



Investing in the Future of Jobs and Skills

Scenarios, implications and options in anticipation
of future skills and knowledge needs

Data Annex Chemicals, Pharmaceuticals, Rubber & Plastics

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Submitted to the European Commission, DG Employment, Social Affairs and Equal Opportunities

Executed by:

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May 2009

Lot 4, Chemicals, Pharmaceuticals, Rubber and Plastic Products

This report is published as part of a series of forward-looking sector studies on New Skills and New Jobs in the frame of the project *Comprehensive Sectoral Analysis of Emerging Competences and Economic Activities in the European Union*.

NOTE TO THE READER

The data presented in this annex provides an overall consistent picture of the state of play and developments in the sector. It constitutes the backbone of the quantitative part of the mapping exercise in Part I of the report.

The key data collected in this study are derived from various, mostly comparable sources. The first source concerns the input-output (I/O) tables published by Eurostat. These tables conform to the ESA95 standard; they provide data on value added for sectors, exports and imports (from the respective supply and use tables) and are the only source providing value added data at the 2-digit NACE level. GDP data (country totals) were derived from the OECD. Employment data were also obtained from Eurostat, partly from the National Accounts. The main part of the employment data was provided by the Structural Business Statistics (SBS) from Eurostat, both at the NACE 2 digit and the NACE 3 digit level. This source required estimations for missing values; these were made under responsibility of TNO. Micro-data on developments in the sector by job occupation were derived Eurostat's Labour Force Survey (LFS), as provided by Alphametrics and further processed by TNO. Due to sample size restrictions, the representativeness of country LFS data should be interpreted with caution and as indicative only, and presented in italics. Data on country groupings EU, EU 6, EU 9, EU 15 and NMS pool country data together and can be judged to be representative. EU 6 refers to the founding fathers of the then European Community, EU 9 to the Member States that accessed in the years thereafter, and the EU 15 as the sum of the two. The NMS or new Member States include the last wave of accession and includes Romania and Bulgaria, unless otherwise stated. It should however be borne in mind that the Labour Force Survey is based on a sample (n) rather than on the full statistical population (N). Data on the USA, Japan and the BRICs (Brazil, Russia, India and China) was based on UNIDO data (ISIC Rev 3). UNIDO contains aggregated EU data, but only EU-15 data rather than EU-25 or EU-27. As the time span for the UNIDO data differs to the other data presented in this report, for reasons of comparability, the UNIDO EU-15 has been included in this last section to maintain a comparable set of data.

In case a blank space appears in the data tables data are not available, either because the (sub)sector did not exist in a particular country, because of lack of information applied or because the underlying information was statistically insignificant. In general, data is lacking for some of the new Member States. This especially applies to Malta and Cyprus. Some sources did also not provide data for Bulgaria, Romania and Latvia. The aggregation of the countries is roughly based on the length in number of years of EU membership. Besides the entire EU, we distinguish the following sets of country blocks:

- EU-6: Belgium, Germany, France, Italy, Luxembourg, the Netherlands
- EU-9: Austria, Denmark, Finland, Greece, Ireland, Portugal, Spain, Sweden, United Kingdom
- EU-7: Czech Republic, Estonia, Hungary, Lithuania, Poland, Slovenia, Slovakia
- New Member States (NMS): Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovenia, Slovakia.

Data on value added and trade is lacking for Malta, Cyprus, Bulgaria, Romania and Latvia. Data on employment is missing for Malta and Cyprus, and data on skills is lacking for Malta, Cyprus and Poland.

The data is presented in 11 sections. In coherence with the main report this data annex refers throughout to the 'chemical industries' as the sum of the manufacture of chemical products and pharmaceutical products (NACE 24) and manufacture of rubber and plastic products (NACE 25). The first section presents data on value added, the second on trade, and the third on knowledge intensity. The remaining sections present data on various variables of employment. Section 4 presents absolute numbers of employment and growth rates by country. Section 5 groups employment by firm size and section 6 by entrepreneurial activity. Section 7 up to 10 are based on Labour Force Survey data. Section 7 presents employment by occupation and relative changes over time therein. Section 8 relates occupations to gender, section 9 to the level of education and section 10 to age groups. The last section compares Europe to its main competitors (USA, Japan, and BRICs) in terms of employment and value added.

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1. Value Added

Table 1.1 GDP and GDP growth: overall economy and chemical industries (NACE 24+25)

	Chemical industries (NACE 24 + 25)				Economy			
	GDP 2006	1995- 2000	2000- 2006	1995- 2006	GDP 2006	1995- 2000	2000- 2006	1995- 2006
	m€		%*		m€		%*	
EU	322 322	4.6	3.5	4.0	11 468 970	2.8	2.0	2.3
EU 6	185 536	4.4	3.1	3.7	6 480 204	2.2	1.3	1.7
EU 9	121 093	5.1	3.7	4.3	4 403 041	3.7	2.8	3.2
EU 15	306 629	4.6	3.3	3.9	10 883 245	2.8	1.9	2.3
NMS	15 693	5.1	6.9	6.1	585 725	2.7	3.7	3.2
Belgium	12 333	6.0	1.3	3.4	316 622	2.4	1.8	2.1
France	49 925	10.8	4.5	7.4	1 792 140	2.5	1.8	2.1
Germany	78 532	2.3	3.3	2.8	2 322 200	2.1	1.0	1.5
Italy	30 991	1.8	1.1	1.4	1 480 007	1.6	0.7	1.1
Luxembourg	418	4.5	2.4	3.3	33 852	5.9	3.9	4.8
Netherlands	13 337	4.0	4.2	4.1	535 382	3.9	1.7	2.7
Austria	5 455	5.9	2.6	4.1	257 897	3.0	1.8	2.3
Denmark	6 062	7.6	3.6	5.4	220 069	2.8	1.9	2.3
Finland	3 524	5.3	1.0	2.9	167 178	4.3	2.8	3.5
Greece	905	-3.3	-7.2	-5.5	214 203	3.5	3.7	3.6
Ireland	32 501	16.3	12.9	14.5	177 281	9.2	6.0	7.4
Portugal	1 822	3.8	-2.4	0.4	155 324	3.5	1.1	2.1
Spain	23 854	4.7	5.0	4.8	981 777	4.3	3.2	3.7
Sweden	10 157	8.7	6.5	7.5	316 435	2.4	3.1	2.8
United Kingdom	36 813	1.8	-1.7	-0.1	1 912 877	3.4	2.5	2.9
Bulgaria								
Cyprus								
Czech Republic	3 570	6.7	11.9	9.5	114 060	-0.3	3.9	2.0
Estonia	184	3.8	14.9	9.7	13 223	6.3	8.3	7.4
Hungary	2 794	-2.2	4.9	1.6	89 908	3.3	3.6	3.5
Latvia								
Lithuania	989	13.2	16.4	15.0	23 748	4.4	7.5	6.1
Malta								
Poland	5 762	9.3	4.2	6.5	269 756	3.5	3.0	3.2
Romania								
Slovenia	1 658	9.3	8.5	8.9	30 455	3.3	4.1	3.7
Slovakia	736	-3.9	3.9	0.3	44 574	2.9	4.1	3.6

* Percentage is calculated as the cumulative annual average growth rate (CAGR)

Source: Eurostat/TNO

Table 1.2 GDP and GDP growth: chemical products (NACE 24)

	GDP sector 2006	Chemical products (NACE 24)		1995-2006
		1995-2000	2000-2006	
	m€		%*	
EU	228 295	5.0	3.9	4.4
EU 6	128 270	4.5	3.0	3.7
EU 9	91 713	6.2	5.2	5.6
EU 15	219 983	5.2	3.9	4.5
NMS	8 312	1.9	3.3	2.7
Belgium	10 233	6.6	0.9	3.4
France	33 742	11.7	3.3	7.0
Germany	53 837	2.2	3.7	3.0
Italy	19 243	1.2	1.3	1.3
Luxembourg	61	5.6	1.8	3.5
Netherlands	11 155	3.9	4.7	4.3
Austria	3 248	5.7	3.4	4.4
Denmark	4 367	9.9	5.0	7.2
Finland	2 143	4.6	0.6	2.4
Greece	676	0.2	-5.8	-3.1
Ireland	31 777	16.8	13.3	14.9
Portugal	1 019	1.5	-4.2	-1.7
Spain	16 241	3.5	5.3	4.5
Sweden	8 340	9.9	8.0	8.8
United Kingdom	23 903	2.8	-0.9	0.7
Bulgaria				
Cyprus				
Czech Republic	1 436	0.0	5.0	2.7
Estonia	89	-0.8	10.5	5.2
Hungary	1 887	-5.0	3.1	-0.7
Latvia				
Lithuania	657	12.4	10.5	11.3
Malta				
Poland	2 841	7.2	1.1	3.8
Romania				
Slovenia	1 160	11.1	8.5	9.7
Slovakia	242	-6.3	-8.1	-7.3

* Percentage is calculated as the cumulative annual average growth rate (CAGR)

Source: Eurostat/TNO

Table 1.3 GDP and GDP growth: rubber and plastic products (NACE 25)

	Rubber and plastic products (NACE 25)			
	GDP sector 2006	1995-2000	2000-2006	1995-2006
	m€		%*	
EU	94 027	3.8	2.6	3.1
EU 6	57 266	3.9	3.3	3.6
EU 9	29 380	2.8	-0.3	1.1
EU 15	86 646	3.5	2.0	2.7
NMS	7 382	13.1	12.4	12.7
Belgium	2 100	3.0	3.6	3.3
France	16 183	8.8	7.5	8.1
Germany	24 696	2.6	2.6	2.6
Italy	11 748	2.6	0.6	1.5
Luxembourg	356	4.3	2.5	3.3
Netherlands	2 183	4.5	1.8	3.0
Austria	2 208	6.2	1.5	3.6
Denmark	1 695	3.7	0.4	1.9
Finland	1 381	6.5	1.6	3.8
Greece	229	-9.0	-10.6	-9.9
Ireland	724	7.9	2.1	4.7
Portugal	803	8.4	0.3	3.9
Spain	7 613	7.3	4.3	5.6
Sweden	1 817	5.7	0.9	3.1
United Kingdom	12 910	0.4	-3.0	-1.5
Bulgaria				
Cyprus				
Czech Republic	2 134	25.3	19.2	22.0
Estonia	94	15.4	20.6	18.2
Hungary	907	10.8	9.7	10.2
Latvia				
Lithuania	332	25.1	45.2	35.7
Malta				
Poland	2 921	12.8	8.0	10.2
Romania				
Slovenia	498	5.8	8.3	7.2
Slovakia	495	3.1	17.8	10.9

* Percentage is calculated as the cumulative annual average growth rate (CAGR)

Source: Eurostat/TNO

Table 1.4 Share of chemical industries (NACE 24+25) in GDP, share in sectoral GDP EU and concentration index*

	Share in national GDP		Share in EU		Concentration index	
	2006	1995-2006 (change)	2006	1995-2006 (change)	2006	1995-2006 (change)
	%	%	%	%	%	%
EU	2.8	0.4	100	0	100	0
EU 6	2.8	0.4	57	-2	101	2
EU 9	2.8	0.3	38	1	100	-4
EU 15	2.8	0.4	95	-1	100	0
NMS	2.6	0.5	5	1	93	5
Belgium	3.9	0.3	4	0	141	-9
France	2.7	1.0	15	4	97	24
Germany	3.3	0.4	24	-3	120	-3
Italy	2.0	-0.1	10	-3	73	-14
Luxembourg	0.0	0.0	0	0	0	0
Netherlands	2.5	0.4	4	0	90	3
Austria	2.1	0.3	2	0	76	1
Denmark	2.7	0.6	2	0	98	11
Finland	2.1	-0.1	1	0	77	-15
Greece	0.5	-0.6	0	0	18	-30
Ireland	17.5	8.0	9	6	630	234
Portugal	1.3	-0.2	1	0	47	-14
Spain	2.4	0.3	7	1	88	-3
Sweden	3.0	1.0	3	1	110	24
United Kingdom	2.1	-0.5	13	-5	75	-35
Bulgaria	0.0	0.0	0	0	0	0
Cyprus	0.0	0.0	0	0	0	0
Czech Republic	2.8	1.1	1	0	101	29
Estonia	1.3	0.2	0	0	48	0
Hungary	3.1	-0.7	1	0	112	-48
Latvia	0.0	0.0	0	0	0	0
Lithuania	4.3	2.6	0	0	157	84
Malta	0.0	0.0	0	0	0	0
Poland	2.0	0.4	2	0	73	3
Romania	0.0	0.0	0	0	0	0
Slovenia	5.2	1.7	0	0	188	42
Slovakia	1.7	-0.1	0	0	62	-14

*defined as share in country divided by share in EU, times 100

Source: Eurostat/TNO

2. Trade

Table 2.1 Exports, export growth, share of exports in value added, and change over time: chemical industries (NACE 24 + 25)

	Exports 2006	Annual growth rate*, 1995-2006	Exports as share of value added, 2006	Change of share in value added, 1995-2006
	m€	%	%	%
EU	627 303	7.9	195	39
EU 6	397 683	8.1	214	51
EU 9	194 659	6.9	161	11
EU 15	592 342	7.7	193	35
NMS	34 960	11.2	223	117
Belgium	58 696	7.7	476	114
France	81 275	10.1	163	30
Germany	147 082	8.1	187	48
Italy	52 553	6.6	170	57
Luxembourg	1 871	0.0	n.a.	n.a.
Netherlands	56 207	7.4	421	47
Austria	14 741	7.0	270	48
Denmark	13 953	9.6	230	6
Finland	5 624	8.0	160	53
Greece	1 668	6.8	184	190
Ireland	41 381	9.2	127	-30
Portugal	4 381	10.2	240	145
Spain	28 717	6.8	120	7
Sweden	17 401	8.7	170	-11
United Kingdom	66 793	4.9	181	51
Bulgaria	0	0.0	n.a.	0
Cyprus	0	0.0	n.a.	0
Czech Republic	7 656	8.9	214	49
Estonia	526	10.7	286	157
Hungary	5 997	6.7	215	21
Latvia	0	0.0	n.a.	0
Lithuania	3 977	19.9	402	-88
Malta	0	0.0	n.a.	0
Poland	10 699	18.4	186	218
Romania	0	0.0	n.a.	0
Slovenia	3 606	11.0	217	7
Slovakia	2 499	5.7	339	362

* calculated as the cumulative annual average growth rate (CAGR)

Source: Eurostat/TNO

Table 2.2 Imports, import growth, exports/imports ratio, and change over time: chemical industries (NACE 24+25)

	Imports	Annual growth rate*	Exports/imports ratio	Change of exports/imports ratio
	2006 m€	1995-2006 %	2006 %	1995-2006 %
EU	546 001	7.6	115	3
EU 6	328 446	8.1	121	-1
EU 9	164 366	5.6	118	13
EU 15	492 812	7.2	120	5
NMS	53 189	11.9	66	1
Belgium	45 363	7.8	129	-1
France	72 048	10.4	113	-4
Germany	112 335	8.4	131	-5
Italy	56 616	6.1	93	3
Luxembourg	2 593	0.0	72	-46
Netherlands	39 491	7.0	142	7
Austria	15 842	6.6	93	4
Denmark	9 748	6.2	143	41
Finland	7 950	7.5	71	2
Greece	4 326	-0.2	39	15
Ireland	10 115	7.1	409	72
Portugal	7 977	6.4	55	17
Spain	33 233	6.0	86	6
Sweden	13 732	6.2	127	22
United Kingdom	61 443	4.9	109	-4
Bulgaria	0	0.0	n.a.	0
Cyprus	0	0.0	n.a.	0
Czech Republic	12 028	9.7	64	-1
Estonia	1 319	13.3	40	-7
Hungary	7 323	3.6	82	17
Latvia	0	0.0	n.a.	0
Lithuania	2 689	13.5	148	78
Malta	0	0.0	n.a.	0
Poland	21 337	20.3	50	-2
Romania	0	0.0	n.a.	0
Slovenia	3 421	9.4	105	11
Slovakia	5 073	15.4	49	-50

* calculated as the cumulative annual average growth rate (CAGR)

Source: Eurostat/TNO

3. Knowledge intensity

Table 3.1 Knowledge intensity* in the chemical industries (NACE 24+25) and the total economy compared

	24 + 25		Economy		Difference	
	<i>% high educated</i>	<i>Change 2000-2006</i>	<i>% high educated</i>	<i>Change 2000-2006</i>	<i>% high educated</i>	<i>Difference in change</i>
EU 25	27	2	26	3	1	-1
EU 6	24	1	35	0	-11	2
EU 9	37	6	46	3	-9	4
EU 15	29	3	27	3	2	0
EU	20	0	32	2	-12	-3
Belgium	42	6	37	4	5	2
Germany	24	-1	26	0	-2	-1
France	28	3	30	4	-2	-1
Italy	15	3	15	3	0	-1
Luxembourg	30	12	27	6	3	5
Netherlands	30	5	30	6	0	-1
Denmark	50	16	33	8	17	8
Ireland	44	14	33	8	11	5
Greece	30	0	25	5	6	-6
Spain	45	10	32	5	13	5
Austria	19	1	18	3	1	-2
Portugal	23	13	14	4	9	9
Finland	39	0	35	2	3	-2
Sweden	30	5	30	0	0	5
United Kingdom	35	4	32	3	3	1
Bulgaria	21	8	25	3	-4	5
Czech Republic	12	2	15	2	-3	0
Estonia	32	-26	35	3	-4	-29
Cyprus						
Latvia	23	-37	23	2	-1	-39
Lithuania	26	-18	31	-15	-5	-3
Hungary	17	1	21	4	-4	-3
Malta						
Poland	24		22		2	
Romania	20	-12	13	5	7	-16
Slovenia	26	5	23	6	3	-1
Slovakia	14	8	17	5	-3	3

*Here defined as share of high educated employees in the sector.

Source: Alphametrics/Eurostat/TNO

4. Employment, employment growth and concentration

Table 4.1 Employment* of economy, manufacturing, chemical industries (NACE 24 + 25), chemical products (NACE 24) and rubber and plastic products (NACE 25) compared (persons)

	Employment economy	Employment manufacturing	Employment 24 + 25	Employment 24	Employment 25
	2006	2006	2006	2006	2006
EU	219 623 000	34 412 299	3 746 869	1 915 063	1 831 806
EU 6	102 008 000	16 767 331	2 048 543	1 114 201	934 342
EU 9	75 247 000	9 425 653	978 729	514 664	464 065
EU 15	177 255 000	26 192 984	3 027 272	1 628 865	1 398 407
NMS	43 668 000	8 219 315	719 597	286 198	433 400
Belgium	4 343 000	608 502	95 655	69 104	26 552
Germany	39 024 000	7 108 858	854 941	460 759	394 182
France	25 356 000	3 657 504	554 546	297 819	256 727
Italy	24 695 000	4 576 771	438 535	224 223	214 311
Luxembourg	203 000	37 020	8 528	1 050	7 478
Netherlands	8 387 000	778 676	96 338	61 246	35 093
Denmark	2 782 000	415 088	54 175	31 854	22 321
Ireland	2 042 000	220 101	35 038	25 429	9 609
Greece	4 642 000	400 081	29 025	18 049	10 977
Spain	20 000 000	2 589 588	262 009	138 495	123 514
Austria	4 800 000	624 394	54 287	25 564	28 724
Portugal	5 167 000	830 116	42 492	17 106	25 387
Finland	2 444 000	406 638	35 122	17 560	17 562
Sweden	4 423 000	798 471	77 363	45 690	31 672
United Kingdom	28 947 000	3 141 176	389 217	194 918	194 299
Bulgaria	3 612 000	663 847	45 617	23 681	21 936
Czech Republic	4 986 000	1 354 162	154 421	43 859	110 562
Estonia	648 000	132 236	8 161	2 926	5 235
Cyprus	373 000	36 490	1 190	1 871	3 061
Latvia	1 088 000	163 840	8 864	4 180	4 684
Lithuania	1 504 000	267 850	14 428	4 739	9 689
Hungary	3 905 000	778 075	74 166	32 326	41 840
Malta	154 000	31 705	2 549	724	1 825
Poland	14 594 000	2 590 854	260 411	104 210	156 201
Romania	9 568 000	1 552 158	96 816	48 487	48 329
Slovenia	935 000	235 917	26 508	13 030	13 477
Slovakia	2 301 000	412 181	30 206	8 760	21 446

* employees and self-employed

Source: Eurostat/TNO

Table 4.2 Employment* of economy, manufacturing, chemical industries (NACE 24 + 25), chemical products (NACE 24) and rubber and plastic products (NACE 25) compared (persons)

	Employment economy	Employment manufacturing	Employment 24 + 25	Employment 24	Employment 25
	2000	2000	2000	2000	2000
EU	208 795 000	36 775 816	3 763 080	2 038 136	1 724 945
EU 6	98 307 000	18 025 935	2 049 433	1 132 108	917 325
EU 9	69 035 000	10 634 910	1 060 594	552 355	508 239
EU 15	167 342 000	28 660 845	3 110 027	1 684 463	1 425 564
NMS	41 453 000	8 114 971	653 053	353 673	299 381
Belgium	4 142 000	676 961	101 080	70 086	30 994
Germany	39 038 000	7 551 269	891 179	495 499	395 680
France	24 332 000	4 026 591	522 460	286 620	235 840
Italy	22 498 000	4 821 489	420 614	206 291	214 323
Luxembourg	185 000	34 357	5 401	1 554	3 847
Netherlands	8 112 000	915 268	108 699	72 058	36 641
Denmark	2 757 000	488 000	46 791	23 632	23 159
Ireland	1 696 000	255 705	33 961	23 127	10 834
Greece	4 255 000	402 365	24 493	12 623	11 870
Spain	16 399 000	2 594 832	255 758	136 813	118 945
Austria	4 836 000	628 753	56 742	27 141	29 601
Portugal	5 054 000	937 549	46 460	22 625	23 835
Finland	2 303 000	435 788	36 504	18 619	17 885
Sweden	4 301 000	791 764	67 126	40 980	26 146
United Kingdom	27 434 000	4 100 154	492 759	246 795	245 964
Bulgaria	3 239 000	611 347	50 369	33 177	17 192
Czech Republic	4 825 000	1 377 896	100 762	44 413	56 349
Estonia	575 000	119 379	6 121	3 181	2 940
Cyprus	315 000	36 422			
Latvia	944 000	153 516	6 389	4 222	2 167
Lithuania	1 403 000	244 720	12 178	6 439	5 739
Hungary	3 844 000	756 003	67 101	35 445	31 656
Malta	146 000	31 728			
Poland	14 526 000	2 274 083	229 175	115 381	113 795
Romania	8 629 000	1 835 416	116 031	76 048	39 983
Slovenia	905 000	263 204	30 497	15 734	14 763
Slovakia	2 102 000	411 256	34 430	19 633	14 797

* employees and self-employed

Source: Eurostat/TNO

Table 4.3 Employment* chemical products (NACE 24) and sub-sectors of basic chemicals (NACE 241+242+243), pharmaceuticals (NACE 244) and other specialty chemicals (NACE 245+246+247) compared (persons)

	24	241+242+243	244	245+246+247
	2006	2006	2006	2006
EU	1 915 063	776 458	616 411	522 193
EU 6	1 114 201	465 614	351 446	297 140
EU 9	514 664	191 071	183 922	139 671
EU 15	1 628 865	656 686	535 368	436 811
NMS	286 198	119 772	81 043	85 382
Belgium	69 104	30 570	21 338	17 196
Germany	460 759	215 752	131 021	113 986
France	297 819	107 614	103 890	86 314
Italy	224 223	79 927	79 497	64 800
Luxembourg	1 050	411	0	639
Netherlands	61 246	31 340	15 700	14 206
Denmark	31 854	6 717	21 395	3 742
Ireland	25 429	8 968	11 565	4 895
Greece	18 049	6 467	5 693	5 888
Spain	138 495	53 746	38 556	46 193
Austria	25 564	9 522	9 142	6 899
Portugal	17 106	8 001	5 068	4 037
Finland	17 560	10 681	3 628	3 250
Sweden	45 690	17 007	22 219	6 465
United Kingdom	194 918	69 961	66 655	58 303
Bulgaria	23 681	6 583	9 274	7 824
Czech Republic	43 859	20 316	12 107	11 437
Estonia	2 926	1 891	238	796
Cyprus	0	0	0	0
Latvia	4 180	896	1 833	1 451
Lithuania	4 739	3 440	693	606
Hungary	32 326	11 955	15 665	4 706
Malta	0	0	0	0
Poland	104 210	36 020	26 404	41 785
Romania	48 487	30 253	8 148	10 085
Slovenia	13 030	4 501	4 809	3 720
Slovakia	8 760	3 918	1 871	2 971

* employees and self-employed

Source: Eurostat/TNO

Table 4.4 Employment* rubber and plastic products (NACE 25) and sub-sectors rubber products (NACE 251) and plastic products (NACE 252) compared (persons)

	25	251	252
	2006	2006	2006
EU	1 831 806	386 892	1 444 914
EU 6	934 342	210 259	724 083
EU 9	464 065	77 224	386 841
EU 15	1 398 407	287 482	1 110 925
NMS	433 400	99 410	333 990
Belgium	26 552	3 016	23 535
Germany	394 182	79 307	314 874
France	256 727	72 434	184 293
Italy	214 311	46 772	167 539
Luxembourg	7 478	5 025	2 453
Netherlands	35 093	3 705	31 388
Denmark	22 321	1 521	20 800
Ireland	9 609	700	8 910
Greece	10 977	736	10 240
Spain	123 514	30 483	93 031
Austria	28 724	3 085	25 639
Portugal	25 387	5 377	20 010
Finland	17 562	3 304	14 259
Sweden	31 672	5 917	25 755
United Kingdom	194 299	26 102	168 197
Bulgaria	21 936	3 535	18 400
Czech Republic	110 562	29 114	81 448
Estonia	5 235	576	4 660
Cyprus	0	0	0
Latvia	4 684	290	4 394
Lithuania	9 689	265	9 424
Hungary	41 840	9 442	32 398
Malta	0	0	0
Poland	156 201	31 472	124 730
Romania	48 329	14 545	33 783
Slovenia	13 477	3 344	10 133
Slovakia	21 446	6 826	14 620

* employees and self-employed

Source: Eurostat/TNO

Table 4.5 Employment* growth** 2000-2006 chemical industries (NACE 24 + 25), chemical products (NACE 24) and rubber and plastics products (NACE 25) compared

	24 + 25	24	25
	<i>CAGR 2000-2006 (%)</i>	<i>CAGR 2000-2006 (%)</i>	<i>CAGR 2000-2006 (%)</i>
EU	-0.1	-1.0	1.0
EU 6	0.0	-0.3	0.3
EU 9	-1.3	-1.2	-1.5
EU 15	-0.4	-0.6	-0.3
NMS	1.6	-3.5	6.4
Belgium	-0.9	-0.2	-2.5
Germany	-0.7	-1.2	-0.1
France	1.0	0.6	1.4
Italy	0.7	1.4	0.0
Luxembourg	0.0	0.0	0.0
Netherlands	-2.0	-2.7	-0.7
Denmark	2.5	5.1	-0.6
Ireland	0.5	1.6	-2.0
Greece	2.9	6.1	-1.3
Spain	0.4	0.2	0.6
Austria	-0.7	-1.0	-0.5
Portugal	-1.5	-4.6	1.1
Finland	-0.6	-1.0	-0.3
Sweden	2.4	1.8	3.2
United Kingdom	-3.9	-3.9	-3.9
Bulgaria	-1.6	-5.5	4.1
Czech Republic	7.4	-0.2	11.9
Estonia	4.9	-1.4	10.1
Cyprus	0.0	0.0	0.0
Latvia	5.6	-0.2	13.7
Lithuania	2.9	-5.0	9.1
Hungary	1.7	-1.5	4.8
Malta	0.0	0.0	0.0
Poland	2.2	-1.7	5.4
Romania	-3.0	-7.2	3.2
Slovenia	-2.3	-3.1	-1.5
Slovakia	-2.2	-12.6	6.4

* employees and self-employed ** calculated as the cumulative annual average growth rate (CAGR)

Source: Eurostat/TNO

Table 4.6 Employment* growth** 2000-2006 chemical products (NACE 24) and sub-sectors of basic chemicals (NACE 241+242+243), pharmaceuticals (NACE 244) and other specialty chemicals (NACE 245+246+247) compared

	24	241+242+243	244	245+246+247
	<i>CAGR 2000-2006 (%)</i>	<i>CAGR 2000-2006 (%)</i>	<i>CAGR 2000-2006 (%)</i>	<i>CAGR 2000-2006 (%)</i>
EU	-1.0	-2.6	1.4	-1.2
EU 6	-0.3	-1.6	1.9	-0.5
EU 9	-1.2	-2.6	1.3	-2.1
EU 15	-0.6	-1.9	1.7	-1.0
NMS	-3.5	-5.8	-0.4	-2.4
Belgium	-0.2	-1.9	3.4	-1.0
Germany	-1.2	-3.3	2.5	-0.8
France	0.6	1.1	0.9	-0.2
Italy	1.4	1.1	2.0	1.1
Luxembourg	-6.3	1.5		-9.7
Netherlands	-2.7	-3.3	0.6	-4.4
Denmark	5.1	-1.7	9.0	1.5
Ireland	1.6	1.1	3.8	-1.8
Greece	6.1	7.3	7.5	3.9
Spain	0.2	0.0	0.7	0.0
Austria	-1.0	-0.4	-2.4	0.3
Portugal	-4.6	-3.4	-5.6	-5.4
Finland	-1.0	-0.7	-7.8	13.0
Sweden	1.8	-0.9	3.4	5.1
United Kingdom	-3.9	-6.0	0.4	-5.2
Bulgaria	-5.5	-8.9	-1.6	-6.1
Czech Republic	-0.2	-4.6	10.8	0.8
Estonia	-1.4	3.0	-2.6	-8.1
Cyprus				
Latvia	-0.2	-5.4	1.8	1.5
Lithuania	-5.0	-1.6	-13.4	-8.0
Hungary	-1.5	-4.0	1.7	-3.8
Malta				
Poland	-1.7	-5.9	0.3	1.8
Romania	-7.2	-6.8	-5.5	-9.6
Slovenia	-3.1	-0.1	-6.2	-1.8
Slovakia	-12.6	-12.9	-13.0	-11.8

* employees and self-employed ** calculated as the cumulative annual average growth rate (CAGR)

Source: Eurostat/TNO

Table 4.7 Employment* growth** 2000-2006 rubber and plastic products (NACE 25) and sub-sectors rubber products (NACE 251) and plastic products (NACE 252) compared

	25	251	252
	<i>CAGR 2000-2006 (%)</i>	<i>CAGR 2000-2006 (%)</i>	<i>CAGR 2000-2006 (%)</i>
EU	1.0	-0.1	1.3
EU 6	0.3	-0.1	0.4
EU 9	-1.5	-3.9	-1.0
EU 15	-0.3	-1.2	-0.1
NMS	6.4	3.9	7.2
Belgium	-2.5	-9.7	-1.3
Germany	-0.1	0.2	-0.1
France	1.4	0.1	2.0
Italy	0.0	-1.0	0.3
Luxembourg	11.7	17.3	4.2
Netherlands	-0.7	-0.8	-0.7
Denmark	-0.6	-5.9	-0.1
Ireland	-2.0	-10.7	-1.0
Greece	-1.3	-5.3	-1.0
Spain	0.6	-1.2	1.3
Austria	-0.5	-5.7	0.3
Portugal	1.1	1.1	1.0
Finland	-0.3	3.2	-1.0
Sweden	3.2	-4.2	5.7
United Kingdom	-3.9	-7.2	-3.3
Bulgaria	4.1	-2.6	5.9
Czech Republic	11.9	10.2	12.5
Estonia	10.1	16.0	9.5
Cyprus			
Latvia	13.7	6.5	14.3
Lithuania	9.1	2.2	9.4
Hungary	4.8	4.3	4.9
Malta			
Poland	5.4	4.2	5.7
Romania	3.2	-1.0	5.4
Slovenia	-1.5	-4.6	-0.3
Slovakia	6.4	2.0	9.0

* employees and self-employed ** calculated as the cumulative annual average growth rate (CAGR)

Source: Eurostat/TNO

Table 4.8 Share of sector employment* of Member States in EU sector employment. Chemical industries (NACE 24+25), chemical products (NACE 24) and rubber and plastic products (NACE 25)

	24 + 25	24	25	24 + 25	24	25
	<i>Share 2006</i>			<i>Change in share 2000-2006</i>		
EU	100	100	100	0	0	0
EU 6	55	58	51	1	4	-1
EU 9	26	27	25	-2	0	-5
EU 15	81	85	76	-1	3	-6
NMS	19	15	24	1	-3	6
Belgium	3	4	1	0	0	0
Germany	23	24	22	-1	0	-1
France	15	16	14	1	2	1
Italy	12	12	12	1	2	0
Luxembourg	0	0	0	0	0	0
Netherlands	3	3	2	0	0	0
Denmark	1	2	1	0	0	0
Ireland	1	1	1	0	0	0
Greece	1	1	1	0	0	0
Spain	7	7	7	1	1	0
Austria	1	1	2	0	0	0
Portugal	1	1	1	0	0	0
Finland	1	1	1	0	0	0
Sweden	2	2	2	0	0	0
United Kingdom	10	10	11	-3	-2	-5
Bulgaria	1	1	1	0	-1	0
Czech Republic	4	2	6	1	0	3
Estonia	0	0	0	0	0	0
Cyprus	0	0	0	0	0	0
Latvia	0	0	0	0	0	0
Lithuania	0	0	1	0	0	0
Hungary	2	2	2	0	0	0
Malta	0	0	0	0	0	0
Poland	7	5	9	1	0	2
Romania	3	3	3	-1	-2	0
Slovenia	1	1	1	0	0	0
Slovakia	1	0	1	0	0	0

* employees and self-employed

Source: Eurostat/TNO

Table 4.9 Share of sub-sector employment* of Member States in EU sub-sector employment. Chemical products (NACE 24) and sub-sectors of basic chemicals (NACE 241+242+243), pharmaceuticals (NACE 244) and other specialty chemicals (NACE 245+246+247)

	24	241/243	244	245/247	24	241/243	244	245/247
	<i>Share 2006</i>				<i>Change in share 2000-2006</i>			
EU	100	100	100	100	0	0	0	0
EU 6	58	60	57	57	3	4	2	3
EU 9	27	25	30	27	0	0	0	-1
EU 15	85	85	87	84	2	4	2	1
NMS	15	15	13	16	-2	-4	-2	-1
Belgium	4	4	3	3	0	0	0	0
Germany	24	28	21	22	0	-1	1	1
France	16	14	17	17	1	3	0	1
Italy	12	10	13	12	2	2	0	2
Luxembourg	0	0	0	0	0	0	0	0
Netherlands	3	4	3	3	0	0	0	-1
Denmark	2	1	3	1	1	0	1	0
Ireland	1	1	2	1	0	0	0	0
Greece	1	1	1	1	0	0	0	0
Spain	7	7	6	9	1	1	0	1
Austria	1	1	1	1	0	0	0	0
Portugal	1	1	1	1	0	0	0	0
Finland	1	1	1	1	0	0	0	0
Sweden	2	2	4	1	0	0	0	0
United Kingdom	10	9	11	11	-2	-2	-1	-3
Bulgaria	1	1	2	1	0	0	0	-1
Czech Republic	2	3	2	2	0	0	1	0
Estonia	0	0	0	0	0	0	0	0
Cyprus	0	0	0	0	0	0	0	0
Latvia	0	0	0	0	0	0	0	0
Lithuania	0	0	0	0	0	0	0	0
Hungary	2	2	3	1	0	0	0	0
Malta	0	0	0	0	0	0	0	0
Poland	5	5	4	8	0	-1	0	1
Romania	3	4	1	2	-1	-1	-1	-1
Slovenia	1	1	1	1	0	0	0	0
Slovakia	0	1	0	1	-1	0	0	-1

* employees and self-employed

Source: Eurostat/TNO

Table 4.10 Share of sub-sector employment* of Member States in EU sub-sector employment. Rubber and plastic products (NACE 25) and sub-sectors rubber products (NACE 251) and plastic products (NACE 252) compared

	25	251	252	25	251	252
	<i>Share 2006</i>			<i>Change in share 2000-2006</i>		
EU	100	100	100	0	0	0
EU 6	51	54	50	-2	0	-3
EU 9	25	20	27	-4	-5	-4
EU 15	76	74	77	-6	-5	-7
NMS	24	26	23	6	5	7
Belgium	1	1	2	0	-1	0
Germany	22	20	22	-1	0	-2
France	14	19	13	0	0	0
Italy	12	12	12	-1	-1	-1
Luxembourg	0	1	0	0	1	0
Netherlands	2	1	2	0	0	0
Denmark	1	0	1	0	0	0
Ireland	1	0	1	0	0	0
Greece	1	0	1	0	0	0
Spain	7	8	6	0	-1	0
Austria	2	1	2	0	0	0
Portugal	1	1	1	0	0	0
Finland	1	1	1	0	0	0
Sweden	2	2	2	0	0	0
United Kingdom	11	7	12	-4	-4	-4
Bulgaria	1	1	1	0	0	0
Czech Republic	6	8	6	3	3	3
Estonia	0	0	0	0	0	0
Cyprus	0	0	0	0	0	0
Latvia	0	0	0	0	0	0
Lithuania	1	0	1	0	0	0
Hungary	2	2	2	0	1	0
Malta	0	0	0	0	0	0
Poland	9	8	9	2	2	2
Romania	3	4	2	0	0	0
Slovenia	1	1	1	0	0	0
Slovakia	1	2	1	0	0	0

* employees and self-employed

Source: Eurostat/TNO

Table 4.11 Share of sector employment* in total employment. Chemical industries (NACE 24+25), chemical products (NACE 24) and rubber and plastic products (NACE 25) compared, 2006

	24 + 25	24	25
	%	%	%
EU	1.71	0.87	0.83
EU 6	2.01	1.09	0.92
EU 9	1.30	0.68	0.62
EU 15	1.71	0.92	0.79
NMS	1.65	0.66	0.99
Belgium	2.20	1.59	0.61
Germany	2.19	1.18	1.01
France	2.19	1.17	1.01
Italy	1.78	0.91	0.87
Luxembourg	4.20	0.52	3.68
Netherlands	1.15	0.73	0.42
Denmark	1.95	1.15	0.80
Ireland	1.72	1.25	0.47
Greece	0.63	0.39	0.24
Spain	1.31	0.69	0.62
Austria	1.13	0.53	0.60
Portugal	0.82	0.33	0.49
Finland	1.44	0.72	0.72
Sweden	1.75	1.03	0.72
United Kingdom	1.34	0.67	0.67
Bulgaria	1.26	0.66	0.61
Czech Republic	3.10	0.88	2.22
Estonia	1.26	0.45	0.81
Cyprus	0.32	0.50	0.82
Latvia	0.81	0.38	0.43
Lithuania	0.96	0.32	0.64
Hungary	1.90	0.83	1.07
Malta	1.66	0.47	1.19
Poland	1.78	0.71	1.07
Romania	1.01	0.51	0.51
Slovenia	2.84	1.39	1.44
Slovakia	1.31	0.38	0.93

* employees and self-employed

Source: Eurostat/TNO

Table 4.12 Share of sector employment* in total manufacturing employment. Chemical industries (NACE 24+25), chemical products (NACE 24) and rubber and plastic products (NACE 25) compared, 2006

	24 + 25	24	25
	%	%	%
EU	10.89	5.57	5.32
EU 6	12.22	6.65	5.57
EU 9	10.38	5.46	4.92
EU 15	11.56	6.22	5.34
NMS	8.75	3.48	5.27
Belgium	15.72	11.36	4.36
Germany	12.03	6.48	5.54
France	15.16	8.14	7.02
Italy	9.58	4.90	4.68
Luxembourg	23.04	2.84	20.20
Netherlands	12.37	7.87	4.51
Denmark	13.05	7.67	5.38
Ireland	15.92	11.55	4.37
Greece	7.25	4.51	2.74
Spain	10.12	5.35	4.77
Austria	8.69	4.09	4.60
Portugal	5.12	2.06	3.06
Finland	8.64	4.32	4.32
Sweden	9.69	5.72	3.97
United Kingdom	12.39	6.21	6.19
Bulgaria	6.87	3.57	3.30
Czech Republic	11.40	3.24	8.16
Estonia	6.17	2.21	3.96
Cyprus	3.26	5.13	8.39
Latvia	5.41	2.55	2.86
Lithuania	5.39	1.77	3.62
Hungary	9.53	4.15	5.38
Malta	8.04	2.28	5.76
Poland	10.05	4.02	6.03
Romania	6.24	3.12	3.11
Slovenia	11.24	5.52	5.71
Slovakia	7.33	2.13	5.20

* employees and self-employed

Source: Eurostat/TNO

Table 4.13 Share of sub-sector employment* in total employment of economy. Basic chemicals (NACE 241+242+243), pharmaceuticals (NACE 244) and other specialty chemicals (NACE 245+246+247) compared

	24	241-243	244	245-247	24	241-243	244	245-247
	<i>Share in national employment . 2006</i>				<i>Change in share 2000-2006</i>			
EU	0.87	0.35	0.28	0.24	-0.10	-0.08	0.01	-0.03
EU 6	1.09	0.46	0.34	0.29	-0.05	-0.06	0.03	-0.02
EU 9	0.67	0.25	0.24	0.18	-0.12	-0.07	0.00	-0.04
EU 15	0.91	0.37	0.30	0.24	-0.09	-0.07	0.01	-0.03
NMS	0.69	0.29	0.20	0.21	-0.16	-0.13	-0.01	-0.03
Belgium	1.62	0.71	0.50	0.40	-0.10	-0.13	0.07	-0.04
Germany	1.18	0.55	0.34	0.29	-0.09	-0.12	0.05	-0.01
France	1.18	0.43	0.41	0.34	0.00	0.01	0.01	-0.02
Italy	0.91	0.32	0.32	0.26	0.01	0.00	0.01	0.00
Luxembourg	0.33	0.13	0.00	0.20	-0.26	-0.01	0.00	-0.25
Netherlands	0.73	0.37	0.19	0.17	-0.16	-0.10	0.00	-0.06
Denmark	1.13	0.24	0.76	0.13	0.28	-0.03	0.30	0.01
Ireland	1.25	0.44	0.57	0.24	-0.12	-0.06	0.02	-0.08
Greece	0.37	0.13	0.12	0.12	0.08	0.03	0.03	0.01
Spain	0.69	0.27	0.19	0.23	-0.14	-0.06	-0.03	-0.05
Austria	0.60	0.23	0.22	0.16	-0.05	-0.01	-0.04	0.00
Portugal	0.33	0.16	0.10	0.08	-0.12	-0.04	-0.04	-0.03
Finland	0.72	0.44	0.15	0.13	-0.09	-0.05	-0.11	0.07
Sweden	1.03	0.38	0.50	0.15	0.07	-0.04	0.07	0.03
United Kingdom	0.63	0.23	0.21	0.19	-0.21	-0.12	-0.01	-0.08
Bulgaria	0.66	0.18	0.26	0.22	-0.36	-0.17	-0.06	-0.13
Czech Republic	0.86	0.40	0.24	0.23	-0.04	-0.15	0.11	0.00
Estonia	0.46	0.30	0.04	0.13	-0.10	0.02	-0.01	-0.11
Cyprus								
Latvia	0.39	0.08	0.17	0.14	-0.06	-0.05	0.00	-0.01
Lithuania	0.32	0.23	0.05	0.04	-0.14	-0.04	-0.07	-0.03
Hungary	0.83	0.31	0.40	0.12	-0.09	-0.09	0.03	-0.03
Malta								
Poland	0.78	0.27	0.20	0.31	0.01	-0.08	0.03	0.06
Romania	0.52	0.33	0.09	0.11	-0.36	-0.21	-0.04	-0.10
Slovenia	1.39	0.48	0.51	0.40	-0.34	-0.02	-0.26	-0.06
Slovakia	0.40	0.18	0.09	0.14	-0.57	-0.26	-0.13	-0.18

* employees and self-employed

Source: Eurostat/TNO

Table 4.14 Share of sub-sector employment* in total employment of economy. Rubber and plastic products (NACE 25) and sub-sectors rubber products (NACE 251) and plastic products (NACE 252) compared

	25	251	252	25	251	252
	<i>Share in national employment, 2006</i>			<i>Change in share, 2000-2006</i>		
EU	0.83	0.18	0.65	0.01	-0.01	0.02
EU 6	0.92	0.21	0.71	-0.01	-0.01	0.00
EU 9	0.60	0.10	0.50	-0.12	-0.04	-0.08
EU 15	0.78	0.16	0.62	-0.06	-0.02	-0.04
NMS	1.04	0.24	0.81	0.32	0.05	0.27
Belgium	0.62	0.07	0.55	-0.14	-0.07	-0.07
Germany	1.01	0.20	0.81	0.00	0.00	-0.01
France	1.02	0.29	0.73	0.05	-0.01	0.06
Italy	0.87	0.19	0.68	-0.07	-0.03	-0.04
Luxembourg	2.34	1.58	0.77	0.89	0.84	0.04
Netherlands	0.42	0.04	0.37	-0.03	0.00	-0.03
Denmark	0.79	0.05	0.74	-0.04	-0.03	-0.02
Ireland	0.47	0.03	0.44	-0.17	-0.05	-0.12
Greece	0.22	0.01	0.21	-0.05	-0.01	-0.04
Spain	0.62	0.15	0.47	-0.11	-0.05	-0.06
Austria	0.68	0.07	0.61	-0.04	-0.03	-0.01
Portugal	0.49	0.10	0.39	0.02	0.00	0.01
Finland	0.72	0.14	0.58	-0.06	0.02	-0.08
Sweden	0.71	0.13	0.58	0.10	-0.05	0.15
United Kingdom	0.63	0.08	0.54	-0.21	-0.05	-0.15
Bulgaria	0.61	0.10	0.51	0.08	-0.03	0.11
Czech Republic	2.18	0.57	1.60	1.03	0.24	0.79
Estonia	0.82	0.09	0.73	0.31	0.05	0.26
Cyprus						
Latvia	0.44	0.03	0.41	0.21	0.01	0.20
Lithuania	0.65	0.02	0.63	0.24	0.00	0.24
Hungary	1.07	0.24	0.83	0.25	0.05	0.20
Malta						
Poland	1.17	0.24	0.93	0.41	0.07	0.34
Romania	0.52	0.16	0.37	0.06	-0.02	0.08
Slovenia	1.44	0.36	1.08	-0.19	-0.13	-0.06
Slovakia	0.99	0.32	0.68	0.26	0.02	0.24

* employees and self-employed

Source: Eurostat/TNO

5. Firm size

Table 5.1 Employment by firm size. Share and changes in share of employment by firm size in chemical industries (NACE 24 + 25)

	Share 2006			Change in share 1999-2006		
	<49 <i>Number of employees</i>	50-249 <i>Number of employees</i>	>249 <i>Number of employees</i>	<49 <i>Number of employees</i>	50-249 <i>Number of employees</i>	>249 <i>Number of employees</i>
EU	20.6	28.4	51.0	0.5	3.6	-4.0
EU 6	17.7	26.3	55.9	-0.1	3.0	-2.9
EU 9	24.7	30.8	44.5	0.8	3.3	-4.1
EU 15	20.1	27.8	52.0	0.2	3.0	-3.2
NMS	23.0	31.5	45.5	1.6	6.4	-8.0
Belgium	12.0	25.1	62.8	-1.7	0.9	0.8
France	13.9	24.6	61.5	-0.9	2.1	-1.1
Germany	11.8	25.7	62.6	0.6	4.1	-4.7
Italy	36.3	28.7	35.0	-0.5	2.0	-1.5
Luxembourg						
Netherlands	19.4	33.5	47.2	1.7	4.5	-6.2
Denmark	14.9	23.7	61.4	-1.0	-0.9	2.0
Ireland	16.1	36.3	47.6	-2.1	-2.2	4.3
Greece	31.2	43.4	25.4	7.9	-0.2	-7.8
Spain	31.9	30.0	38.1	-0.5	2.3	-1.8
Austria	15.3	29.8	54.9	-1.1	1.5	-0.4
Portugal	37.0	40.3	22.7	-1.2	3.5	-2.4
Finland	17.0	28.4	54.6	-1.8	3.7	-1.9
Sweden	22.4	31.5	46.1	2.7	5.5	-8.1
United Kingdom	22.6	30.0	47.4	1.2	4.2	-5.4
Bulgaria	30.1	28.7	41.2			
Czech Republic	20.1	31.1	48.8	-3.6	6.8	-3.2
Estonia	37.1	49.2	13.7			
Cyprus	47.1	31.7	21.2			
Latvia	37.3	35.1	27.6	7.5	-7.9	0.4
Lithuania	32.4	40.9	26.7	3.2	14.7	-17.8
Hungary	25.2	29.1	45.7	7.9	5.3	-13.1
Malta						
Poland	23.8	32.2	44.1	2.8	6.8	-9.6
Romania	26.5	25.8	47.7	12.2	10.6	-22.8
Slovenia	19.1	31.9	49.0			
Slovakia	18.2	28.3	53.5			

Source: Eurostat/TNO

Table 5.2 Number of firms by firm size. Share and changes in share of firms by firm size in chemical industries (NACE 24 + 25)

	Share, 2005			Change in share, 1999-2005		
	<49 <i>Number of employees</i>	50-249 <i>Number of employees</i>	>249 <i>Number of employees</i>	<49 <i>Number of employees</i>	50-249 <i>Number of employees</i>	>249 <i>Number of employees</i>
EU	87.8	9.7	2.4	-0.3	0.6	-0.3
EU 6	85.2	11.6	3.2	-1.3	1.3	0.1
EU 9	88.3	9.4	2.3	1.0	-0.3	-0.8
EU 15	86.5	10.8	2.8	-0.3	0.6	-0.3
NMS	91.3	7.1	1.5	-0.9	1.1	-0.2
Belgium	81.8	13.6	4.6	-1.1	1.1	0.1
France	82.9	12.7	4.4	-1.4	1.2	0.2
Germany	76.2	18.6	5.2	-0.3	0.6	-0.3
Italy	92.6	6.3	1.1	-0.9	0.8	0.1
Luxembourg	52.5	30.0	17.5	-18.3	9.2	9.2
Netherlands	79.3	16.5	4.2	-2.7	3.7	-1.0
Denmark	86.4	10.4	3.1	0.5	-0.3	-0.3
Ireland	67.4	25.5	7.1	-2.1	1.6	0.5
Greece	87.5	11.0	1.5	17.0	-13.2	-3.7
Spain	91.0	7.4	1.6	1.0	-0.6	-0.4
Austria	81.7	13.5	4.7	1.1	-0.6	-0.5
Portugal	90.7	8.1	1.3	0.0	0.0	-0.1
Finland	87.2	9.8	3.1	-2.1	1.7	0.4
Sweden	90.9	7.7	1.4	-0.5	0.7	-0.2
United Kingdom	86.1	11.1	2.7	0.7	0.4	-1.1
Bulgaria	91.7	6.6	1.7			
Czech Republic	89.1	8.8	2.0	-4.3	3.6	0.7
Estonia	86.4	12.8	0.8	-0.8	1.8	-1.0
Cyprus	91.9	7.3	0.8			
Latvia	90.1	8.6	1.2	3.8	-3.4	-0.4
Lithuania	86.4	12.9	0.6	-5.0	5.8	-0.7
Hungary	92.3	6.2	1.4	12.2	-8.9	-3.3
Malta						
Poland	92.3	6.5	1.3	-1.8	1.6	0.2
Romania	91.9	6.4	1.7	2.0	-0.7	-1.3
Slovenia	93.3	5.4	1.3	0.9	0.2	-1.1
Slovakia	82.6	13.4	4.0	36.7	-24.1	-12.7

Source: Eurostat/TNO

Table 5.3 Number of firms by firm size. Share and changes in share of firms by firm size in chemical industries (NACE 24 + 25)

	Share, 2006			Change in share, 1999-2006		
	<49 <i>Number of employees</i>	50-249 <i>Number of employees</i>	>249 <i>Number of employees</i>	<49 <i>Number of employees</i>	50-249 <i>Number of employees</i>	>249 <i>Number of employees</i>
EU	87.6	9.8	2.6	-0.5	0.6	-0.2
EU 6	84.9	11.8	3.3	-1.7	1.5	0.2
EU 9	88.7	9.2	2.1	1.4	-0.5	-0.9
EU 15	86.3	10.8	2.8	-0.5	0.7	-0.2
NMS	90.9	7.3	1.9	-1.4	1.2	0.2
Belgium	81.3	13.8	4.9	-1.6	1.3	0.3
France	82.9	12.7	4.4	-1.4	1.2	0.2
Germany	74.4	19.9	5.8	-2.0	1.8	0.2
Italy	92.7	6.2	1.1	-0.9	0.8	0.1
Luxembourg	54.5	29.5	15.9	-16.3	8.7	7.6
Netherlands	78.6	17.0	4.4	-3.4	4.2	-0.8
Denmark	85.8	11.1	3.1	-0.1	0.4	-0.3
Ireland	68.9	23.9	7.2	-0.6	0.0	0.6
Greece	84.4	14.0	1.6	13.9	-10.3	-3.6
Spain	91.3	7.1	1.6	1.2	-0.8	-0.4
Austria	80.3	14.8	5.0	-0.3	0.6	-0.2
Portugal	90.9	8.0	1.2	0.2	0.0	-0.2
Finland	87.3	9.2	3.5	-1.9	1.1	0.8
Sweden	91.3	7.3	1.4	-0.1	0.4	-0.3
United Kingdom	86.4	10.9	2.7	1.0	0.2	-1.2
Bulgaria	92.0	6.4	1.6			
Czech Republic	88.1	8.2	3.6	-5.3	3.0	2.3
Estonia	87.2	11.8	1.0	0.0	0.8	-0.8
Cyprus	92.4	6.9	0.8			
Latvia	90.2	8.6	1.1	3.9	-3.4	-0.5
Lithuania	85.5	13.4	1.2	-6.0	6.2	-0.2
Hungary	92.1	6.6	1.3	12.0	-8.5	-3.5
Malta	94.8	4.9	0.7			
Poland	91.7	6.8	1.5	-2.3	2.0	0.4
Romania	92.0	6.4	1.6	2.0	-0.6	-1.4
Slovenia	92.9	6.0	1.1	0.5	0.7	-1.3
Slovakia	85.3	11.1	3.5	39.5	-26.4	-13.1

Source: Eurostat/TNO

6. Employment and entrepreneurs

Table 6.1 Share of employees, entrepreneurs and part-time employment in chemical products (NACE 24) compared

	Employment in sector 2006	Share of employees	Share of entrepreneurs	Share of part-time workers
EU	1 917 760	0.94	0.06	0.06
EU 6	1 114 201	0.94	0.06	0.08
EU 9	514 664	0.96	0.04	0.05
EU 15	1 628 865	0.95	0.05	0.07
NMS	288 895	0.92	0.08	0.01
Belgium	69 104	0.99	0.01	0.14
Germany	460 759	0.97	0.03	0.09
France	297 819	0.94	0.06	0.08
Italy	224 223	0.85	0.15	0.02
Luxembourg	1 050	0.83	0.17	0.03
Netherlands	61 246	0.97	0.03	0.18
Denmark	31 854	0.95	0.05	0.04
Ireland	25 429	0.98	0.02	0.03
Greece	18 049	0.90	0.10	0.00
Spain	138 495	0.99	0.01	0.01
Austria	25 564	0.91	0.09	0.11
Portugal	17 106	0.91	0.09	0.00
Finland	17 560	0.98	0.02	0.02
Sweden	45 690	0.87	0.13	0.07
United Kingdom	194 918	0.98	0.02	0.08
Bulgaria	23 681	0.82	0.18	0.02
Czech Republic	43 859	0.89	0.11	0.02
Estonia	2 926	0.92	0.08	0.04
Cyprus	1 762	0.90	0.10	0.00
Latvia	4 180	1.00	0.00	0.08
Lithuania	4 739	0.94	0.06	0.08
Hungary	32 326	0.97	0.03	0.02
Malta	935	0.86	0.14	0.04
Poland	104 210	0.93	0.07	0.00
Romania	48 487	0.96	0.04	0.02
Slovenia	13 030	0.87	0.13	0.02
Slovakia	8 760	0.87	0.13	0.01

Source: Eurostat/TNO

Table 6.2 Share of employees, entrepreneurs and part-time employment in rubber and plastic products (NACE 25) compared

	Employment in sector 2006	Share of employees	Share of entrepreneurs	Share of part-time workers
EU	1 834 575	0.92	0.08	0.05
EU 6	934 342	0.93	0.07	0.07
EU 9	464 065	0.96	0.04	0.05
EU 15	1 398 407	0.94	0.06	0.06
NMS	436 169	0.84	0.16	0.02
Belgium	26 552	0.94	0.06	0.12
Germany	394 182	0.95	0.05	0.09
France	256 727	0.95	0.05	0.06
Italy	214 311	0.88	0.12	0.04
Luxembourg	7 478	0.91	0.09	0.01
Netherlands	35 093	0.93	0.07	0.14
Denmark	22 321	0.93	0.07	0.08
Ireland	9 609	0.96	0.04	0.04
Greece	10 977	0.95	0.05	0.03
Spain	123 514	0.97	0.03	0.01
Austria	28 724	0.94	0.06	0.07
Portugal	25 387	0.91	0.09	0.00
Finland	17 562	0.89	0.11	0.01
Sweden	31 672	0.81	0.19	0.09
United Kingdom	194 299	1.00	0.00	0.08
Bulgaria	21 936	0.87	0.13	0.02
Czech Republic	110 562	0.71	0.29	0.02
Estonia	5 235	0.91	0.09	0.02
Cyprus	1 260	0.85	0.15	0.00
Latvia	4 684	0.96	0.04	0.09
Lithuania	9 689	0.97	0.03	0.09
Hungary	41 840	0.96	0.04	0.05
Malta	1 509	0.92	0.08	0.31
Poland	156 201	0.82	0.18	0.00
Romania	48 329	0.96	0.04	0.02
Slovenia	13 477	0.95	0.05	0.01
Slovakia	21 446	0.99	0.01	0.01

Source: Eurostat/TNO

7. Employment and occupations

Table 7.1 Employment by occupation in the chemical industries (NACE 24+25), 2006 (in thousands)

	TOTAL	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers
EU	3747	359	56	474	279	406	405	57	301	150	47	73	800	340
EU 6	2049	148	30	307	126	214	256	31	169	81	14	40	478	156
EU 9	979	149	19	89	110	114	98	13	59	33	16	19	159	103
EU 15	3027	309	49	392	237	320	354	45	224	114	30	57	635	261
NMS	720	62	7	78	43	78	51	13	74	36	18	15	164	81
Belgium	96	11	2	24	6	4	16	1	3	2	1	2	17	6
Germany	855	66	14	117	62	86	121	11	76	31	6	9	172	83
France	555	30	10	103	31	34	39	9	53	28	1	20	172	25
Italy	439	28	3	50	20	79	66	6	29	18	5	7	92	33
Luxembourg	9	0	0	2	1	1	2	0	2	0	0	0	0	0
Netherlands	96	12	2	9	6	11	11	4	5	2	1	1	24	8
Denmark	54	5	3	7	5	14	4	1	4	1	0	0	3	6
Ireland	35	4	0	5	2	4	3	1	3	1	0	0	7	4
Greece	29	2	0	1	4	4	5	2	1	1	1	0	4	3
Spain	262	24	4	18	40	37	26	3	17	7	4	9	41	32
Austria	54	4	1	6	6	5	5	2	4	2	1	0	7	11
Portugal	42	4	1	3	7	3	9	1	1	0	1	0	6	7
Finland	35	5	1	7	4	4	1	0	3	1	0	1	7	2
Sweden	77	8	2	14	8	9	5	2	7	1	0	2	15	5
United Kingdom	389	93	5	28	36	33	38	3	19	19	8	6	68	33
Bulgaria	46	4	1	4	1	2	2	1	5	2	2	0	13	10
Czech Republic	154	13	2	18	8	23	10	2	19	6	1	2	44	6
Estonia	8	1	0	1	0	1	0	0	1	0	0	0	3	1
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Latvia	9	2	0	1	1	0	0	1	1	1	0	0	1	1
Lithuania	14	1	0	1	1	1	0	1	2	3	0	0	2	2
Hungary	74	6	0	8	3	9	7	1	8	4	1	3	19	5
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Poland	260	26	2	25	24	23	23	5	19	14	7	7	49	37
Romania	97	3	1	13	1	11	4	2	15	4	5	1	20	15
Slovenia	27	2	0	5	3	4	3	1	2	0	0	1	5	1
Slovakia	30	3	1	3	1	4	2	1	3	2	0	1	8	3

Source: Alphametries/Eurostat/TNO

Table 7.2 Share of employment by occupation in the chemical industries (NACE 24+25), 2006 (in %)

	TOTAL	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers
EU	100	11	2	3	5	25	10	2	19	2	8	8	9	11
EU 6	100	8	2	4	3	26	11	3	18	2	6	6	8	8
EU 9	100	15	2	2	8	24	11	2	18	1	7	7	10	15
EU 15	100	11	2	3	5	25	11	3	18	1	7	7	9	11
NMS	100	9	4	4	5	22	9	2	20	2	14	14	11	9
Belgium	100	12	3	4	6	14	15	1	20	1	15	15	6	12
Germany	100	7	2	2	3	25	12	0	18	2	1	1	10	7
France	100	11	1	7	4	31	8	1	8	2	18	18	5	11
Italy	100	8	2	5	2	29	10	1	35	2	2	2	8	8
Luxembourg													5	
Netherlands	100	8	3	1	3	22	10	28	8	1	11	11	8	8
Denmark	100	8	3	7	12	25	9	1	19	0	6	6	10	8
Ireland	100	19	2	3	4	13	12	2	30	4	4	4	11	19
Greece	100	10	0	8	3	25	13	2	30	1	3	3	9	10
Spain	100	8	1	5	10	21	8	2	24	1	13	13	12	8
Austria	100	8	1	3	8	30	13	4	8	1	16	16	20	8
Portugal	100	7	3	2	5	19	8	0	32	1	17	17	16	7
Finland	100	17	1	5	8	31	5	1	8	1	16	16	7	17
Sweden	100	6	2	1	8	36	7	2	8	1	16	16	6	6
United Kingdom	100	21	3	1	7	22	13	2	16	1	0	0	9	21
Bulgaria	100	6	3	1	6	22	11	1	26	3	12	12	21	6
Czech Republic	100	9	6	2	4	24	9	1	19	4	13	13	4	9
Estonia	100	20	0	0	15	38	0	4	17	0	3	3	9	20
Cyprus														
Latvia	100	3	4	4	7	24	13	1	25	3	7	7	10	3
Lithuania	100	7	0	4	5	22	24	0	30	1	1	1	15	7
Hungary	100	14	3	0	5	15	9	3	38	2	7	7	7	14
Malta														
Poland	100	6	6	7	8	20	7	2	17	2	15	15	14	6
Romania	100	7	2	3	0	26	9	6	10	3	22	22	15	7
Slovenia	100	12	1	4	4	31	9	1	2	1	27	27	5	12
Slovakia	100	8	4	1	2	29	10	1	15	1	19	19	8	8

Source: Alphametrics/Eurostat/TNO

Table 7.3 Change in share of employment by occupation in the chemical industries (NACE 24+25), 2000-2006 (in %)

	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers
EU	0	0	1	1	0	-3	0	0	0	0	1	1	-1
EU 6	0	0	2	0	2	-2	0	0	0	0	1	-1	-1
EU 9	1	1	-1	2	2	-4	0	-1	0	1	0	0	-1
EU 15	1	0	1	1	2	-2	0	0	0	0	0	-1	-1
NMS	1	0	4	3	-12	-4	0	1	1	1	1	8	-5
Belgium	3	1	4	-1	0	-4	0	-1	-1	0	0	7	-10
Germany	1	0	-1	2	1	1	0	-1	-1	0	0	-2	0
France	-1	1	3	-1	1	-3	1	3	0	-1	1	-3	-2
Italy	0	0	5	-3	6	-7	-2	-2	1	0	1	0	1
Luxembourg	-3	-1	5	9	-6	1	-2	4	-2	-1	0	-6	2
Netherlands	-5	0	-2	4	2	2	1	-2	-1	0	0	1	0
Denmark	4	6	-13	3	13	-8	1	-2	0	0	0	1	-5
Ireland	0	0	4	1	4	-1	1	2	-2	0	-1	-13	4
Greece	-2	1	1	2	0	0	4	-1	2	2	-1	-5	-3
Spain	1	0	-1	0	1	-3	-1	0	0	0	2	2	-5
Austria	1	0	0	3	4	-12	2	-6	3	1	0	-7	12
Portugal	1	1	1	2	-1	2	-2	-2	-3	0	0	2	-2
Finland	-3	0	7	1	-2	-2	-1	-2	-1	0	1	5	-3
Sweden	5	1	-2	-4	6	-4	2	3	-3	1	0	-5	1
United Kingdom	3	0	-1	3	0	-5	0	-1	0	1	-1	1	-1
Bulgaria	4	1	-1	1	-9	-1	0	-2	1	2	-2	5	2
Czech Republic	4	0	2	3	-1	2	-2	0	0	-2	1	8	-16
Estonia	-5	0	8	6	7	-19	0	-10	-2	4	0	24	-13
Cyprus													
Latvia	-26	0	4	6	6	2	9	-10	6	0	1	9	-7
Lithuania	-8	0	-16	9	-3	2	1	3	6	1	1	2	3
Hungary	-3	0	4	-3	0	-3	0	-3	-3	0	1	10	1
Malta													
Poland													
Romania	-3	1	14	1	-38	-15	1	16	4	5	1	21	-8
Slovenia	-2	0	9	3	4	-4	-1	-2	-1	-2	0	-6	3
Slovakia	5	2	-2	-1	2	1	0	-2	2	-3	2	-1	-5

Source: AlphametRICS/Eurostat/TNO

8. Occupations and gender

Table 8.1 Share of males in employment by occupation in the chemicals industries (NACE 24+25), 2006 (in %)

	TOTAL	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers
EU	59	67	84	74	52	49	26	56	74	89	70	70	58	59
EU 6	59	66	84	81	53	49	30	65	80	84	69	69	58	59
EU 9	61	67	86	64	54	54	20	37	74	91	77	77	62	61
EU 15	60	67	85	75	53	51	26	59	77	87	73	73	60	60
NMS	54	70	80	73	42	38	27	52	56	96	64	64	50	54
Belgium	63	70	89	81	44	63	28	19	77	98	68	68	80	63
Germany	56	74	80	83	47	45	28	51	80	86	54	54	56	56
France	60	46	100	82	45	54	31	13	84	80	66	66	46	60
Italy	64	75	86	77	87	46	33	69	79	83	72	72	68	64
Luxembourg													68	
Netherlands	66	73	80	83	59	58	35	71	67	78	88	88	71	66
Denmark	59	69	65	48	51	58	23	50	88		67	67	58	59
Ireland	66	66	81	69	52	63	24	54	83	92	56	56	52	66
Greece	64	83	100	42	90	54	39	34	76	100	77	77	67	64
Spain	67	81	88	69	61	54	27	56	77	100	77	77	69	67
Austria	54	79	58	80	34	45	16	26	64	100	89	89	61	54
Portugal	58	43	80	53	47	36	52	100	59	100	78	78	39	58
Finland	50	62	86	71	25	42	10	0	36	100	66	66	62	50
Sweden	59	45	84	77	60	53	30	35	63	62	81	81	28	59
United Kingdom	59	65	90	81	53	57	13	31	75	88			67	59
Bulgaria	45	61	81	100	22	25	40	100	33	100	55	55	52	45
Czech Republic	56	70	82	31	58	48	23	0	70	98	61	61	45	56
Estonia	46	69			41	45		46	39		0	0	35	46
Cyprus														
Latvia	52	39	74	38	19	35	38	0	67	100	61	61	39	52
Lithuania	50	84		35	0	70	0		71	100	100	100	74	50
Hungary	53	70	100	100	49	31	42	46	50	100	60	60	36	53
Malta														
Poland	57	75	79	89	43	30	33	58	60	100	71	71	53	57
Romania	51	66	52	42	100	40	14	58	45	83	56	56	45	51
Slovenia	57	57	60	100	29	53	39	23	8	20	70	70	77	57
Slovakia	44	71	100	25	62	20	23	100	50	100	56	56	54	44

Source: Alphametrics/Eurostat/TNO

Table 8.2 Change in share of male employment by occupation in the chemical industries
(NACE 24+25), 2000-2006 (in %)

	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers	Total
EU	-4	0	-4	-5	-5	3	-17	1	5	1	1	-4	2	-1
EU 6	-7	-1	-3	-4	-7	2	-16	2	6	2	1	-3	-1	-2
EU 9	0	0	1	-7	-2	-1	-12	-2	6	-2	-4	-2	9	1
EU 15	-3	1	-2	-4	-6	1	-12	0	5	1	-1	-2	4	-1
NMS	-4	0	-15	17	-9	16	-33	1	2	4	15	5	1	6
Belgium	-6	51	0	0	-16	4	18	0	15	0	0	2	2	2
Germany	-9	0	-2	-4	-4	-4	-8	2	-8	4	0	-3	0	-5
France	-10	4	-4	7	-19	13	6	-1	19	0	3	-4	-6	0
Italy	0	-13	-9	-16	-9	4	-22	10	17	0	-4	-1	-2	-1
Luxembourg	47	0	2		-15	-12	0	0	0			7	38	-2
Netherlands	-1	6	-6	10	1	5	18	-1	12	0	0	3	26	1
Denmark	17		7	5	-3	-28		0	47		-28	18	2	1
Ireland	-10	5	4	-16	-11	-3	-32	-10	1	0	4	4	3	-5
Greece	-2		-24	2	-1	-12	39	0	-18	0	0	15	17	2
Spain	-10	-39	7	2	2	8	-33	0	-6	0	-2	4	8	4
Austria	22	-13	0	-34	8	4	-59	-2	6	-5	0	-8	-11	-3
Portugal	-2	46	18	3	9	16	-8	0	58	0	0	-10	20	10
Finland	10	26	-10	10	-9	-1	45	1	-4	0	-8	0	8	5
Sweden	-11	6	0	2	9	23		-5	-2		-18	-8	-16	-1
United Kingdom	1	10	0	-19	-2	-11	-13	-3	5	0	-2	-6	16	0
Bulgaria	-19	61	-3	1	-11	42	-26	-4	-31	0	23	9	-2	4
Czech Republic	-5	32	-17	12	-14	-8	-56	4	6	10	39	-6	5	-2
Estonia	-53							0	-21			42	-27	-19
Cyprus														
Latvia	-9		-39					0					39	-9
Lithuania	42		-41		6		79	-1	-2			40	-8	6
Hungary	-7	0	2	10	12	9	-18	1	20	0	7	-12	-8	1
Malta														
Poland														
Romania	-17				1	10	-34						-12	18
Slovenia	-6	-55	9	-1	-27	25	-66	-7	0	7	0	6	62	-2
Slovakia	6	-19	9	19	19	25	-37	-3	3	0		-21	1	-1

Source: Alphametrics/Eurostat/TNO

Table 8.3 Share of females in employment by occupation in the chemicals industries
(NACE 24+25), 2006 (in %)

	TOTAL	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers
EU	41	33	16	26	48	51	74	44	26	11	30	30	42	41
EU 6	41	34	16	19	47	51	70	35	20	16	31	31	42	41
EU 9	39	33	14	36	46	46	80	63	26	9	23	23	38	39
EU 15	40	33	15	25	47	49	74	41	23	13	27	27	40	40
NMS	46	30	20	27	58	62	73	48	44	4	36	36	50	46
Belgium	37	30	11	19	56	37	72	81	23	2	32	32	20	37
Germany	44	26	20	17	53	55	72	49	20	14	46	46	44	44
France	40	54	0	18	55	46	69	87	16	20	34	34	54	40
Italy	36	25	14	23	13	54	67	31	21	17	28	28	32	36
Luxembourg													32	
Netherlands	34	27	20	17	41	42	65	29	33	22	12	12	29	34
Denmark	41	31	35	52	49	42	77	50	12		33	33	42	41
Ireland	34	34	19	31	48	37	76	46	17	8	44	44	48	34
Greece	36	17	0	58	10	46	61	66	24	0	23	23	33	36
Spain	33	19	12	31	39	46	73	44	23	0	23	23	31	33
Austria	46	21	42	20	66	55	84	74	36	0	11	11	39	46
Portugal	42	57	20	47	53	64	48	0	41	0	22	22	61	42
Finland	50	38	14	29	75	58	90	100	64	0	34	34	38	50
Sweden	41	55	16	23	40	47	70	65	37	38	19	19	72	41
United Kingdom	41	35	10	19	47	43	87	69	25	12			33	41
Bulgaria	55	39	19	0	78	75	60	0	67	0	45	45	48	55
Czech Republic	44	30	18	69	42	52	77	100	30	2	39	39	55	44
Estonia	54	31			59	55		54	61		100	100	65	54
Cyprus														
Latvia	48	61	26	62	81	65	62	100	33	0	39	39	61	48
Lithuania	50	16		65	100	30	100		29	0	0	0	26	50
Hungary	47	30	0	0	51	69	58	54	50	0	40	40	64	47
Malta														
Poland	43	25	21	11	57	70	67	42	40	0	29	29	47	43
Romania	49	34	48	58	0	60	86	42	55	17	44	44	55	49
Slovenia	43	43	40	0	71	47	61	77	92	80	30	30	23	43
Slovakia	56	29	0	75	38	80	77	0	50	0	44	44	46	56

Source: Alphametrics/Eurostat/TNO

Table 8.4 Change in share of female employment by occupation in the chemical industries
(NACE 24+25), 2000-2006 (in %)

	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers	Total
EU	4	0	4	5	5	-3	17	-1	-5	-1	-1	4	-2	1
EU 6	7	1	3	4	7	-2	16	-2	-6	-2	-1	3	1	2
EU 9	0	0	-1	7	2	1	12	2	-6	2	4	2	-9	-1
EU 15	3	-1	2	4	6	-1	12	0	-5	-1	1	2	-4	1
NMS	4	0	15	-17	9	-16	33	-1	-2	-4	-15	-5	-1	-6
Belgium	6	-51	0	0	16	-4	-18	0	-15	0	0	-2	-2	-2
Germany	9	0	2	4	4	4	8	-2	8	-4	0	3	0	5
France	10	-4	4	-7	19	-13	-6	1	-19	0	-3	4	6	0
Italy	0	13	9	16	9	-4	22	-10	-17	0	4	1	2	1
Luxembourg	-47	0	-2		15	12	0	0	0			-7	-38	2
Netherlands	1	-6	6	-10	-1	-5	-18	1	-12	0	0	-3	-26	-1
Denmark	-17		-7	-5	3	28		0	-47		28	-18	-2	-1
Ireland	10	-5	-4	16	11	3	32	10	-1	0	-4	-4	-3	5
Greece	2		24	-2	1	12	-39	0	18	0	0	-15	-17	-2
Spain	10	39	-7	-2	-2	-8	33	0	6	0	2	-4	-8	-4
Austria	-22	13	0	34	-8	-4	59	2	-6	5	0	8	11	3
Portugal	2	-46	-18	-3	-9	-16	8	0	-58	0	0	10	-20	-10
Finland	-10	-26	10	-10	9	1	-45	-1	4	0	8	0	-8	-5
Sweden	11	-6	0	-2	-9	-23		5	2		18	8	16	1
United Kingdom	-1	-10	0	19	2	11	13	3	-5	0	2	6	-16	0
Bulgaria	19	-61	3	-1	11	-42	26	4	31	0	-23	-9	2	-4
Czech Republic	5	-32	17	-12	14	8	56	-4	-6	-10	-39	6	-5	2
Estonia	53							0	21			-42	27	19
Cyprus														
Latvia	9		39					0					-39	9
Lithuania	-42		41		-6		-79	1	2			-40	8	-6
Hungary	7	0	-2	-10	-12	-9	18	-1	-20	0	-7	12	8	-1
Malta														
Poland														
Romania	17				-1	-10	34						12	-18
Slovenia	6	55	-9	1	27	-25	66	7	0	-7	0	-6	-62	2
Slovakia	-6	19	-9	-19	-19	-25	37	3	-3	0		21	-1	1

Source: Alphametrics/Eurostat/TNO

9. Occupations and level of education

Table 9.1 Share of low educated* in employment by occupation in the chemical industry
(NACE 24+25) 2006 (in %)

	TOTAL	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers
EU	22	12	7	10	12	6	22	51	30	21	31	31	44	22
EU 6	25	10	9	15	13	9	20	73	29	22	32	32	50	25
EU 9	26	18	12	8	15	6	31	24	41	31	52	52	55	26
EU 15	25	14	10	12	14	7	24	63	34	25	40	40	51	25
NMS	5	0	0	1	1	1	4	9	8	6	8	8	21	5
Belgium	18	4	2	7	0	4	11	49	23	19	35	35	43	18
Germany	21	4	4	5	5	4	13	51	13	17	20	20	39	21
France	22	15	40	26	14	17	29	13	26	0	28	28	61	22
Italy	31	14	3	7	37	10	26	50	50	71	60	60	66	31
Luxembourg													83	
Netherlands	39	12	8	25	23	6	32	82	32	14	38	38	59	39
Denmark	20	7	9	4	11	3	17	50	15		50	50	44	20
Ireland	22	10	0	11	11	5	18	16	35	41	39	39	28	22
Greece	16	20	0	0	0	1	9	0	29	83	30	30	60	16
Spain	33	21	20	7	15	6	17	36	56	36	61	61	72	33
Austria	10	4	41	0	12	2	9	17	17	0	13	13	42	10
Portugal	56	38	67	21	9	6	72	100	75	100	91	91	73	56
Finland	22	14	0	23	25	9	29	37	30	0	39	39	48	22
Sweden	20	14	22	16	4	6	21	29	14	48	31	31	40	20
United Kingdom	23	18	5	17	19	6	39	18	32	22			46	23
Bulgaria	4	0	0	0	0	0	0	0	9	7	13	13	26	4
Czech Republic	5	0	0	0	0	0	9	0	4	0	4	4	24	5
Estonia	2	0			0	0		0	9		0	0	22	2
Cyprus														
Latvia	5	0	0	0	0	0	0	100	4	49	8	8	0	5
Lithuania	7	0		35	34	0	0		3	100	0	0	5	7
Hungary	12	0	0	0	0	7	11	0	15	0	37	37	46	12
Malta														
Poland	3	0	0	0	0	0	0	0	3	0	8	8	14	3
Romania	3	0	0	0	0	0	4	20	12	8	1	1	27	3
Slovenia	10	0	0	0	7	4	19	28	29	20	12	12	63	10
Slovakia	3	0	0	0	0	0	0	0	2	0	7	7	10	3

* low education (ISCED level 1+2) / Source: Alphametrics/Eurostat/TNO

Table 9.2 Change in share of low educated* employees by occupation in the chemical industries
(NACE 24+25), 2000-2006 (in %)

	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers	Total
EU	-2	-5	0	-2	-1	-3	-15	-5	-6	-11	-12	-9	-10	-5
EU 6	-2	-7	0	1	0	0	-17	-1	0	9	-16	-4	-1	-3
EU 9	-1	-2	3	-4	-3	-7	-11	-4	-2	-15	10	-7	-18	-6
EU 15	-1	-4	1	0	-1	-2	-14	-1	-2	2	-9	-5	-8	-4
NMS	-1	0	0	0	-2	1	-8	-6	-9	-17	-37	-12	-12	-6
Belgium	2	0	-4	5	-26	-2	-20	3	7	12	-46	-25	7	-6
Germany	-3	-2	-1	3	2	-2	-18	2	2	9	-16	-1	-3	-1
France	0	0	-3	7	8	20	-16	-1	-18	-50	-10	-5	1	-3
Italy	-8	-18	13	-3	-3	-1	-20	-8	15	-10	-22	-10	-8	-5
Luxembourg	65	23	0	0	0	2	-100	-27	-49	0	0	63	13	-5
Netherlands	2	-28	-2	-2	-15	-14	20	10	-32	0	-27	-12	7	-6
Denmark	7	0	8	-14	2	-8	0	-21	-44	0	57	59	-13	-4
Ireland	-1	0	-3	-3	-3	-11	-4	-6	-11	-12	15	0	-32	-9
Greece	-12	0	6	0	0	-6	-37	-7	87	-35	43	-11	8	-6
Spain	-4	-20	0	-1	-10	-6	17	-1	2	-16	-7	-20	0	-7
Austria	3	0	0	1	4	-2	-55	7	1	35	1	-1	6	4
Portugal	2	-13	2	-13	-11	-20	-39	-16	0	0	0	-1	-18	-13
Finland	4	7	12	-5	4	-2	16	-13	47	-20	46	2	3	2
Sweden	-22	0	0	-21	4	6	0	-16	11	0	-8	-8	-19	-6
United Kingdom	1	8	4	2	1	-9	11	-5	-3	-17	0	-9	-35	-6
Bulgaria	0	0	-6	0	-2	-7	-18	-1	-25	-1	-49	-12	-5	-7
Czech Republic	1	0	1	0	-6	5	-5	-8	-10	-34	-18	-10	-16	-11
Estonia	7	0	0	0	0	0	0	9	60	0	0	6	22	9
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Latvia	0	0	14	0	0	0	0	-65	0	0	0	0	-54	-16
Lithuania	0	0	0	0	0	0	21	0	15	0	0	-1	-14	2
Hungary	-1	0	-1	0	3	-2	7	-1	-12	5	-25	-7	-6	-1
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Poland	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	-8	0	0	0	-2	0	6	0	0	0	0	0	-2	-2
Slovenia	7	0	3	0	0	-1	-56	-10	-50	-37	-14	-5	-37	-8
Slovakia	0	0	0	0	-5	8	35	4	-9	0	0	0	-1	0

* low education (ISCED level 1+2)

Source: Alphametrics/Eurostat/TNO

Table 9.3 Share of medium educated* employees by occupation in the chemicals industry, 2006 (in %)

	TOTAL	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers
EU	50	42	40	50	40	39	61	41	61	70	62	62	52	50
EU 6	50	43	50	48	40	43	65	21	61	68	61	61	48	50
EU 9	42	39	25	43	38	33	48	61	48	56	42	42	37	42
EU 15	47	41	38	45	38	39	58	30	56	64	53	53	44	47
NMS	67	46	48	69	46	41	81	88	86	91	87	87	77	67
Belgium	40	24	36	54	23	16	34	37	65	45	50	50	47	40
Germany	58	47	54	43	52	53	75	41	78	77	73	73	58	58
France	39	29	0	33	33	19	58	41	34	81	65	65	37	39
Italy	53	59	67	75	39	55	58	40	48	22	40	40	33	53
Luxembourg													17	
Netherlands	38	44	62	38	20	37	49	16	53	86	59	59	38	38
Denmark	52	59	22	85	51	42	57	50	79		36	36	55	52
Ireland	46	43	0	43	21	40	54	52	55	37	47	47	49	46
Greece	62	60	0	67	2	56	90	100	60	8	67	67	38	62
Spain	26	28	7	13	23	19	35	30	29	56	29	29	17	26
Austria	72	73	32	100	56	58	90	74	80	74	86	86	53	72
Portugal	18	26	33	33	14	19	24	0	18	0	9	9	16	18
Finland	43	22	35	39	36	37	55	63	64	66	59	59	40	43
Sweden	55	31	45	56	62	53	67	59	77	52	62	62	60	55
United Kingdom	44	41	26	42	44	28	44	71	57	64			48	44
Bulgaria	57	19	64	100	20	13	87	35	76	93	75	75	73	57
Czech Republic	77	61	45	49	87	65	79	100	95	100	96	96	76	77
Estonia	48	43			44	25		100	78		100	100	27	48
Cyprus														
Latvia	64	61	26	100	56	45	60	0	82	51	92	92	74	64
Lithuania	48	0		0	0	14	70		79	0	100	100	92	48
Hungary	66	48	33	69	49	46	88	100	78	100	59	59	54	66
Malta														
Poland	66	57	47	79	38	31	77	100	94	91	82	82	84	66
Romania	69	14	71	50	0	35	94	74	88	92	97	97	73	69
Slovenia	66	37	60	34	53	59	81	72	71	80	88	88	37	66
Slovakia	78	48	90	75	100	58	86	100	95	100	93	93	84	78

* medium educated (ISCED level 3+4)

Source: Alphametrics/Eurostat/TNO

Table 9.4 Change in share of medium educated* employees by occupation in the chemical industries (NACE 24+25), 2000-2006 (in %)

	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers	Total
EU	3	-10	5	-4	-2	1	4	5	9	9	10	8	10	3
EU 6	5	-13	4	-3	1	0	4	1	5	-9	14	3	2	1
EU 9	-2	-8	1	0	-7	-3	11	0	-1	11	-15	3	15	0
EU 15	1	-10	4	-3	-2	0	5	0	4	-4	7	3	7	1
NMS	10	-11	-12	-22	6	-3	-13	7	14	17	35	13	12	6
Belgium	-4	-27	1	-21	10	-1	18	4	0	-12	46	20	-8	0
Germany	3	-4	7	4	1	5	13	2	-1	-9	16	0	5	2
France	1	-9	4	-12	-8	-16	-12	-8	27	50	10	3	0	0
Italy	13	-11	-4	2	6	-1	21	8	-12	10	15	8	8	2
Luxembourg	-13	3	-23	0	-42	-2	100	27	49	0	0	-63	-13	-7
Netherlands	4	-19	5	-6	-4	-1	-32	-12	25	0	24	8	-8	1
Denmark	6	0	-7	0	-47	8	0	18	14	0	-57	-42	12	-12
Ireland	-6	-22	-11	-16	-4	5	16	-3	6	4	6	-1	13	-5
Greece	-11	0	19	13	15	1	22	7	-87	35	-43	9	-5	6
Spain	-12	-28	11	-4	-19	-11	-17	-1	3	1	-4	14	2	-3
Austria	-5	15	2	-12	50	0	44	-10	-2	-35	-1	-4	-7	-5
Portugal	-10	-54	-8	-1	-35	10	39	16	0	0	0	-6	6	0
Finland	4	-29	10	18	-11	-11	-16	5	-79	20	-46	-11	-10	-2
Sweden	11	-48	6	24	6	-7	0	6	-11	0	2	2	19	2
United Kingdom	-1	17	0	-2	1	0	-7	5	0	17	-1	8	29	3
Bulgaria	-34		-13	-22	-29	-21	9	-6	12	1	49	12	4	-1
Czech Republic	-4	4	-7	20	12	-2	3	9	10	34	18	9	16	8
Estonia	6	0	0	0	0	0	0	-1	-60	0	0	69	-10	18
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Latvia	69	0	32	0	0	0	0	65	0	0	0	0	27	53
Lithuania	-7	0	-21	0	37	0	-21	0	26	0	0	-12	37	15
Hungary	15	11	-12	-13	-13	-7	-7	0	17	-5	25	6	6	-1
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Poland	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	8	0	0	0	-1	-2	-23	0	0	0	0	0	2	14
Slovenia	-37	-39	-6	17	2	11	56	10	50	37	14	6	37	3
Slovakia	11	43	-17	-67	-17	-8	-35	-4	9	0	0	-1	-4	-7

* medium educated (ISCED level 3+4)

Source: Alphametrics/Eurostat/TNO

Table 9.5 Share of high educated* employees by occupation in the chemicals industry, (NACE 24+25), 2006 (in %)

	TOTAL	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers
EU	28	46	53	39	48	55	18	8	10	9	6	6	4	28
EU 6	25	48	41	37	47	49	16	6	10	10	7	7	2	25
EU 9	33	43	63	49	47	62	21	15	11	13	7	7	8	33
EU 15	28	45	52	42	47	54	18	7	11	11	7	7	5	28
NMS	27	54	52	30	53	58	15	4	6	3	5	5	2	27
Belgium	42	72	62	39	76	81	55	14	12	36	15	15	10	42
Germany	22	48	42	52	43	43	12	8	9	6	7	7	2	22
France	38	56	60	41	53	64	13	45	40	19	7	7	2	38
Italy	17	28	29	18	24	36	15	10	2	7	0	0	1	17
Luxembourg													0	
Netherlands	23	44	30	37	57	57	19	2	15	0	3	3	3	23
Denmark	28	34	69	11	38	55	26	0	6		14	14	1	28
Ireland	32	47	100	46	68	55	28	32	10	22	13	13	23	32
Greece	22	20	100	33	98	42	1	0	11	9	3	3	2	22
Spain	41	51	73	80	62	75	48	35	15	8	10	10	10	41
Austria	19	23	28	0	32	41	2	9	3	26	1	1	5	19
Portugal	25	36	0	47	78	75	4	0	7	0	0	0	11	25
Finland	35	64	65	38	40	54	17	0	6	34	2	2	12	35
Sweden	25	55	33	28	34	40	12	12	9	0	7	7	0	25
United Kingdom	33	42	69	41	37	66	17	11	11	14			7	33
Bulgaria	38	81	36	0	80	87	13	65	15	0	12	12	2	38
Czech Republic	18	39	55	51	13	35	13	0	2	0	0	0	0	18
Estonia	51	57			56	75		0	13		0	0	50	51
Cyprus														
Latvia	30	39	74	0	44	55	40	0	15	0	0	0	26	30
Lithuania	45	100		65	66	86	30		18	0	0	0	3	45
Hungary	22	52	67	31	51	47	1	0	8	0	4	4	0	22
Malta														
Poland	30	43	53	21	62	69	23	0	3	9	11	11	1	30
Romania	27	86	29	50	100	65	3	7	0	0	1	1	0	27
Slovenia	24	63	40	66	40	37	0	0	0	0	0	0	0	24
Slovakia	19	52	10	25	0	42	14	0	4	0	0	0	6	19

* high educated (ISCED level 5+6)

Source: Alphametrics/Eurostat/TNO

Table 9.6 Change in share of high educated* workers in employment by occupation in the chemical industries (NACE 24+25), 2000-2006 (in %)

	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers	Total
EU	-1	15	-5	6	2	2	11	0	-3	1	3	1	0	2
EU 6	-2	20	-5	2	-1	0	13	0	-5	0	1	1	-1	1
EU 9	3	10	-4	3	10	10	0	4	3	4	6	4	3	6
EU 15	0	15	-5	3	3	2	9	1	-2	2	2	2	1	3
NMS	-9	11	12	22	-4	1	21	0	-5	0	2	-1	0	0
Belgium	1	27	3	17	15	3	2	-7	-7	0	0	5	1	6
Germany	0	6	-6	-6	-3	-3	5	-4	-2	0	0	1	-1	-1
France	-1	9	0	6	-1	-4	27	9	-9	0	0	2	0	3
Italy	-5	29	-8	1	-3	2	-1	0	-3	0	7	2	0	3
Luxembourg	-52	-26	23	0	42	0	0	0	0	0	0	0	0	12
Netherlands	-7	47	-3	8	19	15	12	2	7	0	3	5	1	5
Denmark	-13	0	-1	14	45	0	0	3	29	0	0	-17	1	16
Ireland	7	22	14	18	7	5	-13	9	5	8	-21	1	18	14
Greece	23	0	-25	-13	-15	4	15	0	0	0	0	2	-3	0
Spain	16	48	-11	5	29	17	0	2	-5	15	10	6	-2	10
Austria	2	-15	-1	11	-54	2	10	3	0	0	0	5	1	1
Portugal	7	67	6	14	46	10	0	0	0	0	0	7	11	13
Finland	-8	22	-22	-13	6	14	0	8	32	0	0	10	7	0
Sweden	11	48	-7	-4	-10	1	0	10	0	0	6	6	0	5
United Kingdom	1	-25	-4	1	-2	9	-4	0	3	0	2	1	6	4
Bulgaria	34	100	19	22	32	28	9	7	13	0	0	0	0	8
Czech Republic	3	-4	6	-20	-6	-3	2	-1	0	0	0	1	0	2
Estonia	-13	0	0	0	0	0	0	-8	0	0	0	-76	-12	-26
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Latvia	-69	0	-45	0	0	0	0	0	0	0	0	0	26	-37
Lithuania	7	0	21	0	-37	0	0	0	-41	0	0	13	-23	-18
Hungary	-14	-11	12	13	10	9	0	1	-5	0	0	1	0	1
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Poland	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	0	0	0	0	4	2	18	0	0	0	0	0	0	-12
Slovenia	31	39	3	-17	-2	-10	0	0	0	0	0	-2	0	5
Slovakia	-11	-43	17	67	22	0	0	0	0	0	0	0	6	8

* high educated (ISCED level 5+6)

Source: Alphametrics/Eurostat/TNO

10. Occupations and age

Table 10.1 Share of younger workers (15-39 years) in employment by occupation in the chemical industries (NACE 24+25), 2006 (in %)

	TOTAL	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers
EU	52	42	73	55	56	53	47	73	51	43	53	53	52	52
EU 6	49	38	65	45	56	52	46	81	47	54	44	44	47	49
EU 9	52	45	69	61	53	56	45	65	50	30	55	55	52	52
EU 15	50	41	66	51	53	53	46	78	48	47	49	49	48	50
NMS	58	41	86	72	68	53	55	52	63	37	62	62	63	58
Belgium	50	50	83	56	58	41	51	8	40	20	56	56	51	50
Germany	45	32	59	47	42	46	46	21	43	48	48	48	44	45
France	50	50	73	38	67	59	35	75	51	74	38	38	55	50
Italy	53	36	78	52	77	56	56	48	50	61	64	64	50	53
Luxembourg													29	
Netherlands	57	27	49	35	60	49	39	89	47	18	49	49	43	57
Denmark	54	29	83	53	65	48	58	100	47		53	53	59	54
Ireland	59	56	85	74	64	64	64	79	52	52	68	68	70	59
Greece	60	46	0	91	51	62	69	98	54	77	59	59	72	60
Spain	55	29	66	72	49	61	60	51	51	42	63	63	65	55
Austria	55	54	95	44	57	58	55	58	63	57	48	48	54	55
Portugal	68	49	46	51	59	72	69	0	68	0	71	71	61	68
Finland	38	30	71	21	27	44	49	39	32	81	31	31	50	38
Sweden	48	35	48	68	43	50	41	49	37	40	36	36	44	48
United Kingdom	49	48	72	30	56	55	34	72	46	6			32	49
Bulgaria	52	51	92	0	67	38	54	0	62	0	63	63	58	52
Czech Republic	51	46	76	35	41	47	43	0	60	40	66	66	43	51
Estonia	59	78			56	62		54	50		0	0	28	59
Cyprus														
Latvia	61	39	26	100	56	59	67	100	63	49	34	34	11	61
Lithuania	61	92		65	100	66	36		70	0	0	0	67	61
Hungary	50	23	100	69	69	44	51	78	54	0	60	60	46	50
Malta														
Poland	65	37	92	78	77	54	64	55	72	58	62	62	67	65
Romania	61	36	100	74	100	60	62	47	72	21	60	60	73	61
Slovenia	56	46	14	71	40	60	61	23	52	100	64	64	57	56
Slovakia	64	56	87	100	100	55	65	0	54	55	71	71	67	64

Source: Alphametrics/Eurostat/TNO

Table 10.2 Change in share of younger workers (15-39 years) in employment by occupation in the chemical industries (NACE 24+25), 2000-2006 (in %)

	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers	Total
EU	1	-7	-6	-1	2	0	-6	-4	2	-5	0	-6	-6	-3
EU 6	-1	-7	-6	-5	-2	-2	-9	1	0	-23	-14	-8	-10	-5
EU 9	-3	-13	-9	-8	3	0	-5	-13	-7	-6	16	-5	-9	-5
EU 15	-2	-8	-7	-5	-1	-2	-8	-3	-4	-14	-4	-8	-10	-5
NMS	16	0	9	32	8	15	5	-3	20	6	14	1	6	8
Belgium	-3	29	-6	11	14	1	1	22	-23	-1	-8	13	-28	-2
Germany	-5	-11	-12	-3	-7	2	-8	-3	-13	-21	-13	-8	-7	-6
France	14	0	-1	-7	-3	-17	-7	4	20	-53	-15	-13	5	-4
Italy	-7	-15	-8	-6	3	1	-2	7	-10	-27	-21	0	-21	-3
Luxembourg	-73	-58	7		15	0	-100	-11	-29			0	-1	-4
Netherlands	-1	18	2	4	-12	-13	-31	-23	-4	-43	-2	-23	-13	-10
Denmark	-45		-5	10	0	40		-15	19		-100	-12	-7	-2
Ireland	-8	-28	3	7	6	-2	-5	17	-8	-12	28	-10	-7	-2
Greece	11		-36	-5	17	9	2	0	-50	35	-77	-5	9	4
Spain	8	21	-2	-9	7	-8	-8	-8	32	19	29	10	-2	1
Austria	8	-31	10	-9	-12	13	17	-18	-16	52	97	6	0	1
Portugal	-17	-54	-2	-23	4	-10	-35	4	25	-34	88	15	10	-6
Finland	-17	-22	-4	-14	-17	-8	67	1	-20	-100	-54	1	-3	-8
Sweden	11	0	9	-27	15	-6		-9	-19		55	1	-21	-2
United Kingdom	-4	-8	-26	0	5	-2	13	-23	-20	-23	-10	-16	-24	-10
Bulgaria	16	39	-12	-29	29	0	-65	1	37	6	13	5	2	5
Czech Republic	8	-7	0	48	-1	-9	-26	9	-4	-10	-13	1	4	3
Estonia	41							-83	60			-75	28	-6
Cyprus														
Latvia	52		55					90					11	49
Lithuania	13		17		52		0	-21	31			48	39	28
Hungary	12	-50	20	14	-7	3	-19	-25	2	2	7	-3	3	1
Malta														
Poland														
Romania	15				18	25	40						-7	6
Slovenia	-14	-10	-7	16	23	-11	39	28	-17	-16	13	-10	57	3
Slovakia	11	7	13	33	8	-21	31	9	3	-7		-2	8	4

Source: Alphametrix/Eurostat/TNO

Table 10.3 Share of workers (40-49 years) in employment by occupation in the chemical industries (NACE 24+25), 2006 (in %)

	TOTAL	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers
EU	25	28	18	26	24	25	29	15	25	30	27	27	27	25
EU 6	27	32	26	32	23	28	32	9	28	25	32	32	31	27
EU 9	23	25	18	23	25	20	25	24	24	34	23	23	24	23
EU 15	26	28	23	29	25	25	29	12	26	28	28	28	28	26
NMS	22	29	8	12	20	23	28	25	18	36	24	24	23	22
Belgium	29	37	15	26	24	32	30	71	31	45	23	23	32	29
Germany	26	32	26	23	27	29	27	63	27	26	30	30	32	26
France	32	34	27	38	21	30	51	0	25	18	35	35	26	32
Italy	27	24	17	33	13	25	30	27	30	27	14	14	33	27
Luxembourg													71	
Netherlands	22	36	46	31	23	27	26	4	28	33	31	31	27	22
Denmark	19	27	0	14	29	22	11	0	23		14	14	22	19
Ireland	21	22	12	6	13	20	20	10	24	27	23	23	19	21
Greece	25	15	0	7	47	24	29	2	29	7	16	16	17	25
Spain	24	29	34	22	27	26	24	43	23	27	18	18	22	24
Austria	22	21	5	20	13	22	12	24	25	43	32	32	25	22
Portugal	17	32	54	49	22	11	11	100	13	0	19	19	23	17
Finland	30	31	23	38	32	25	32	42	37	19	33	33	20	30
Sweden	24	19	30	16	28	21	26	29	31	35	30	30	22	24
United Kingdom	23	25	14	46	23	17	29	18	25	43			28	23
Bulgaria	19	41	8	100	7	16	30	0	13	39	7	7	22	19
Czech Republic	22	23	19	37	28	26	40	0	13	40	15	15	24	22
Estonia	21	5			21	18		0	34		61	61	13	21
Cyprus														
Latvia	26	61	0	0	44	22	16	0	29	51	66	66	12	26
Lithuania	34	8		35	0	27	64		18	100	100	100	19	34
Hungary	23	41	0	0	31	14	21	22	18	65	22	22	33	23
Malta														
Poland	19	33	4	7	17	22	14	13	17	28	29	29	24	19
Romania	21	19	0	8	0	23	28	48	20	17	24	24	21	21
Slovenia	26	12	40	0	15	27	14	18	44	0	26	26	26	26
Slovakia	23	37	13	0	0	34	14	0	23	45	16	16	4	23

Source: Alphametrics/Eurostat/TNO

Table 10.4 Change in share of workers (40-49 years) in employment by occupation in the chemical industries (NACE 24+25), 2000-2006 (in %)

	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers	Total
EU	2	9	5	0	-2	-3	2	-2	2	1	1	3	2	1
EU 6	4	10	7	0	1	-1	2	-3	4	7	7	4	5	3
EU 9	5	15	3	4	-1	-2	5	2	8	0	-4	2	2	2
EU 15	5	11	6	1	1	-2	3	-2	6	2	4	4	3	3
NMS	-12	-4	-9	-19	-9	-18	-5	0	-11	4	-11	-3	-4	-8
Belgium	4	20	1	-25	-11	-6	25	-10	29	45	11	12	18	3
Germany	9	5	11	-2	3	-3	-4	-1	7	-4	3	2	3	3
France	-3	16	2	2	10	8	-3	-7	-1	-30	10	6	-6	3
Italy	4	22	7	6	-7	-3	3	-5	5	20	3	1	16	1
Luxembourg	22	12	-4		-17	11	100	-15	50			0	71	4
Netherlands	2	-15	16	1	10	4	18	8	4	23	-9	17	5	9
Denmark	23		-3	22	12	-19		3	-5		63	-5	9	5
Ireland	13	22	-4	-3	-12	0	-7	-3	22	-31	-12	3	6	1
Greece	17		16	11	-15	-3	18	-5	37	-44	43	-6	-2	0
Spain	-6	-6	-6	5	0	0	-9	2	-17	-25	-17	-7	6	-1
Austria	8	23	-15	15	0	-11	-38	0	19	43	-60	-2	-3	-2
Portugal	36	100	16	34	-1	1	92	-17	-25	60	0	-7	-14	11
Finland	9	-12	0	-18	-3	1	-45	-4	1	100	29	0	3	0
Sweden	8	1	-7	0	-14	18		-16	10		-38	-2	10	-1
United Kingdom	5	18	14	-3	-3	-1	3	8	16	4	18	9	0	5
Bulgaria	-27	-73	12	32	-15	0	37	-18	-18	-22	7	-12	-9	-9
Czech Republic	-9	0	-6	-24	-2	-7	1	-9	-5	9	-1	-6	-10	-6
Estonia	-48							70	40			40	-25	15
Cyprus														
Latvia	9		-100					0					-88	-6
Lithuania	28		-65		-17		0	31	-1			-38	0	-11
Hungary	-10	50	-7	-25	5	-4	23	5	-15	-2	-18	2	-1	-4
Malta														
Poland														
Romania	-21				-22	-38	-50						6	-12
Slovenia	1	6	6	-2	-8	-7	-17	-17	-19	27	-17	4	-49	-3
Slovakia	-10	18	-6	-13	-10	4	-62	-6	-7	18		-2	-24	-7

Source: AlphametRICS/Eurostat/TNO

Table 10.5 Share of older workers (50+ years) in employment by occupation in the chemical industries (NACE 24+25), 2006 (in %)

	TOTAL	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers
EU	24	30	9	20	20	22	25	12	24	27	21	21	21	24
EU 6	23	30	9	23	21	20	22	10	25	21	24	24	22	23
EU 9	25	30	12	16	22	24	30	11	26	37	22	22	24	25
EU 15	24	30	10	20	22	21	25	9	25	26	23	23	23	24
NMS	20	30	6	16	11	25	18	23	19	27	14	14	14	20
Belgium	21	14	2	18	18	27	20	20	29	35	21	21	17	21
Germany	29	36	15	30	31	25	27	17	29	27	22	22	25	29
France	17	16	0	24	12	11	14	25	24	7	26	26	19	17
Italy	19	40	5	15	11	19	14	24	19	11	22	22	17	19
Luxembourg													0	
Netherlands	21	37	5	34	17	24	34	7	25	49	21	21	30	21
Denmark	27	43	17	33	7	30	31	0	30		33	33	19	27
Ireland	19	21	4	20	23	17	16	11	24	21	9	9	11	19
Greece	15	39	100	2	2	14	3	0	18	15	26	26	11	15
Spain	21	42	0	6	24	13	16	6	26	31	19	19	13	21
Austria	23	25	0	36	29	21	33	18	11	0	20	20	21	23
Portugal	15	19	0	0	19	17	19	0	18	100	10	10	16	15
Finland	32	39	6	41	41	31	19	19	32	0	36	36	30	32
Sweden	28	46	22	16	29	28	33	22	32	25	33	33	34	28
United Kingdom	28	27	13	25	21	28	37	10	29	50			39	28
Bulgaria	29	9	0	0	26	45	15	100	25	61	31	31	20	29
Czech Republic	27	30	5	28	31	28	17	100	27	21	19	19	33	27
Estonia	20	17			24	19		46	16		39	39	59	20
Cyprus														
Latvia	14	0	74	0	0	20	17	0	7	0	0	0	78	14
Lithuania	6	0		0	0	7	0		12	0	0	0	14	6
Hungary	27	36	0	31	0	43	28	0	27	35	18	18	21	27
Malta														
Poland	16	29	4	14	6	24	22	32	11	14	10	10	9	16
Romania	18	45	0	18	0	17	10	5	8	62	16	16	6	18
Slovenia	18	42	46	29	45	13	25	59	4	0	10	10	16	18
Slovakia	13	7	0	0	0	12	21	100	23	0	12	12	28	13

Source: Alphametrics/Eurostat/TNO

Table 10.6 Change in share of older workers (50+ years) in employment by occupation in the chemical industries (NACE 24+25), 2000-2006 (in %)

	Managers	Computing professionals	Engineers	Business professionals	Other professionals	Office clerks and secretaries	Service workers	Metal, machinery, precision	Craft and trade workers	Chemical prod machine operators	Rubber, plastic prod. mach. Operators	Plant, machine operators	Labourers	Total
EU	-3	-2	1	2	0	3	4	5	-4	4	-1	3	4	2
EU 6	-4	-2	-1	4	1	4	7	3	-3	16	7	4	5	2
EU 9	-2	-3	6	3	-2	2	0	11	0	6	-12	3	7	2
EU 15	-3	-3	1	4	0	3	5	5	-2	12	0	4	6	2
NMS	-3	4	0	-13	1	3	0	3	-9	-10	-3	2	-2	0
Belgium	0	-49	5	15	-4	5	-26	-12	-6	-44	-3	-25	10	0
Germany	-4	5	2	5	3	2	12	3	6	25	9	6	4	4
France	-11	-16	-2	6	-7	9	10	3	-19	83	4	7	1	2
Italy	3	-8	1	1	4	2	-1	-2	5	8	18	-1	5	2
Luxembourg	51	46	-3		1	-12	0	25	-21			0	-70	0
Netherlands	-1	-3	-17	-5	2	9	13	15	0	21	11	6	8	1
Denmark	22		8	-32	-12	-22		12	-14		37	17	-2	-3
Ireland	-5	6	1	-4	6	2	12	-13	-14	43	-17	7	1	1
Greece	-29		20	-6	-2	-6	-20	5	13	9	35	11	-7	-4
Spain	-2	-14	8	4	-7	8	17	6	-16	6	-13	-3	-3	0
Austria	-16	8	4	-6	11	-2	21	18	-3	-95	-37	-4	3	1
Portugal	-20	-46	-14	-12	-4	10	-57	13	0	-27	-88	-8	4	-5
Finland	7	34	5	32	20	7	-22	3	19	0	25	0	0	9
Sweden	-20	-1	-2	27	-1	-12		25	8		-16	1	10	3
United Kingdom	-1	-11	12	3	-2	3	-17	15	4	18	-8	7	23	6
Bulgaria	12	33	-1	-2	-14	0	28	16	-20	16	-20	7	7	3
Czech Republic	2	8	5	-24	3	16	25	0	9	1	13	5	6	3
Estonia	7							13	-100			35	-4	-9
Cyprus														
Latvia	-61		45					-90					78	-43
Lithuania	-41		48		-36		0	-10	-30			-10	-40	-17
Hungary	-2	0	-13	11	3	1	-5	20	12	1	12	1	-2	3
Malta														
Poland														
Romania	7				4	13	10						1	6
Slovenia	13	4	1	-14	-15	19	-22	-11	36	-11	3	6	-8	0
Slovakia	-1	-24	-7	-21	2	17	31	-3	3	-11		4	15	3

Source: AlphametRICS/Eurostat/TNO

11. EU and competitors

Table 11.1 TRIAD and BRICs compared: Employment, share of sub-sector in manufacturing employment and wages per employee (in US\$), 1995 and 2005

	ISIC Category	ISIC Rev 3 code	Share in total manufacturing employment (in %)		Employment		Wages per employee (in US\$)	
			1995	2005	1995	2005	1995	2005
EU-15 ¹	Basic chemicals	241	2.2	2.1	561 730	517 177	43 546	51 560
	Other chemicals	242	3.6	3.8	917 305	966 061	36 911	47 250
	Man-made fibres	2430	0.2	0.1	48 603	30 434	33 743	41 926
	Rubber products	251	1.2	1.1	307 140	282 054	29 429	37 729
	Plastic products	2520	3.7	4.2	929 817	1 063 481	26 684	33 724
	Chemicals Total		10.8	11.3	2 764 595	2 859 207	33 933	42 003
	Manufacturing Total	D			25 498 419	25 283 696	29 118	37 030
USA ²	Basic chemicals	241	1.9	2.0	323 881	266 303	49 007	61 531
	Other chemicals	242	3.2	3.7	536 243	493 544	43 076	55 043
	Man-made fibres	2430	0.3	0.1	41 887	18 120	38 414	41 501
	Rubber products	251	1.2	1.2	202 353	157 832	33 483	41 842
	Plastic products	2520	5.1	5.3	859 608	724 858	28 088	35 203
	Chemicals Total		11.7	12.2	1 963 972	1 660 657	36 406	46 021
	Manufacturing Total	D			16 805 127	13 571 249	33 907	42 411
Japan	Basic chemicals	241	1.4	1.4	137 520	106 324	59 528	53 288
	Other chemicals	242	2.3	2.7	230 213	203 018	52 370	45 891
	Man-made fibres	2430	0.3	0.1	23 215	9 810	56 329	48 993
	Rubber products	251	1.3	1.4	126 914	104 931	40 293	33 208
	Plastic products	2520	4.3	5.3	438 549	397 089	28 388	24 626
	Chemicals Total		9.3	10.9	956 411	821 172	40 896	34 982
	Manufacturing Total	D			10 185 500	7 565 219	33 835	30 682
BRICs³								
Brazil	Basic chemicals	241	1.6	1.6	80 332	96 609	21 945	14 915
	Other chemicals	242	3.9	3.8	196 606	237 325	15 701	12 568
	Man-made fibres	2430	0.2	0.1	8 136	5 899	14 760	11 133
	Rubber products	251	1.4	1.4	68 816	86 480	11 104	7 718
	Plastic products	2520	3.6	4.0	177 400	249 438	8 196	5 707
	Chemicals Total		10.8	10.9	531 290	675 751	13 529	9 738
	Manufacturing Total	D			4 939 816	6 222 477	9 202	6 599
Russia	Basic chemicals	241	4.3	3.6	463 268	338 509	1 654	4 489
	Other chemicals	242	2.0	2.1	216 061	202 817	1 422	2 053
	Man-made fibres	2430	0.3	0.2	33 709	21 723	1 000	2 496
	Rubber products	251	1.1	1.2	120 496	118 305	1 368	3 133
	Plastic products	2520	0.6	1.5	59 054	138 502	1 420	2 735
	Chemicals Total		8.4	8.6	892 588	819 856	1 519	3 342
	Manufacturing Total	D			10 670 571	9 511 631	1 411	3 573

India	Basic chemicals	241	2.8	2.5	224 036	201 697	2 207	3 367
	Other chemicals	242	6.4	6.8	504 545	556 854	1 419	1 960
	Man-made fibres	2430	0.4	0.3	32 272	26 355	2 635	3 091
	Rubber products	251	1.4	1.4	113 266	115 481	1 268	1 784
	Plastic products	2520	2.1	2.3	168 661	188 995	949	1 333
	Chemicals Total		13.1	13.3	1 042 780	1 089 382	1 534	2 120
	Manufacturing Total	D			7 939 537	8 180 493	1 203	1 615
China ⁴	Industrial chemicals	351	9.6	8.5	5 610 000	5 061 000	N.A.	N.A.
	Petroleum refineries	353	1.2	1.3	720 000	744 000	N.A.	N.A.
	Rubber products	355	1.3	1.3	770 000	796 000	N.A.	N.A.
	Plastic products	356	1.9	3.1	1 090 000	1 833 000	N.A.	N.A.
	Chemicals Total		14.1	14.2	8 190 000	8 434 000	N.A.	N.A.
	Manufacturing Total	300			58 255 000	59 353 000	N.A.	N.A.

Source: <TNO>, based on data of UNIDO (ISIC Rev. 3)

¹ EU-15: 1995-2004 (Except France: 1996-2000; Germany: 1998-2004; Greece: 1995-1998; Luxembourg: 1995-2003; Portugal: 1996-2004), Data for Europe (EU-15) is composed from data individual EU-15 countries ;

² USA: 1997-2004; Japan: 1995-2004

³ Brazil: 1996-2005, Russia: 2001-2005; India: 1998-2004

⁴ Data for China based on ISIC Rev 2; Totals of China do not contain data on 'Fine Chemicals'

Table 11.2 TRIAD and BRICs compared: Value added, share of sub-sector in manufacturing value added and value added per employee (in US\$), 1995 and 2005

Category in ISIC		ISIC Rev 3 code	Share of sector in total manufacturing value added (in %)		Value added (in million US\$)		Value added per employee (in US\$)	
			1995	2005	1995	2005	1995	2005
EU-15 ¹	Basic chemicals	241	4.4	4.0	63 721	73 625	113 437	142 359
	Other chemicals	242	5.0	5.6	72 114	103 444	78 615	107 078
	Man-made fibres	2430	0.3	0.1	3 562	2 285	73 288	75 081
	Rubber products	251	1.2	1.1	16 727	20 067	54 461	71 146
	Plastic products	2520	3.4	3.6	48 744	67 071	52 423	63 067
	Chemicals Total		14.2	14.4	204 868	266 492	74 104	93 205
	Manufacturing Total	D						
USA ²	Basic chemicals	241	4.5	4.5	81 902	91 954	252 876	345 298
	Other chemicals	242	7.6	9.9	137 948	201 813	257 249	408 906
	Man-made fibres	2430	0.4	0.1	6 908	2 739	164 926	151 159
	Rubber products	251	1.0	0.8	18 068	17 121	89 291	108 476
	Plastic products	2520	3.6	3.6	65 708	74 396	76 439	102 635
	Chemicals Total		17.0	18.9	310 534	388 023	158 115	233 656
	Manufacturing Total	D			1 825 690	2 049 612	108 639	151 026
Japan	Basic chemicals	241	3.7	3.6	46 205	33 708	335 986	317 034
	Other chemicals	242	6.2	7.5	77 100	70 291	334 907	346 231
	Man-made fibres	2430	0.3	0.2	3 795	1 433	163 492	146 037
	Rubber products	251	1.2	1.3	14 895	12 311	117 361	117 328
	Plastic products	2520	3.6	4.3	44 238	40 150	100 873	101 112
	Chemicals Total		15.0	16.8	186 233	157 893	194 721	192 278
	Manufacturing Total	D			1 245 721	938 101	122 303	124 002
BRICs³								
Brazil	Basic chemicals	241	4.6	4.7	7 031	9 090	87 525	94 086
	Other chemicals	242	8.1	6.4	12 460	12 219	63 374	51 488
	Man-made fibres	2430	0.2	0.2	344	328	42 288	55 638
	Rubber products	251	1.4	1.3	2 099	2 509	30 501	29 007
	Plastic products	2520	2.9	2.5	4 398	4 859	24 789	19 479
	Chemicals Total		17.1	15.1	26 332	29 005	49 562	42 923
	Manufacturing Total	D			154 267	191 862	31 229	30 834
Russia	Basic chemicals	241	5.2	6.8	2 037	8 524	4 397	25 180
	Other chemicals	242	3.2	1.7	1 252	2 155	5 794	10 626
	Man-made fibres	2430	0.1	0.1	54	64	1 597	2 938
	Rubber products	251	0.9	1.8	359	2 313	2 982	19 549
	Plastic products	2520	0.8	N.A.	318	N.A.	5 383	N.A.
	Chemicals Total ³		10.2	10.3	4 020	13 056	4 504	15 925
	Manufacturing Total	D			39 358	126 260	3 688	13 274

India	Basic chemicals	241	12.1	7.6	4 780	5 051	21 334	25 044
	Other chemicals	242	9.8	8.6	3 845	5 753	7 620	10 332
	Man-made fibres	2430	1.8	0.4	722	292	22 378	11 088
	Rubber products	251	1.6	1.2	617	828	5 443	7 169
	Plastic products	2520	1.7	1.8	659	1 166	3 909	6 172
	Chemicals Total		26.9	19.6	10 623	13 090	10 187	12 016
	Manufacturing Total	D			39 435	66 740	4 967	8 158
China ⁴	Industrial chemicals	351	11.4	11.2	16 888	78 189	3 010	15 449
	Petroleum refineries	353	4.5	3.5	6 721	24 183	9 335	32 504
	Rubber products	355	1.1	1.0	1 657	7 266	2 152	9 128
	Plastic products	356	1.8	2.2	2 695	15 524	2 472	8 469
	Chemicals Total		18.9	17.9	27 961	125 162	3 414	14 840
	Manufacturing Total	300			148 059	698 429	2 542	11 767

Source: <TNO>, based on data of UNIDO (ISIC Rev. 3)

¹ EU-15: 1995-2004 (Except France: 1996-2000; Germany: 1998-2004; Greece: 1995-1998; Luxembourg: 1995-2003; Portugal: 1996-2004), Data for Europe (EU-15) is composed from data individual EU-15 countries ;

² USA: 1997-2004; Japan: 1995-2004

³ Brazil: 1996-2005, Russia: 2001-2005; India: 1998-2004

⁴ Data for China based on ISIC Rev 2; Totals of China do not contain data on 'Fine Chemicals'