



Use of chemicals

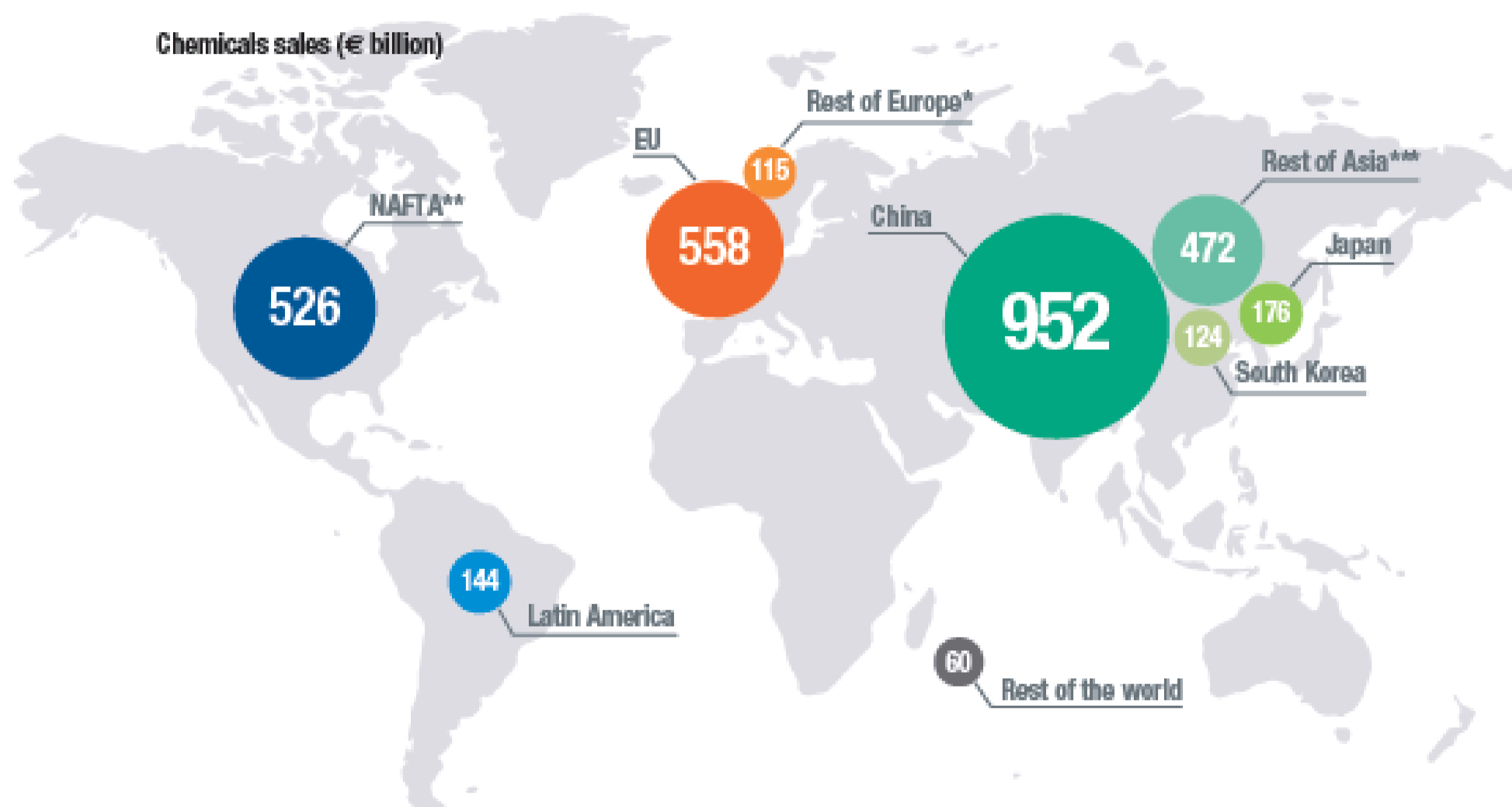
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Asian chemicals production dwarfs other regions

World chemicals sales in 2012 are valued at €3,127 billion.
The European Union accounts for 17.8% of the total.



Source: Cefic Chemdata International (2013)

* Rest of Europe includes Switzerland, Norway, Turkey, Russia and Ukraine

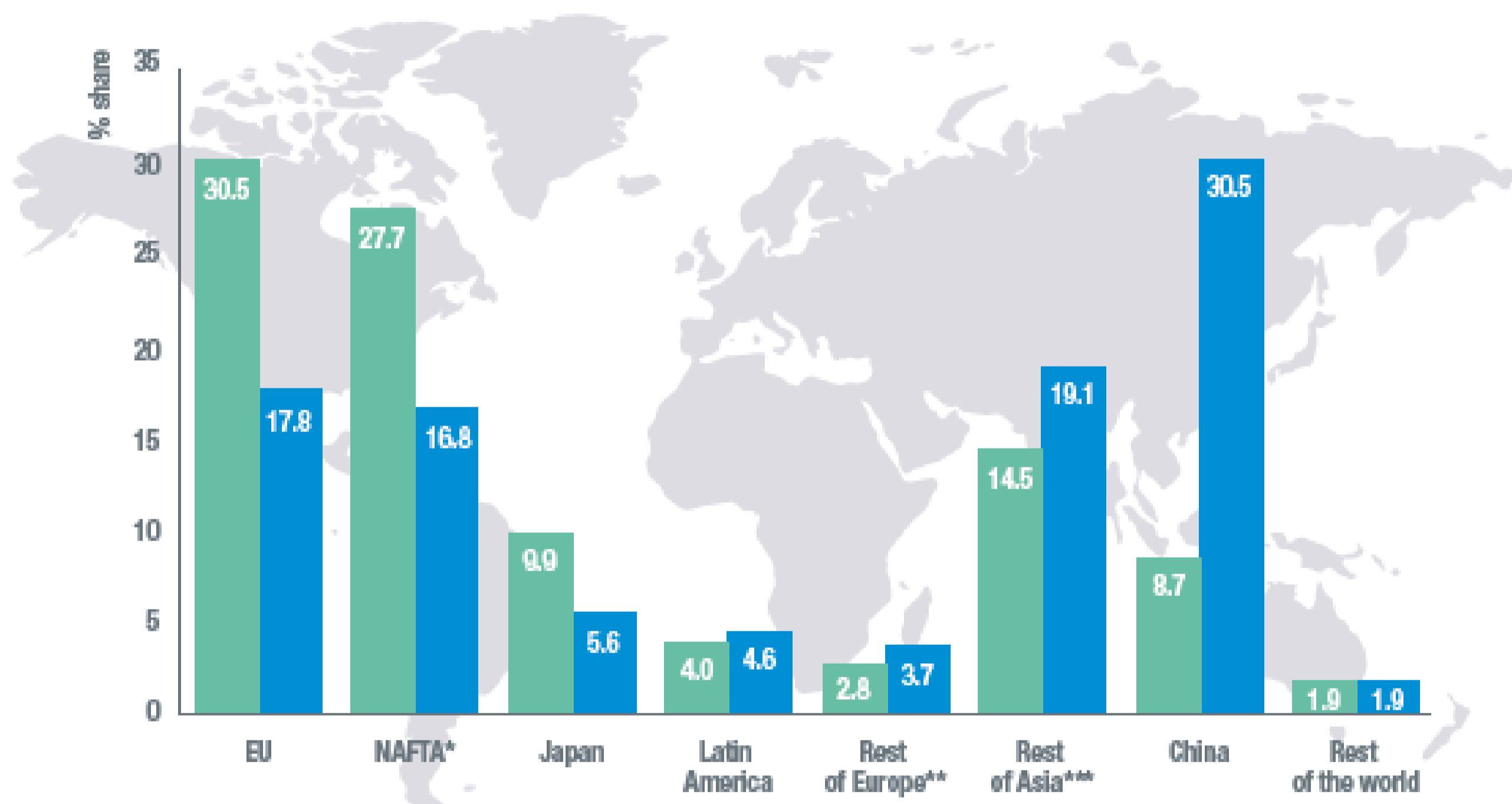
** North American Free Trade Agreement

*** Asia excluding China and Japan

*Unless specified, chemical industry excludes pharmaceuticals
Unless specified, EU refers to EU 27*

World chemicals output more than doubles as emerging markets sales surge

- World sales 2002: €1,363 billion
- World sales 2012: €3,127 billion



Source: Cefic Chemdata International (2013)

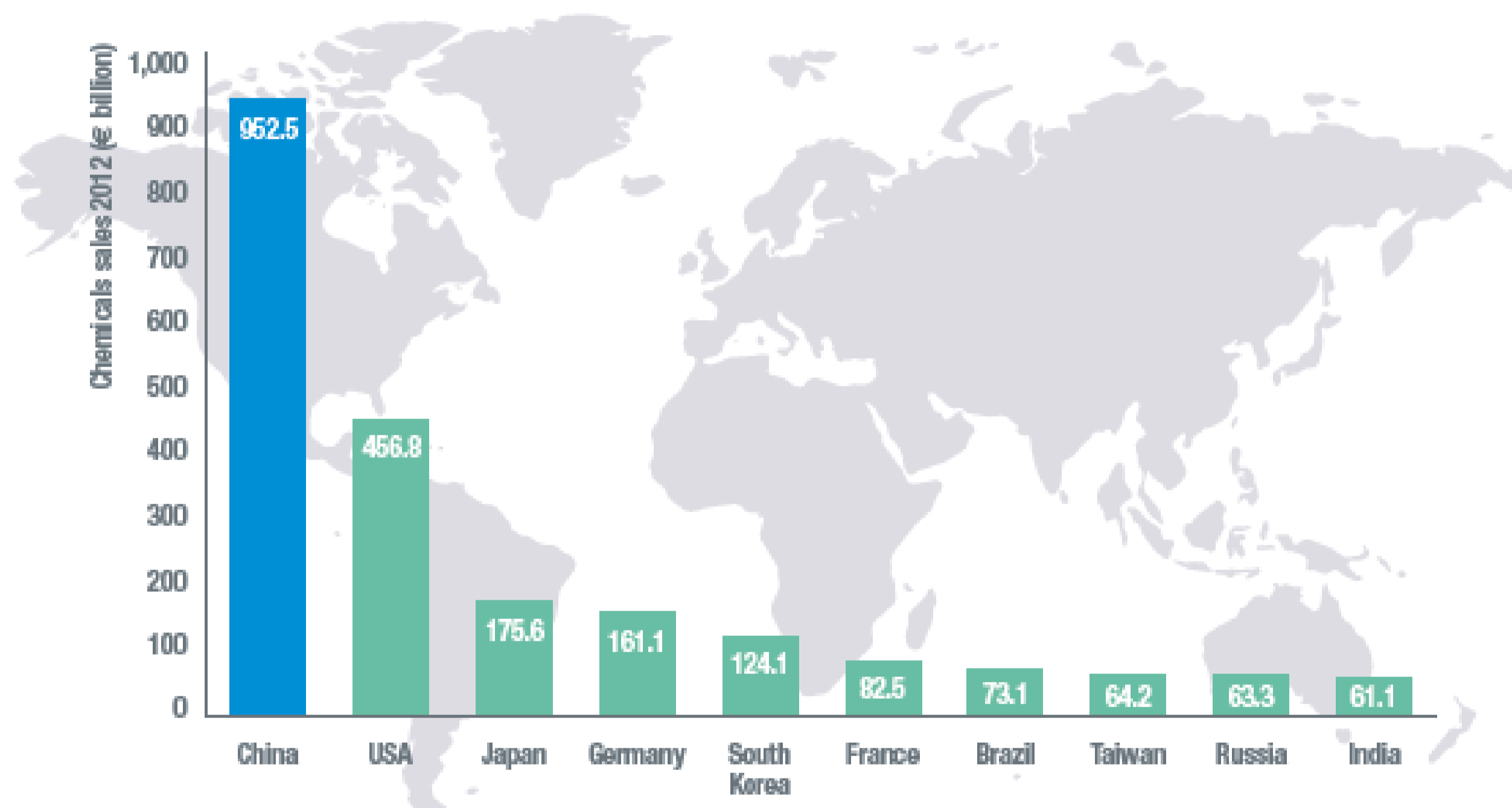
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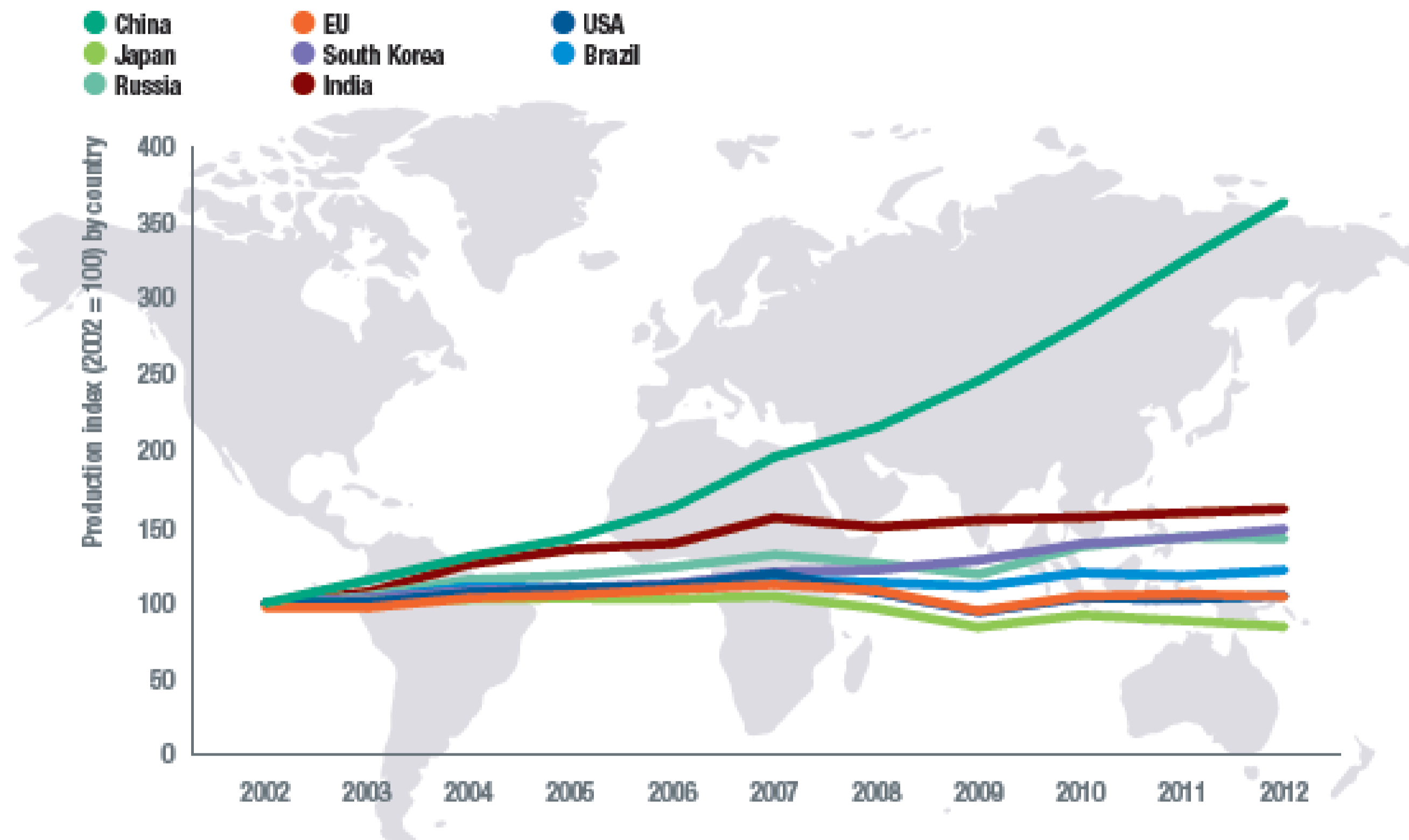
China dominates chemicals world top 10



Source: Cefic Chemdata International (2013)

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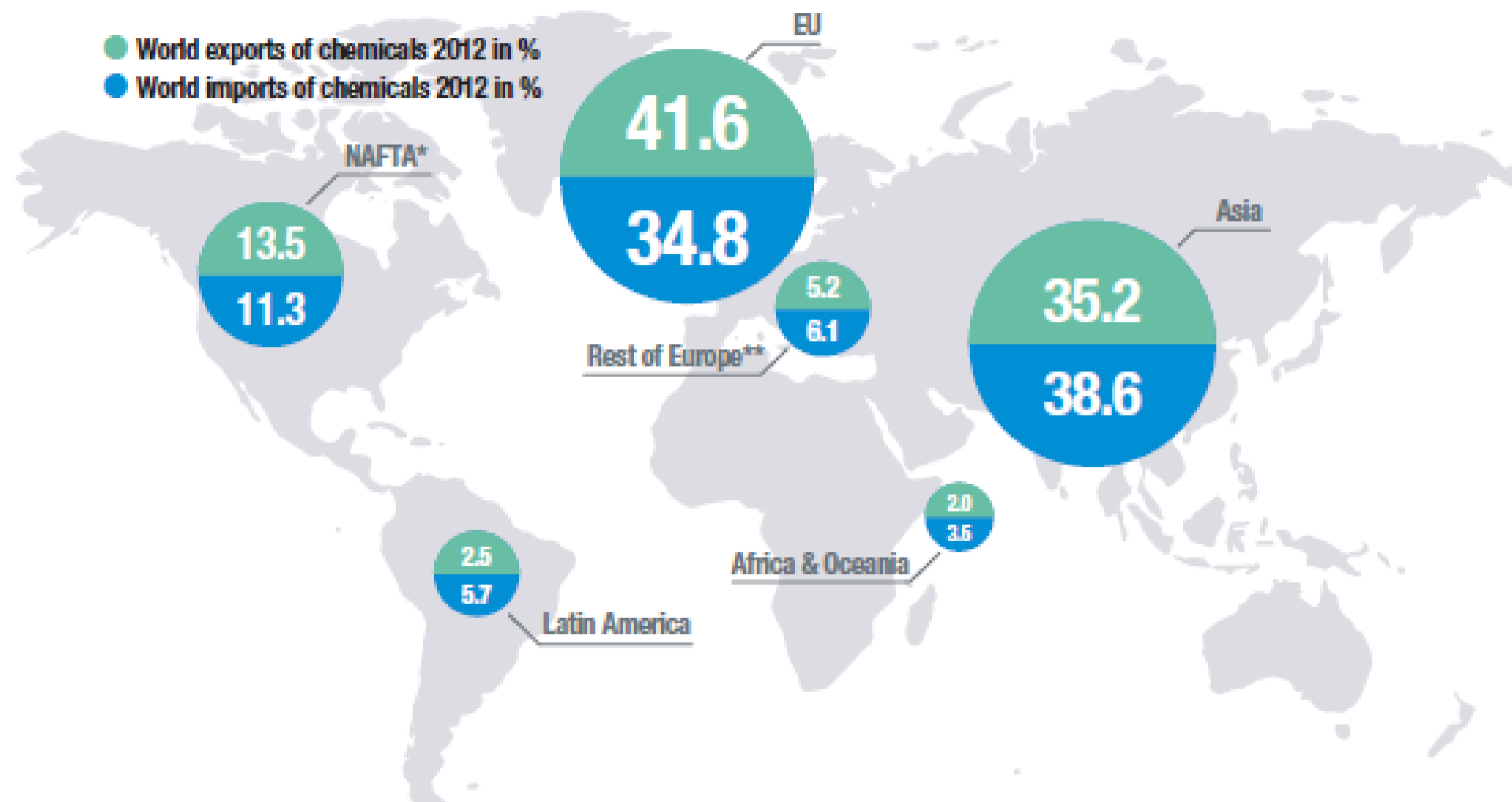
Emerging economies outpace industrial countries in chemicals production



Sources: Cefic Chemdata International (2013) and Cefic analysis

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The European Union was the world's top exporter and importer of chemicals in 2012



Sources: Eurostat and Cefic Chemdata International (2013)

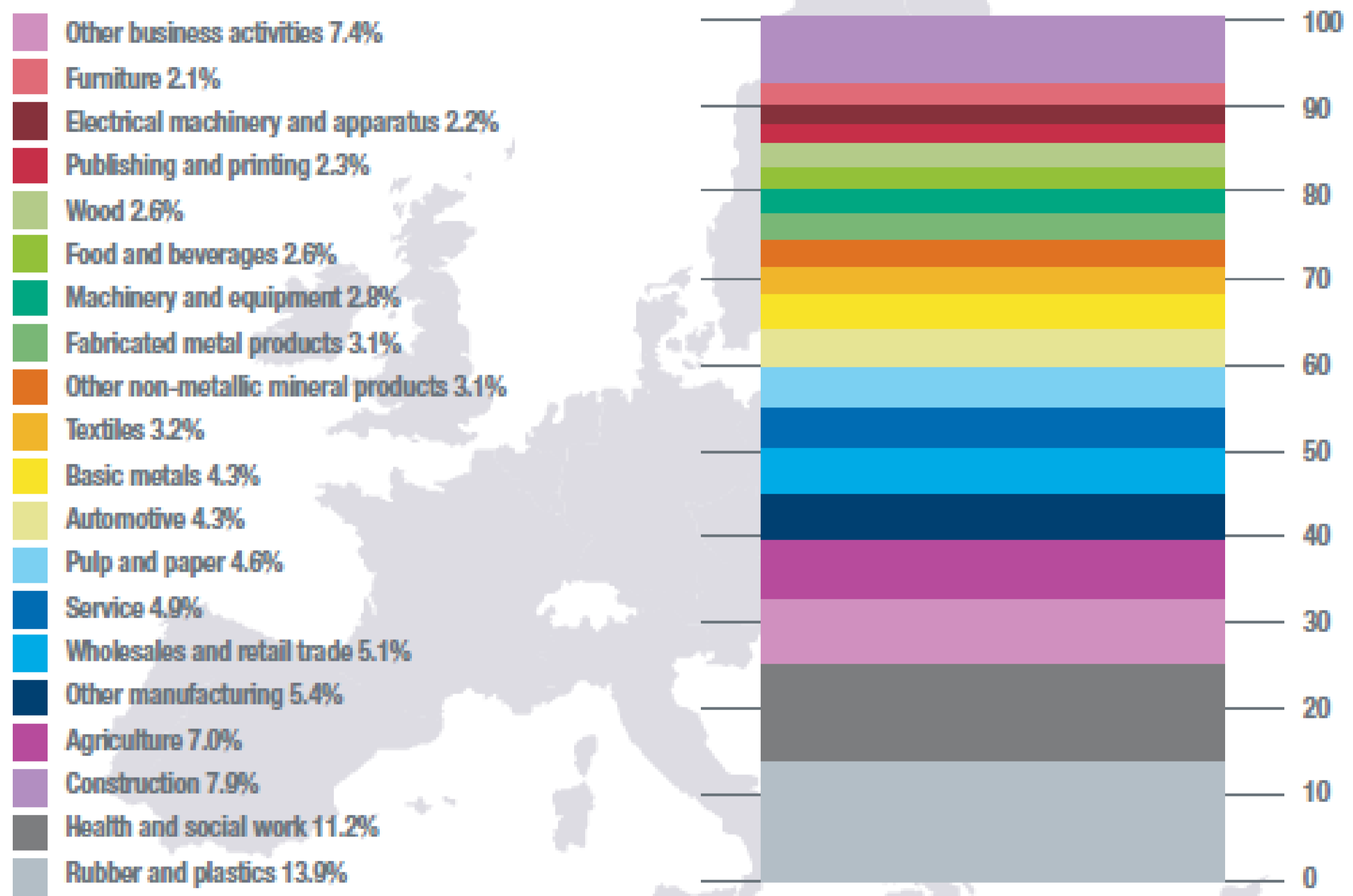
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The EU chemical industry supplies virtually all sectors of the economy

Percentage of output consumed by customer sector



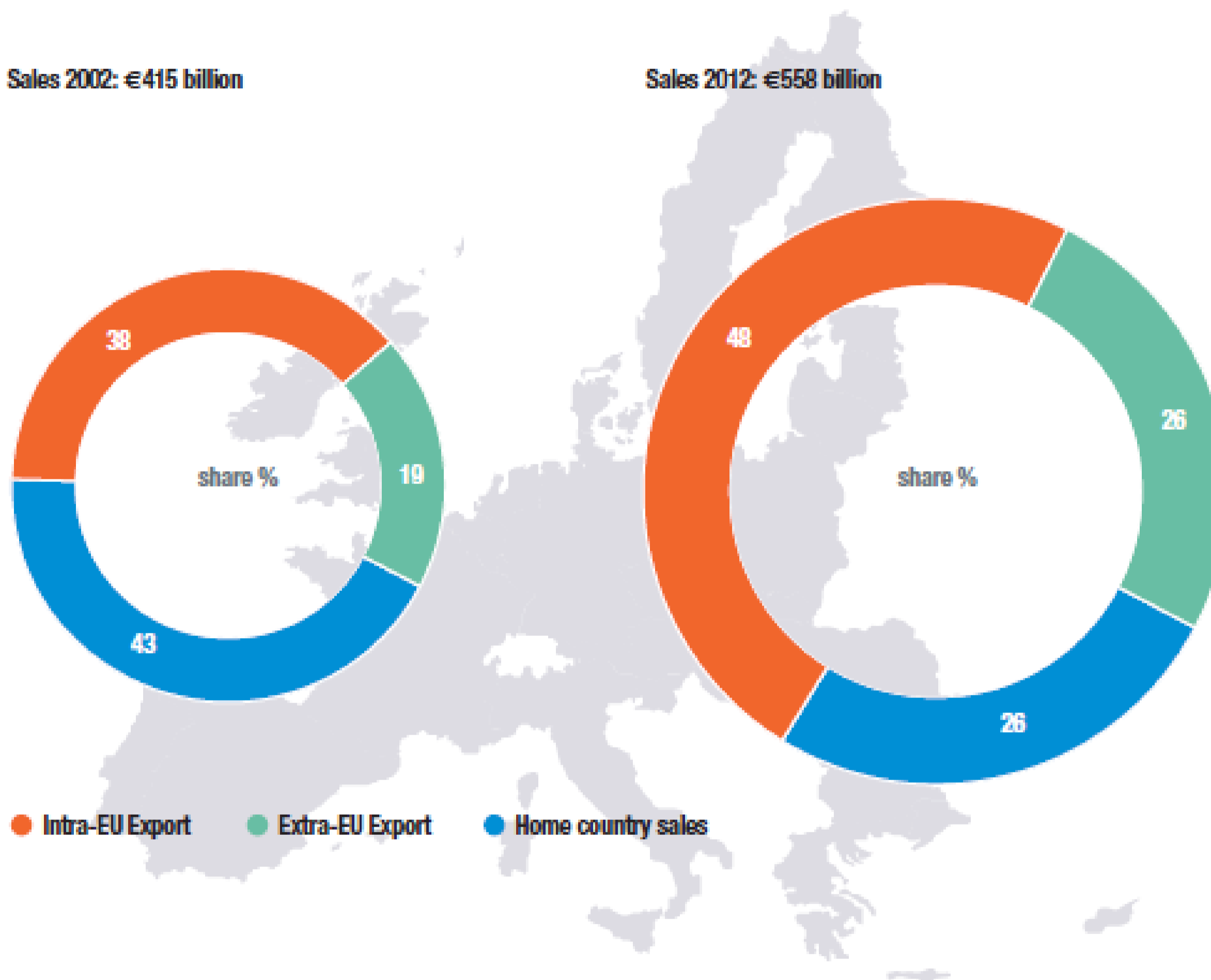
Sources: European Commission, Eurostata data (Input-Output 2000) and Cefic analysis

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Intra-EU sales (excluding home country sales) accounted for nearly half of total chemicals sales in 2012

Sales 2002: €415 billion

Sales 2012: €558 billion



Source: Cefic Chemdata International (2013)

* excluding home country sales

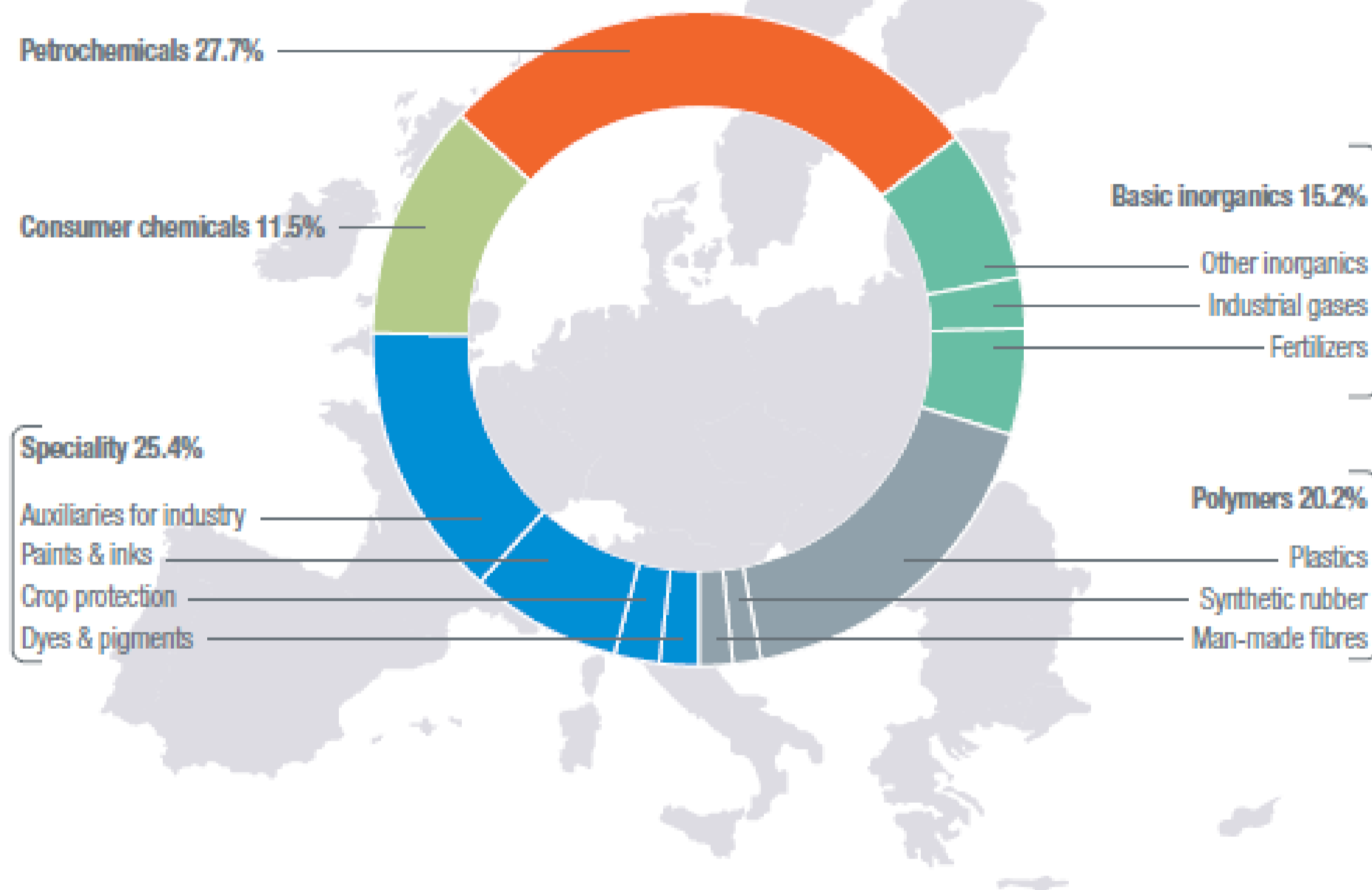
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Grouping of chemicals by Cefic

- **Inorganics**
 - Basic inorganics, Industrial gases, Fertilizers, Other inorganics
- **Organics/Petrochemicals**
- **Polymers**
 - Plastics, Synthetic rubber, Man-made fibers
- **Specialty and Fine chemicals**
 - Dyes&Pigments, Crop protection, Paints&inks, Auxiliaries for industry
- **Pharmaceuticals**
- **Consumer chemicals** (=hygiene and cleaner products)

Petrochemicals and speciality chemicals account for half of EU sales

Sales 2012



Source: Cefic Chemdata International (2013)

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Chemicals in Sweden, 2011

Source: The Products Register

Functions	No. of products	Quantity (tonnes)
Paints and varnishes, all types	10,958	457,000
Cleaners, all types	8,064	259,000
Lubricants, all types	6,614	340,000
Pigment and colouring agents, all types	4,338	65,000
Raw materials for plastic manufacturing	3,728	3,530,000
Surface active agents	3,397	150,000
Raw material for rubber manufacturing	3,343	131,000
Binders for paint, adhesives (sundry)	3,185	990,000
Adhesives, all types	3,114	150,000
Filling agents	2,371	161,000

Product type	Quantity (tonnes)	No. of products
Raw materials for synthesis (sundry)	27,439,532	1,555
Motor fuel (for internal combustion engines)	18,594,375	194
Fuels, fuel oil (sundry)	12,026,120	223
Heating agents	4,219,352	48
Raw material for plastic manufacturing	3,534,846	3,728
Cement, mortar	3,398,806	815
Fertilisers	1,267,255	451
Raw materials for paper production	1,114,215	549
Asphalt, bitumen, tar	864,309	315
pH-regulating agents	830,309	465

10 Most used substances in Sweden, 2011

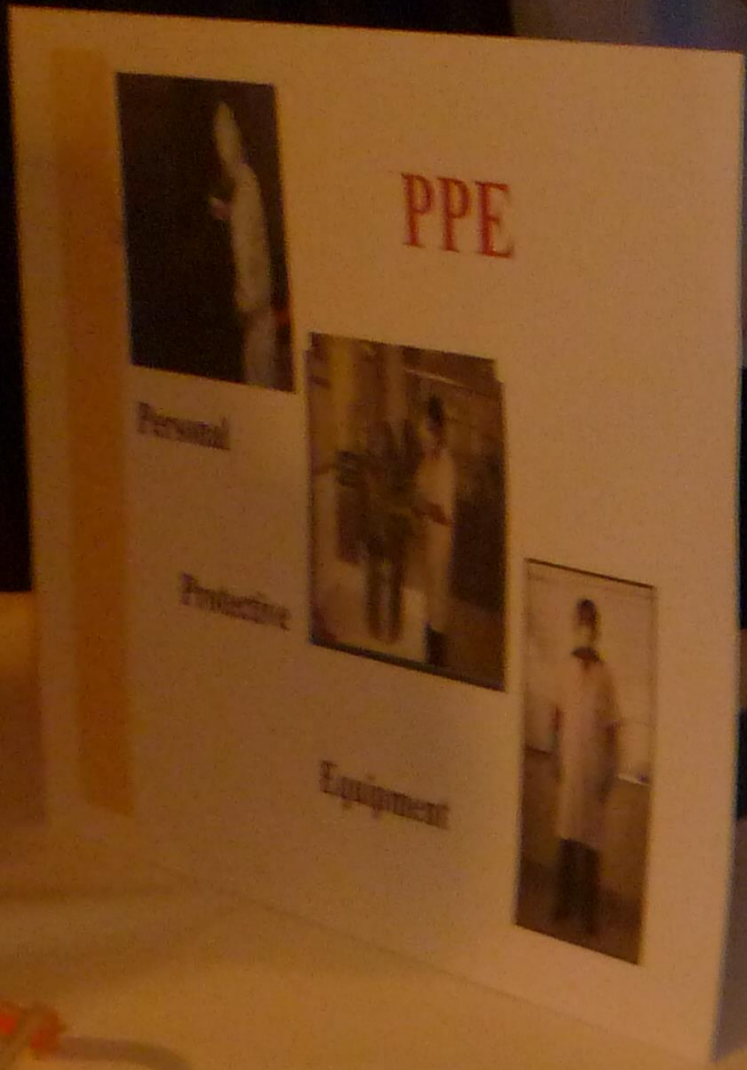
Source: The Products Register

CAS number	Chemical substance	Number of products	Quantity (tonnes)
7732-18-5	Water	30,995	2,347,531
13463-67-7	Titanium dioxide	5,926	74,043
1330-20-7	Xylene	5,754	13,066
2634-33-5	1,2-Benzoisothiazol-3-one	4,519	160
67-63-0	Isopropanol	4,223	15,129
2682-20-4	2-Methyl-3(2H)-isothiazolone	3,862	58
123-86-4	Butylacetate	3,390	29,484
55965-84-9	5-Chloro-2-methyl-3(2H)-isothiazolone mixture with 2-methyl-3(2H)-isothiazolone	3,380	28
1333-86-4	Carbon black	3 333	98 569
64742-95-6	Medium aromatic solvent naphtha	3 280	18 856

Substance name	Quantity in milion tonnes
Crude oil	21.23
Petrol	7.78
Diesel oil	5.30
Diesel MK1/Hydrotreated heavy solvent naphtha	5.17
Kerosine	2.94
Portland cement	2.37
Water	2.35
Nitrogen	1.82
Oxygen	1.32
Methane	1.15

Why information of what?

- Overview
- Emergencies
- Direct control of single products and companies
- Choice between different chemicals
- Target information and measures
- Prioritize between important problems related to chemicals
- Report to international conventions
- Resource planning and overview



Pigment





Crown & Closure



