthesis businesses by the year 2010. The tasks facing the enterprises which comprise the Great Chemical Synthesis programme include:

#### EXPORT OF CHEMICAL GOODS BY TYPE OF RECIPIENT COUNTRY (MILLION PLN)

Year	Export Developed Countries		Central & Eastern	Developing	
rear	overall	verall Total European Union		Europe*	Countries
2000	6,709.6	3,692.6	3,432.8	<i>7</i> 48.1	2,268.8
2001	7,069.8	3,731.2	3,455.6	661.8	2,676.8
2002	8,093.0	4,261.7	3,987.2	3,155.5	675.8
2003	10,457.7	8,053.1	7,661.0	1,586.7	817.9
2004	12,983.6	9,167.7	8,685.8	2,441.0	1,374.9

<sup>\*</sup> Albania, Byelorussia, Bulgaria, Croatia, Moldova, Russia, Romania and Ukraine Source: GUS

Year	Import	Developed Countries		Central & Eastern	Developing Countries
rear	overall	Total	European Union	Europe*	Developing Countries
2000	8,826.8	6,827.9	5,632.7	472.4	1,526.5
2001	8,658.5	6,447.5	5,506.5	625.0	1,586.0
2002	9,850.5	7,269.2	6,389.6	1,936.1	645.2
2003	11,475.6	10,269.9	9,217.4	497.2	708.5
2004	14,201.3	12,449.1	11,273.4	<i>7</i> 45.2	1,007.0

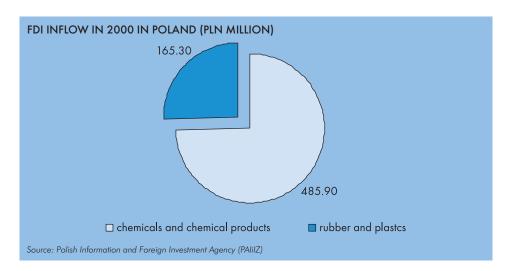
IMPORT OF CHEMICAL GOODS BY TYPE OF RECIPIENT COUNTRY (MILLION PLN)

<sup>\*</sup> Albania, Byelorussia, Bulgaria, Croatia, Moldova, Russia, Romania and Ukraine Source: GUS

Production specialization	Companies (according to number of employees)			
Production specialization	0-9	10-49	50-249	>249
Production of chemical products	2,934	586	220	83
Production of basic chemicals	734	145	49	27
Production of paints and varnishes	424	93	19	6
Production of pharmaceuticals	177	67	50	23
Production of detergents and cleaners, cosmetics and toiletries	1,064	191	68	16
Production of other chemical products	463	79	29	7
Production of rubber and plastic products	12,130	1,949	475	52
Production of rubber products	1,056	146	49	20
Production of plastics products	11,074	1,803	426	32

	Task	Activities
1.	Analysis and implementation of new structures	Market analysis, restructuring and privatization of companies
2.	Modernization of production installations	Implementation of new, productive technologies and optimizing attractive chemical goods production
3.	Organization of infrastructure parks	Modernization of factory energy blocks, preparing infrastructure for investors' requirements, access to low-cost technological media
4.	Employee-oriented policy	Creating new jobs, retraining redundant employees for new production process needs
5.	Commercial research- implementation centres	Implementation of innovative industrial solutions concerning production process Promotion of new technologies (energy-saving, material-saving, etc.) Innovative financing initiatives Training programmes for restructuring human resources

# 19. Foreign direct investment in chemical sector in Poland



# 20. Largest foreign investors in chemical sector in Poland

	Investor	Country of registration	Country of origin	Activities (class)
1.	GlaxoSmithKline	United Kingdom	United Kingdom	Manufacture of pharmaceuticals, medicinal chemicals and botanical products
2.	Marga B.V	The Netherlands	The Netherlands	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toiletry preparations
3.	IVAX Corporation	USA	USA	Manufacture of pharmaceuticals, medicinal chemicals and botanical products
4.	Pliva d.d.	Croatia	Croatia Manufacture of pharmaceuticals, medicinal chemicals products	
5.	British Oxygen Corporation (BOC Group)	United Kingdom	United Kingdom	Manufacture of basic chemicals
6.	Procter & Gamble Mexico Holding	The Netherlands	USA	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toiletry preparations
7.	Basell Europe Holdings NV	The Netherlands	The Netherlands	Manufacture of basic chemicals
8.	Henkel CEE	Austria	Austria	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toiletry preparations
9.	Linde AG	Germany	Germany	Manufacture of basic chemicals
10.	Petro Carbo Chem AG (PCC)	Germany	Germany	Manufacture of basic chemicals
11.	Air Liquide S.A.	France	France	Manufacture of basic chemicals
12.	3M Nederland B.V.	The Netherlands	The Netherlands	Manufacture of pharmaceuticals, medicinal chemicals and botanical products
13.	Beiersdorf AG	Germany	Germany	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toiletry preparations
14.	Alcro - Beckers AB	Sweden	Sweden	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
15.	Valeant Pharmaceuticals, Int	USA	USA	Manufacture of pharmaceuticals, medicinal chemicals and botanical products
16.	Praxair Inc.	USA	USA	Manufacture of basic chemicals
17.	Cussons Group Ltd.	United Kingdom	United Kingdom	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toiletry preparations
18.	Lek d.d.	Slovenia	Slovenia	Manufacture of pharmaceuticals, medicinal chemicals and botanical products
19.	SCA Hygiene Products Holding GmbH	Germany	Germany	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toiletry preparations
20.	L'Oreal SA	France	France	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toiletry preparations

#### 21. Base chemicals industry and market

In 2004, comparing to 2001, the number of companies producing base chemicals fell by 7, however sold production in this segment rose from PLN 10,777 million to PLN 15,459 million, i.e. by 43.4%. The increase in the value of sold production was accompanied by a decrease in the number of employees.

#### 22. Pharmaceutical industry and market

The number of enterprises producing pharmaceuticals has not changed since 2001. The largest companies in this sector in Poland in terms of the value of sold production include GSK Pharma RX (PLN 541.8 million), Polpharma S.A. (PLN 416.4 million), Servier (PLN 298.0 million), Aventis (PLN 235.1 million), Novartis Pharma (PLN 209.4 million), Roche (PLN 201.5 million), LEK (PLN 190.6 million), KRKA (PLN 189.2 million), Sanofi-Synthelabo (PLN 182.5 million), Astrazeneca (PLN 176.9 million), Janssen Cilag (PLN 176.5 million), Adamed (PLN 167.4 million), Novo Nordisk (PLN 165.6 million) and Pliva Kraków (PLN 155.0 million). The sold production of this sector rose by PLN 1,623.2 million from 2001 to 2004, during which time employment fell from 23,600 in 2001 to 22,700 in 2004.

#### 23. Chemical consumer goods industry and market

50% of the Polish market for chemical consumer goods is taken by companies controlled by foreign capital. In 2004 the value of sold production in this sector was PLN 8,904.8 million. The sector is dominated by large cosmetics companies which include Avon Cosmetics, Dr Irena Eris, Oceanic Cosmetic, Ziaja, Dax Cosmetics and Kolastyna, whose brands and products are most popular with Polish consumers.

#### 24. Paints and varnishes industry and market

The largest paints and varnishes producers in the Polish market are Polifarb Cieszyn Wrocław, FFiL Śnieżka, Nobiles Włocławek, ICI Pilawa and TBD Debica. Except for Śnieżka, all of these companies are controlled by foreign capital. Sold production in 2004 was PLN 1,976.4 million. Two-thirds of sold production was consumed by the construction market.

#### 25. Rubber goods industry and market

66 businesses operated in rubber goods production in 2004. The average monthly salary in this sector grew by nearly 3% in comparison with 2003. The value of sold production of chemical rubber goods increased by 47% in comparison with 2001.

#### **BASE CHEMICALS PRODUCTION**

Year	Number of companies	Sold production (PLN million)	Average employment (thousand)	Average monthly gross salary (PLN)
2001	<i>7</i> 6	10,777.6	33.6	2,612.74
2002	82	10,331.8	29.8	2,669.03
2003	74	12,907.5	27.7	2,813.14
2004	69	15,459.6	26.9	3,011.60
Source: GL	JS			

#### PHARMACEUTICAL PRODUCTION

Year	Number of companies	Sold production (in mln PLN)	Average employment (in thousand)	Average monthly gross salary (PLN)
2001	<i>7</i> 1	4,905.2	23.6	3,429.34
2002	72	5,546.9	22.9	3,737.68
2003	72	6,042.9	23.1	3,937.02
2004	<i>7</i> 1	6,528.4	22.7	4,162.54

Source: GUS

#### CHEMICAL CONSUMER GOODS PRODUCTION

Year	Number of companies	Sold production (in mln PLN)	Average employment (in thousand)	Average monthly gross salary (PLN)
2001	74	6,405.2	19.3	3,139.38
2002	<i>7</i> 4	7,393.8	19.7	3,313.14
2003	80	8,041.3	20.5	3,218.19
2004	77	8,904.8	19.8	3,309.39

#### PRODUCTION OF PAINTS AND VARNISHES

Year	Number of companies	Sold production (PLN million)	Average employment (thousand)	Average monthly gross salary (PLN)
2001	23	1,486.9	4.9	3,223.23
2002	24	1,678.9	4.8	3,353.23
2003	23	1,808.7	4.7	3,427.81
2004	24	1,976.4	4.8	3,539.33
Source: Gl	IS			

#### RUBBER GOODS PRODUCTION

Year	Number of companies	Sold production (PLN million)	Average employment (thousand)	Average monthly gross salary (PLN)
2001	59	3,588.9	19.1	2,437.71
2002	59	4,230.2	18.8	2,553.31
2003	58	5,474.4	20.0	2,608.46
2004	66	6,657.5	22.3	2,681.45
Source: Gl	IC			

#### 26. Plant protection products and fertilizers industry and market

Due to subsidies that Polish farmers received after EU accession, the demand for fertilizers grew significantly. In 2004 the consumption of artificial fertilizers grew by 3.4% in comparison with 2003. In 2004 prices of mineral fertilizers grew by 18% compared to 2003.

The largest producers of mineral fertilizers include Zakłady Azotowe Puławy S.A., Zakłady Chemiczne Police S.A., Zakłady Azotowe Kędzierzyn S.A., and Zakłady Azotowe w Tarnowie-Mościcach. All of these companies participate in the Great Chemical Synthesis programme.

The main foreign markets for Polish artificial fertilizers include Germany (about 29% of exports), Denmark, Belgium, Brazil, the Czech Republic and the USA. Poland, on the other hand, imports artificial fertilizers from Belarus (31%), Russia (30%), Germany (15%) and Lithuania (10%).

#### 27. Chemical fibres industry and market

Businesses in chemical fibres production are a minority among the overall number of companies in the chemical sector. The number of such companies has not changed over the last four years. The value of sold production in the chemical fibres sector has been growing steadily during the last three years, and in 2004 was PLN 1,197.9 million.

#### 28. Plastic goods industry and market

General characteristics of the plastic goods industry in Europe

About 10 million people are currently employed in the European plastics goods production market. The investments in EU countries in this sector are EUR 10 billion annually. About 40% of demand for overall plastic goods production comes from the packaging industry. Second place is held by household chemical goods, and third place by the construction materials market.

Germany is the largest producer of plastic goods with employment of 300,000 people. The second-largest producer is France, and the United Kingdom is third. The usage of plastics goods in Europe is shown on the following graph.

#### Polish plastics industry

The value of sold production of plastics goods in Poland in 2004 was PLN 15,511 million, which is almost twice as high as in 2001. An upward trend in employment was reported in this sector, with average employment growing from 48,700 people in 2001 to 59,200 in 2004.

- Main manufacturers of plastic goods on the Polish market
- Prospects for development of Polish plastic goods production

It is expected that the demand for plastic goods will grow in the following years, especially thanks to new export opportunities. Nevertheless, Polish plastic goods producers have to increase their investments in technology and cooperate more closely with R&D centres. The most important task, however, is to invest in environmental protection and recycling. The biggest growth opportunities in this sector are associated with further development of markets for isolative materials, pipe systems, windows and others plastics products for construction.

#### PRODUCTION OF PLANT PROTECTION PRODUCTS AND FERTILIZERS

Year	Number of companies	Sold production (PLN million)	Average employment (thousand)	Average monthly gross salary (PLN)
2001	4	N/A	1.4	2,786.29
2002	4	397.4	1.3	2,974.95
2003	4	472.6	1.2	3,043.41
2004	5	530.2	1.3	3,173.34

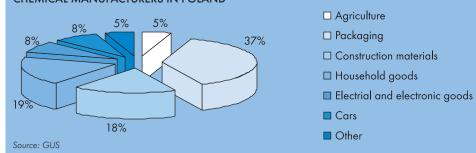
Source: GUS

#### PRODUCTION OF CHEMICAL FIBRES

Year	Number of companies	Sold production (PLN million)	Average employment (thousand)	Average monthly gross salary (PLN)
2001	4	N/A	4.8	1,883.58
2002	5	1,080.2	4.4	1,933.28
2003	4	1,146.8	3.9	1,975.34
2004	4	1,197.9	3.4	1,920.13

Source: GUS

#### CHEMICAL MANUFACTURERS IN POLAND



#### PRODUCTION OF PLASTIC GOODS

	Year	Number of companies	Sold production (PLN million)	Average employment (thousand)	Average monthly gross salary (PLN)
ĺ	2001	407	8907.1	48.7	1,951.62
ĺ	2002	425	10,457.3	51.1	2,019.4
	2003	443	13,148.8	55.3	2,073.28
	2004	463	15,511.0	59.2	2,144.89

Company	City of registration
Wavin Buk Sp. z o.o.	Buk, near Poznań
Aluplast Sp. z o.o.	Poznań
Veka-Polska Sp. z o.o.	Skierniewice
Rehau Sp. z o.o.	Przeźmierowo, near Poznań
Metalplast Oborniki Sp. z o.o.	Oborniki
PPHT Barbara Kaczmarek	Gostyń
Sanplast Sp. z o.o.	Strzelno
Zakłady Tworzyw Sztucznych Gamrat S.A.	Jasło
Mabo Piplife S.A.	Karlikowo
Zakłady Tworzyw Sztucznych ERG - BIERUN S.A.	Bieruń
Termo Organika Sp. z o.o.	Cracow
GK Styropol Sp. z o.o.	Biskupiec

#### • Main investors

#### 29. Prospects for the Polish chemical industry

The chemical industry sector will face sustained development in the next years. The greatest opportunities for the sector are associated with packaging production, pharmaceuticals and plastic materials for construction. The sector requires continuous investments in technology and research, however. Poland as a member state of the European Union is in the course of implementing the EU directives for environmental protection, which may increase production costs at some point.

Investor	Country of registration	Country of origin	Activities (class)
Campagnie Financiere Michelin	Switzerland	France	Manufacture of rubber products
Bridgestone Corporation	Japan	Japan	Manufacture of rubber products
Goodyear Luxembourg S.A.	Luxembourg	USA	Manufacture of rubber products
Alstom Holdings	France	France	Manufacture of plastic products
Huhtamaki Van Leer	Finland	Finland	Manufacture of plastic products
Veka AG	Germany	Germany	Manufacture of plastic products
Nordisk Wavin A/S	Denmark	The Netherlands	Manufacture of plastic products
M. J. Maillis	Greece	Greece	Manufacture of plastic products
Hutchinson S.A.	France	France	Manufacture of rubber products
Frankische Plastiks GmbH	Germany	Germany	Manufacture of plastic products
The Gates Corporation Denver	USA	USA	Manufacture of rubber products
Uponor Group	Germany	Germany/ Finland	Manufacture of plastic products
Plastal Group AB	Sweden	Sweden	Manufacture of plastic products
Onduline S.A.	France	France	Manufacture of plastic products
Plastiques Du Val de Loire	France	France	Manufacture of rubber and plastic products

Source: PAlilZ



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