



cutting through complexity

Georgian National Investment Agency

Chemical Sector Research
Polish

April 2015



Our findings, observations and/or recommendations are those that we could reasonably derive from the procedures or scope of services performed. The specific procedures performed were agreed with Georgian National Investment Agency (the Client) and were performed by us as set forth in the Report.

Our work was carried out solely based on the publicly available research data.

We have indicated within our Report the sources of the information presented and have satisfied ourselves, so far as possible, that the information presented in our Report is consistent with other information which was made available to us in the course of our work in accordance with the terms of the Contract. We have not, however, sought to establish the reliability of the sources by reference to other evidence.

All recommendations, provided to you with/in this Report that refer to the future have some limitations in the sense that they are based on the assumptions valid on the issuance date. These assumptions could change with time, after the date of this Report issuance, and so could lose their value.

References to 'KPMG Analysis' in this Report indicate only that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented; we do not accept responsibility for the underlying data.

In 2013 the global market revenue of other household products including polishes was around USD 12.2 billion

The major producers in the polishes and creams industry are Procter and Gamble, Northern Labs, Johnson&Son, Parker and Bailey etc. which are also important players in the soap and detergents and household cleaning goods sector.

Polishes are the substances containing chemical agents or abrasive particles and are generally applied to smooth or shine the surface. Polishes are used on the surfaces like metal, wood, footwear, leather.

For analyzing the global polish market consumption on country level we used the data regarding the other household products revenue.

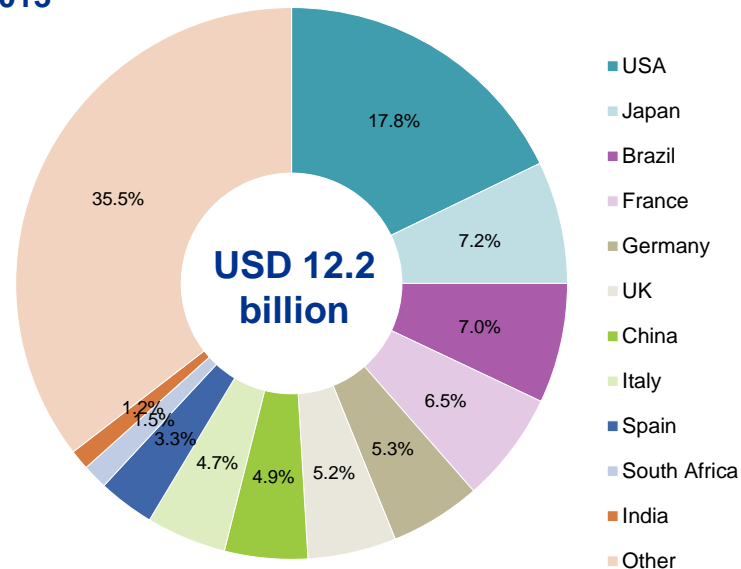
The other household product group includes bleach, furniture and floor polish, shoe polish, toilet care products, and scouring products. While the group includes products such as bleach or toilet care, this total group analysis can be used as an indication for identifying the country level consumption structure of polish products designed for household use.

According to MarketLine data in 2013 the global revenue of the other household products was around USD 12.2 billion.

The selected countries accounted for about 64.5% of the global revenue of the other household products group.

USA accounted for the 17.8% of the global revenue of the market (Other household products) thus was the largest consumer of other household products among selected countries from the perspective of consumption volume. Japan was the second largest market for the household products accounting for the 7.2% of the global revenue followed by Brazil with 7%.

Global revenue of other household products* in 2013



Source: MarketLine, KPMG analysis

Note: The other household product group includes bleach, furniture and floor polish, shoe polish, toilet care products, and scouring products. The industrial polishing for metals is not included here.

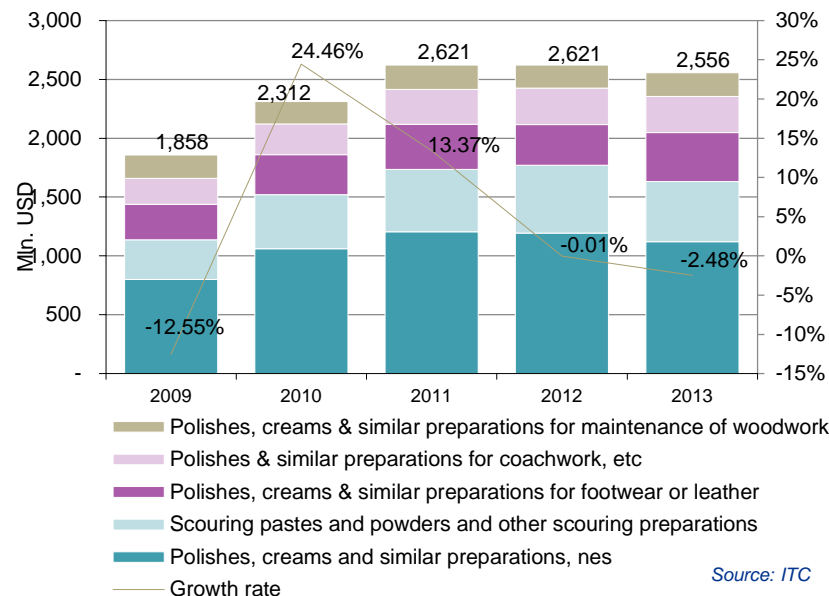
Scouring pastes and powders and other scouring preparations represent the largest segment of the global polish market followed by polishes, creams and similar preparations for footwear or leather

CAGR of global polish export reached 8.3% from 2009 till 2013

Scouring pastes and powders and other scouring preparations represent the largest segment of the global polish market, accounting for 23.5% of the market's total value. Polishes, creams and similar preparations, for footwear or leather segment accounts for a further 21.7%.

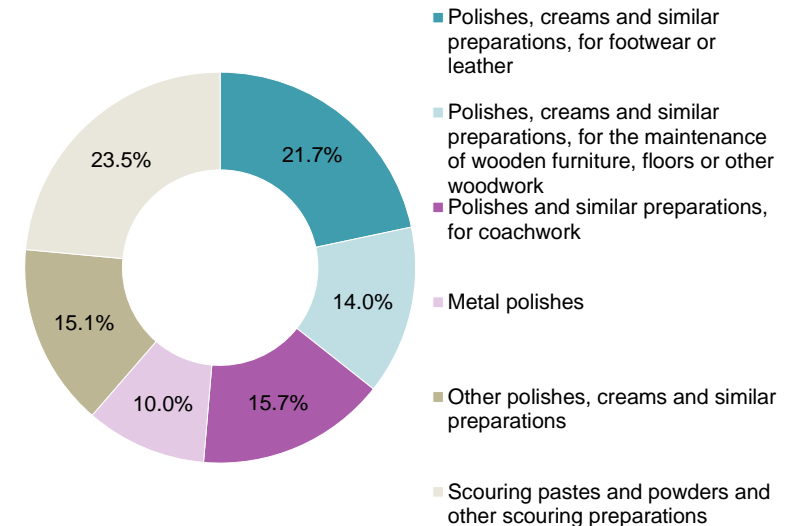
In terms of polish consumptions Asian countries take the top places: China and republic of Korea are polish top consumers, while Germany holds the first place among the European countries.

The world trade of polish 2009-2013



Source: ITC

Global polish market segmentation by main types 2013



Source: Eurostat, KPMG analysis

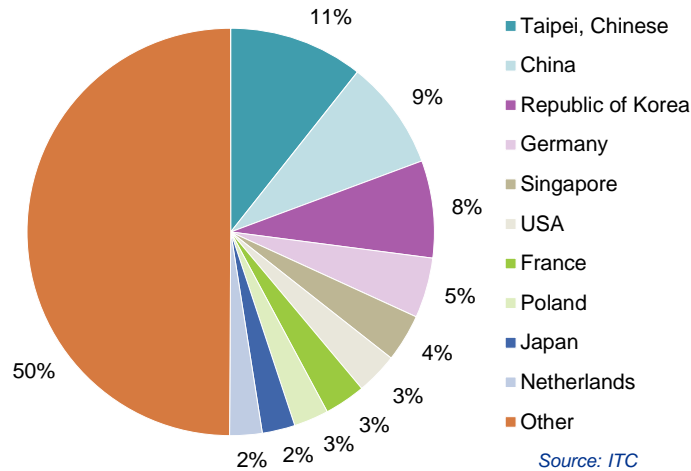
In 2013 the global import of polish shrank by 2.48% compared with the previous year to reach USD 2,556 million.

Compound annual growth rate of global polish trade reached 8.3% from 2009 till 2013.

In 2013 top three importing countries of polish accounted for about 28% of the world polish import

In 2013 top three exporting countries of polish accounted for about 43% of the world polish export

Structure of the world polish import by countries in 2013

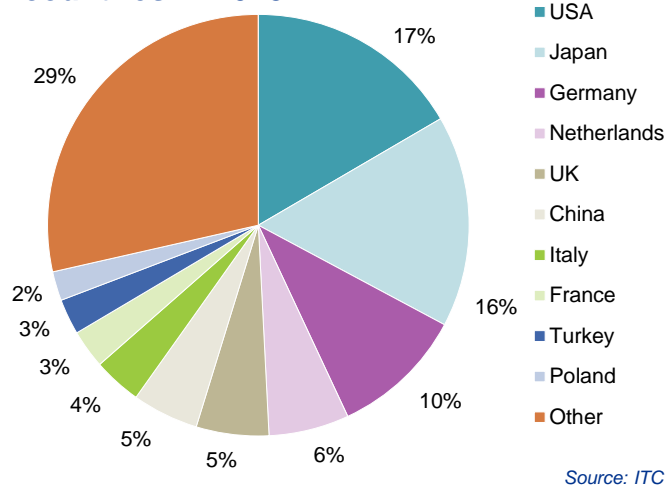


In 2013 the top ten importing countries of polish accounted for about 50% of world polish import. Taipei Chinese, China and Republic of Korea were the top 3 importers of polish with shares of 11%, 9% and 8% respectively. The total world import comprised USD 2.5 billion.

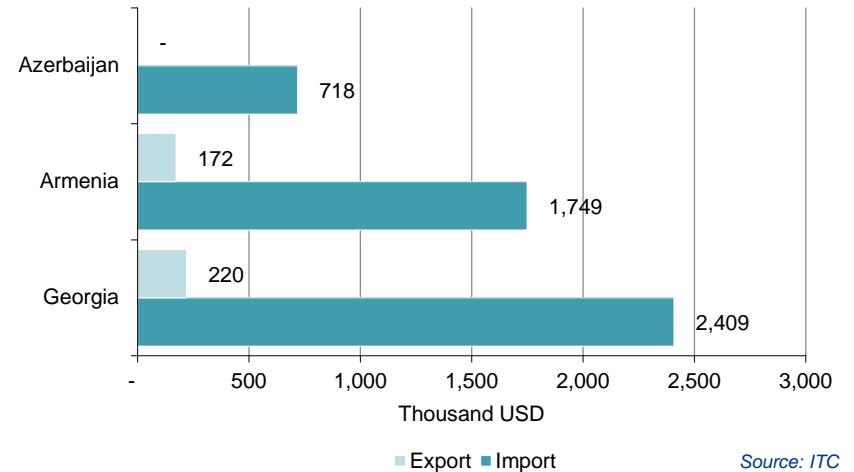
Meanwhile in 2013 top ten exporting countries of polish accounted for about 71% of the world polish export. USA, Japan and Germany were the top 3 exporters of polish with shares of 17%, 16% and 10% in the world export of polish. The world total export comprised USD 2.2 billion.

In 2013 the import of polish in South Caucasus (Georgia, Azerbaijan and Armenia) was about USD 5 million, while the export was only USD 400 thousands. Among the countries of South Caucasus Georgia was the biggest importer.

Structure of the world polish export by countries in 2013

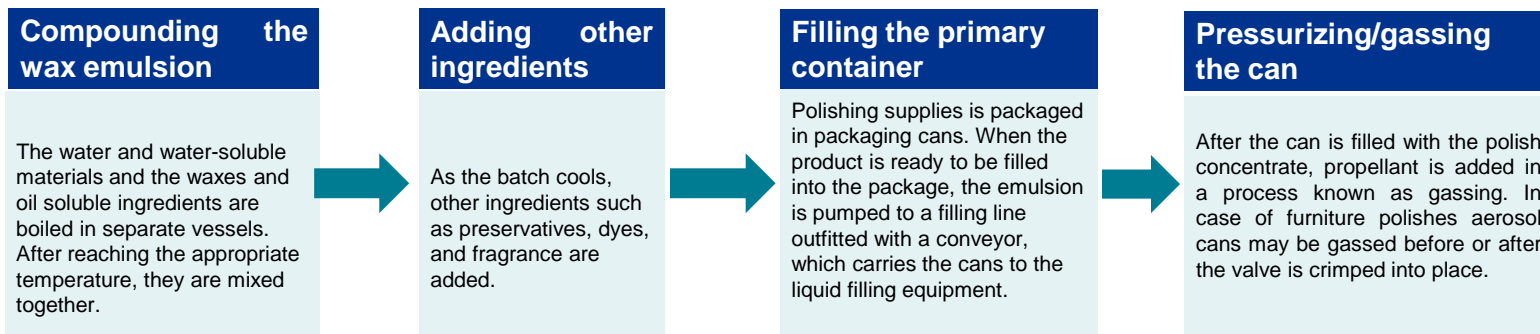


Import and export of polish in South Caucasus in 2013



The main raw materials of polishes are wax, abrasives and solvents

Polishes production cycle general description



Waxes	
P/E	22.1x
Return on Assets %	7.4%
Gross Margin %	48.0%
SG&A Margin %	27.7%
EBIT Margin %	20.2%
Net Income Margin %	15.0%

Solvents (e.g. alcohols, acids)	
P/E	17.6x
Return on Assets %	2.3%
Gross Margin %	8.1%
SG&A Margin %	4.2%
EBIT Margin %	3.5%
Net Income Margin %	2.8%

Abrasives	
P/E	9.5x
Return on Assets %	(0.6%)
Gross Margin %	12.8%
SG&A Margin %	14.8%
EBIT Margin %	(2.6%)
Net Income Margin %	(3.6%)

Polishes	
P/E	28.4x
Return on Assets %	5.1%
Gross Margin %	43.8%
SG&A Margin %	34.5%
EBIT Margin %	9.3%
Net Income Margin %	5.8%

Volume and price of polish can be affected by many factors, including cost of raw materials, transportation, packaging cost, etc

Our research showed that during the period between 2010 and 2013 average import price of polish increased for CIS and Central Asia, while the average price decreased for EU 28. As shown on the chart prices are quite different among the regions for 2010, 2011 and 2012 while the prices come to almost the same point for 2013.

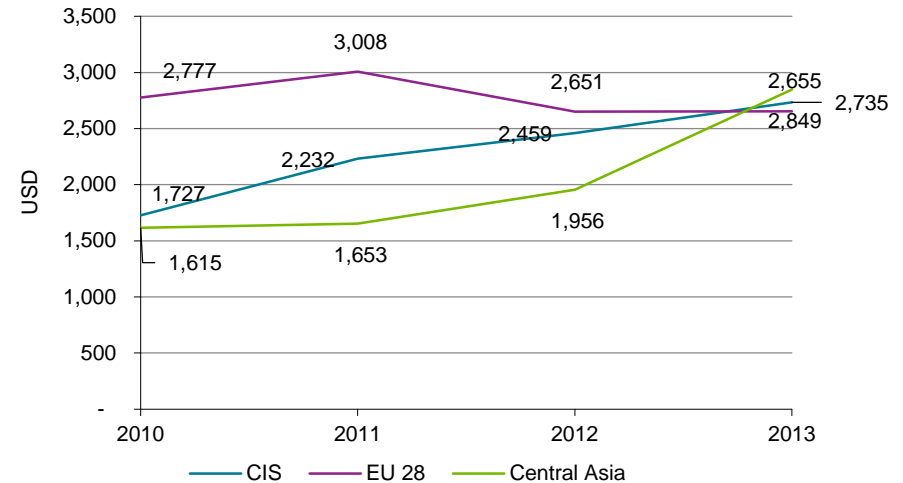
On average EU holds the first position by highest import price of polish.

Volume and price of consumption can be affected by many factors. The fundamental price drivers are supply, demand and price of raw materials.

The price drivers include:

- Cost of raw materials
- Packaging
- Transportation costs (both for raw materials and finished products)

Average import price of polish in CIS, EU and Central Asia, 2010-2013 (USD/Tons)



Source: ITC

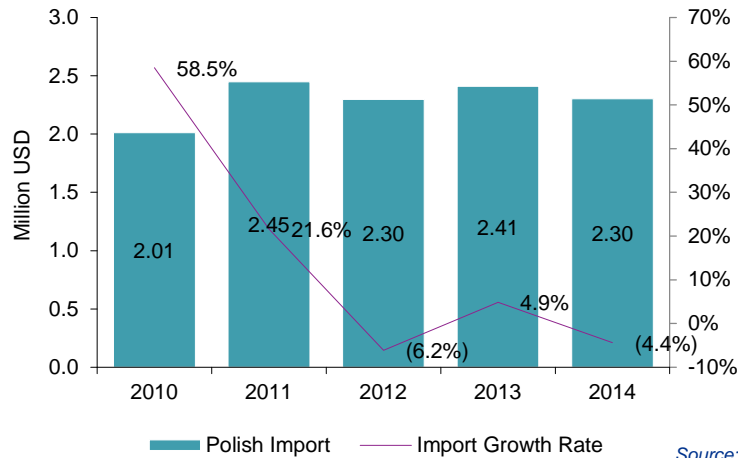
Global Top producing companies by revenue	
	Total Revenue (Million USD)
1 S. C. Johnson & Son, Inc.	2,066
2 Procter & Gamble do Brasil S/A	1,683
3 Reckitt Benckiser, Inc.	235
Intravedco Industrial S.A.	
4 (BVL:INTINDI1)	168
5 RINREI WAX CO.,Ltd.	95
6 Quimi Romar S.L.	58
7 Northern Labs, Inc.	55
8 The Fuller Brush Company, Inc.	49
Reckitt Benckiser (Bangladesh) Ltd.	
9 (DSE:RECKITBEN)	34
10 SC Johnson & Son Pty. Ltd.	28
11 Spotless Group SAS	18.1
12 Parker & Bailey Corporation	8
13 The Hope Company, Inc.	6
14 Resource One, inc.	5.5
15 Caldrea Inc.	2.8
16 Earth Friendly Products, Inc.	0.48

Source: S&P

Note: Ranking of the Top companies is based on the total revenues for February 2015 (LTM). Polish production is one of the primary lines of business for the entities.

In 2014 Georgia imported USD 2 million of polishes mainly from Turkey, Israel and Ukraine. The majority of the import were polishes, creams and similar preparations for maintenance of woodwork

Import of polish in 2010 - 2014



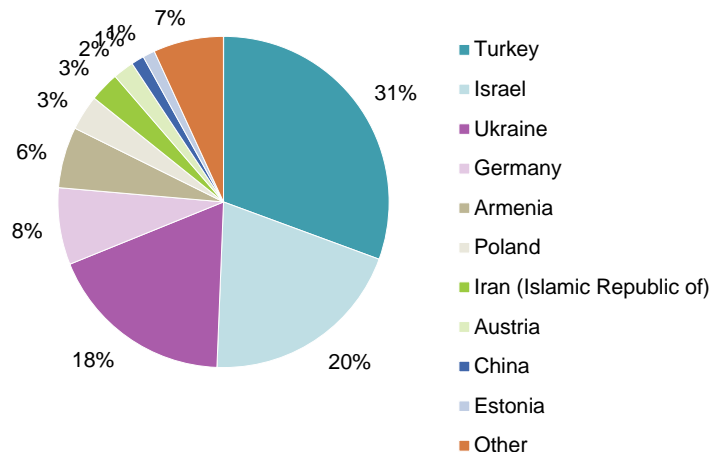
Source: ITC

In 2014 the import of polishes in Georgia decreased by 4.4% and was USD 2.3 million. During 2010 – 2014 the polish import recorded 3.4% CAGR.

In 2014 Turkey accounted for 31% of the total import of polishes to Georgia. Israel and Ukraine are the next largest exporters of polish to Georgia accounting for 20% and 18% of the import in total.

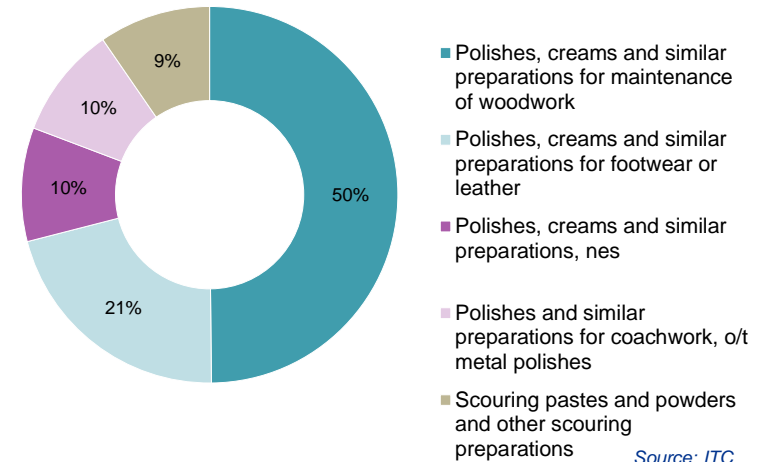
In 2014 the polishes, creams and similar preparations for maintenance of woodwork were the main types of polish imported to Georgia accounting for 50% of the import. Polishes, creams and similar preparations for footwear or leather were the second largest group of imported polish (21%).

Polish import structure by countries, 2014



Source: ITC

Polish import structure by product type in 2014



Source: ITC

Polish Georgia- Polish export

In 2014 Georgia exported USD 0.011 million of polishes mainly to Lithuania

In 2014 Georgia exported mainly polishes, creams and similar preparations for maintenance of woodwork

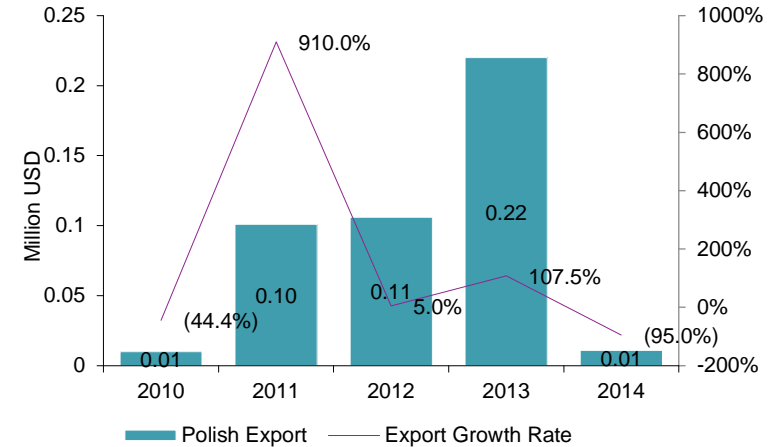
The Georgian Statistics Office does not provide information regarding polish production separately. Production information is available for the group - soap and detergents, cleaning and polishing products. For production and consumption analysis for mentioned group please refer to respective section in 'Soap' analysis.

In 2014 the export of polishes from Georgia decreased by 95% and was USD 0.011 million. During the 2010 – 2014 the polish export recorded 2.4% CAGR.

In 2014 the largest export country for Georgia was Lithuania which accounted for 75% of Georgia's export. Export with Azerbaijan accounts for 9% of the total exported polishes, followed by Greece and Italy accounting for 8% each.

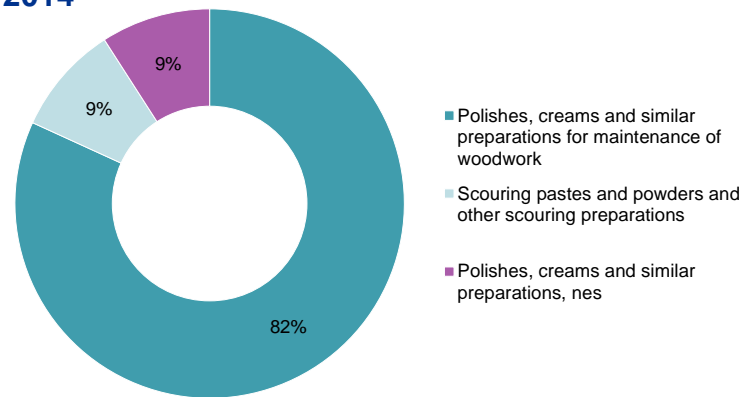
In 2014 Georgian export of polishes included mainly polishes, creams and similar preparations for maintenance of woodwork (82%).

Export of polish in 2010 - 2014



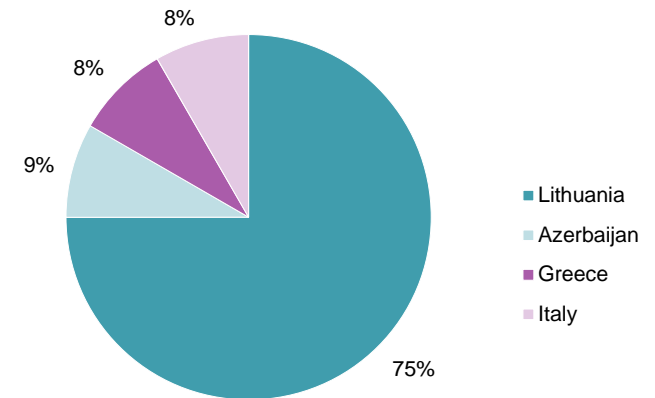
Source: ITC

Polish Export structure by product type in 2014



Source: ITC

Polish export structure by countries, 2014



Source: ITC

In 2013 the world import of waxes was equal to approximately USD 2.9 billion

Import of waxes, 2013			
Importers	Value imported in (USD thousand)	Quantity imported in (Tons)	Import price (USD)
World	2,852,960	1,111,643	2,566
Germany	177,088	71,144	2,489
France	169,794	65,413	2,596
Belgium	141,731	48,037	2,950
Netherlands	140,626	56,929	2,470
Italy	98,104	32,003	3,065
United Kingdom	95,026	32,341	2,938
Spain	65,804	27,612	2,383
Other EU	237,931	91,605	N/A
Turkey	56,844	21,163	2,686
Ukraine	9,413	3,737	2,519
Kazakhstan	1,206	522	2,310
Uzbekistan	738	225	3,280
Turkmenistan	185	35	5,286
Azerbaijan	143	61	2,344
Armenia	119	18	6,611
Kyrgyzstan	114	25	4,560
Georgia	72	16	4,500
Tajikistan	22	8	2,750

Source: ITC

In 2013 Germany was major importing and exporting country of waxes with the importing and exporting shares in the world trade equal to 6.2% and 20.3% correspondingly.

In 2013 Armenia had the highest import price of waxes equal to USD 6.6 thousand, while Austria had the highest export price equal to USD 4.8 thousand.

Production and consumption of wax in the world (kt)

	Production	Consumption
USA/Canada	930	940
China	900	600
West Europe areas	640	580
Asian other areas	190	350
South America	180	260
World other areas	280	295

Export of waxes, 2013							
Exporters	Exported value in (USD thousand)	Exported quantity, Tons	Unit value (USD/unit)	Exporters	Exported value in (USD thousand)	Exported quantity, Tons	Export price (USD)
World	3,024,800	1,034,013	2,925	Sweden	13,533	2,896	4,673
Germany	613,110	182,935	3,352	Portugal	5,923	6,433	921
Netherlands	231,393	77,897	2,970	Austria	5,504	1,156	4,761
Belgium	177,405	53,241	3,332	Finland	5,056	1,588	3,184
Denmark	124,201	54,653	2,273	Lithuania	3,178	2,707	1,174
Italy	70,098	33,040	2,122	Other EU	4,710	2,252	N/A
Spain	56,422	27,329	2,065	Turkey	3,090	901	3,430
United Kingdom	52,817	12,957	4,076	Ukraine	718	204	3,520
France	48,465	11,084	4,373	Azerbaijan	44	77	571
Poland	21,329	8,807	2,422	Kyrgyzstan	2	1	2,000

Source: ITC

In 2013 the world import of abrasives was equal to approximately USD 4 billion

import of abrasives, 2013			
Importers	Value imported in (USD thousand)	Quantity imported in (Tons)	Import price (USD)
World	3,981,684	449,093	8,866
Germany	528,361	40,924	12,911
France	178,725	20,469	8,731
Italy	132,548	11,280	11,751
United Kingdom	130,162	17,431	7,467
Poland	129,158	13,816	9,348
Belgium	128,060	9,189	13,936
Netherlands	95,885	8,460	11,334
Spain	83,614	6,575	12,717
Austria	82,390	8,560	9,625
Hungary	69,517	3,503	19,845
Czech Republic	60,442	10,512	5,750
Other EU	214,213	25,055	N/A
Turkey	56,293	5,741	9,805
Ukraine	18,817	4,524	4,159
Kazakhstan	4,179	1,044	4,003
Georgia	1,289	173	7,451
Uzbekistan	784	179	4,380
Armenia	489	136	3,596
Turkmenistan	454	90	5,044
Azerbaijan	286	407	703
Kyrgyzstan	166	74	2,243
Tajikistan	154	35	4,400

Source: ITC

In 2013 Germany was major importing and exporting country of abrasives with the importing and exporting shares in the world trade equal to 13.3% and 19.5% correspondingly.

In 2013 Turkey had the highest import price of abrasives equal to USD 9.8 thousand, while Belgium had the highest export price equal to USD 14.7 thousand.

Export of abrasives, 2013							
Exporters	Exported value in (USD thousand)	Exported quantity, Tons	Unit value (USD/unit)	Exporters	Exported value in (USD thousand)	Exported quantity, Tons	Export price (USD)
World	4,076,918	410,059	9,942	Austria	111,328	8,943	12,449
Germany	796,361	59,358	13,416	Belgium	111,321	7,550	14,745
Italy	232,385	34,542	6,728	Other EU	394,461	33,148	N/A
United Kingdom	173,632	14,456	12,011	Kazakhstan	330	507	651
France	151,291	13,084	11,563	Turkey	39,020	5,519	7,070
Finland	145,539	12,748	11,417	Ukraine	8,852	1,247	7,099
Poland	131,292	13,038	10,070	Georgia	6	-	-

Source: ITC

In 2014, China was the world's leading producer of abrasive fused aluminum oxide and abrasive silicon carbide, with production nearly at capacity

World Production Capacity				
	Fused aluminum oxide		Silicon carbide	
	2,013	2014e	2,013	2014e
United States and Canada	60,400	60,400	42,600	42,600
Argentina	—	—	5,000	5,000
Australia	50,000	50,000	—	—
Austria	60,000	60,000	—	—
Brazil	50,000	50,000	43,000	43,000
China	700,000	800,000	455,000	455,000
France	40,000	40,000	16,000	16,000
Germany	80,000	80,000	36,000	36,000
India	40,000	40,000	5,000	5,000
Japan	25,000	25,000	60,000	60,000
Mexico	—	—	45,000	45,000
Norway	—	—	80,000	80,000
Venezuela	—	—	30,000	30,000
Other countries	80,000	80,000	190,000	190,000
World total (rounded)	1,190,000	1,290,000	1,010,000	1,010,000

Source: USGS

According to USGS, In 2014, China was the world's leading producer of abrasive fused aluminum oxide and abrasive silicon carbide, with production nearly at capacity.

Imports and higher operating costs than in China continued to challenge abrasives producers in the United States and Canada. China is expected to persist and continue to limit production in North America.

Abrasives markets are greatly influenced by activity in the manufacturing sector in the United States. During 2014, these manufacturing sectors included the aerospace, automotive, furniture, housing, and steel industries, all of which experienced increased production. The U.S. abrasive markets also are influenced by economic and technological trends.

Raw materials in the selected Region/Countries - Solvents

Import of solvents			
Importers	Value imported in 2013 (USD thousand)	Quantity imported in 2013 (Tons)	Import price (USD)
World	62,631,362	N/A	1,875
Belgium	3,256,226	3,669,403	887
Germany	3,089,730	3,894,237	793
Netherlands	2,381,946	3,247,061	734
United Kingdom	982,860	N/A	955
France	948,078	1,213,121	782
Italy	862,244	1,064,598	810
Spain	861,561	1,112,631	774
Poland	388,998	591,958	657
Sweden	366,088	374,068	979
Portugal	291,370	293,371	993
Austria	228,091	N/A	832
Finland	211,177	419,143	504
Other EU	1,134,022	1,086,281	N/A
Turkey	706,644	903,726	782
Ukraine	26,693	38,988	685
Kazakhstan	22,649	N/A	747
Turkmenistan	18,314	13,126	1,395
Georgia	12,274	6,210	1,976
Azerbaijan	7,138	10,796	661
Uzbekistan	5,487	4,035	1,360
Armenia	1,547	N/A	1,432
Kyrgyzstan	562	550	1,022
Tajikistan	552	513	1,076

Source: ITC

Export of solvents							
Exporters	Exported value in 2013 (USD thousand)	Exported quantity, Tons	Unit value (USD/unit)	Exporters	Exported value in 2013 (USD thousand)	Exported quantity, Tons	Export price (USD)
World	57,923,295	No Quantity	868	Turkey	93,158	76,868	1,212
Netherlands	2,928,956	3,822,959	766	Ukraine	54,194	103,375	524
Belgium	2,594,988	2,748,579	944	Azerbaijan	13,734	14,194	968
Germany	2,212,080	2,293,227	965	Uzbekistan	788	1,685	468
Other EU	3,758,959	N/A	N/A	Armenia	5,480	3,321	1,650
Kazakhstan	358	219	1,635	Kyrgyzstan	21	-	-
Georgia	102	73	1,397	Tajikistan	-	-	-
				Turkmenistan	-	-	-

Source: ITC

Note: Due to confidentiality matters some countries have not provided data

World trade of main solvents, 2013	
USD thousand	
Acetic acid	1,996,197
Acetone	2,027,693
Methanol (methyl alcohol)	11,736,418
Propan-1-ol(propyl alcohol)and propan-2ol(isopropyl alcohol)	1,586,253
Butan-1-ol (N-butyl alcohol)	1,428,017
O-xylene	1,651,926
M-xylene	163,546
P-xylene	22,643,813
Toluene	3,868,010
Cyclohexane	1,981,749
Chloroform (trichloromethane)	89,396
Dichloromethane (methylene chloride)	241,556
1,2-dichloroethane(ethylene dichloride)	1,060,051
Ethyl alcohol & other spirits	9,327,310
Ethyl acetate	1,436,270
N-butyl acetate	620,496
Trichloroethylene	63,558
Tetrachloroethylene (perchloroethylene)	159,686
Diethyl ether	38,216
Tetrahydrofuran	511,209
Total	62,631,370

Source: ITC

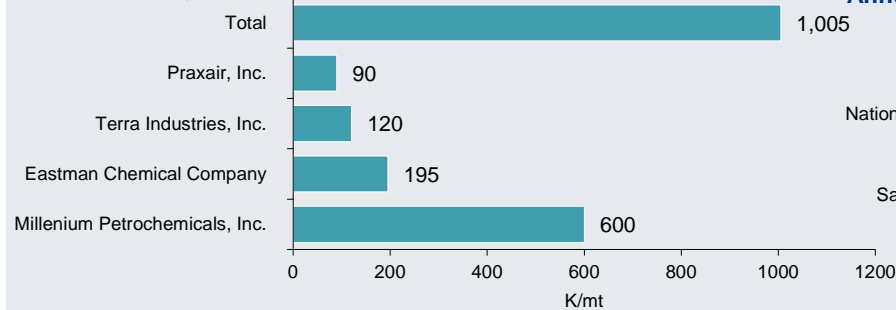
Raw materials in the selected Region/Countries - Solvents

The cumulative trade share of the mostly traded solvents- methanol and aromatics (xylenes and toluene) comprised approximately 64% of the total trade of solvents under research

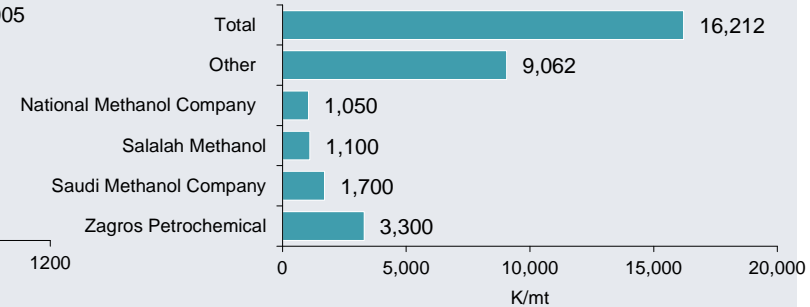
In 2013 the mostly traded solvents were methanol and aromatics (xylenes and toluene) the cumulative trade of which comprised approximately the 64% of the total trade of solvents under research.

Annual capacity of methanol producers

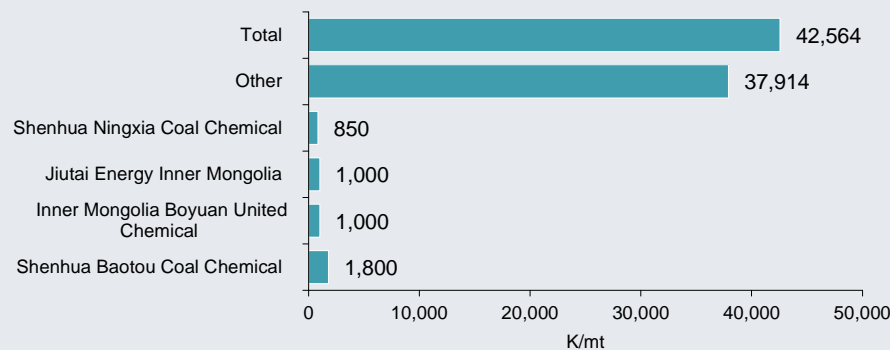
Annual capacity of US



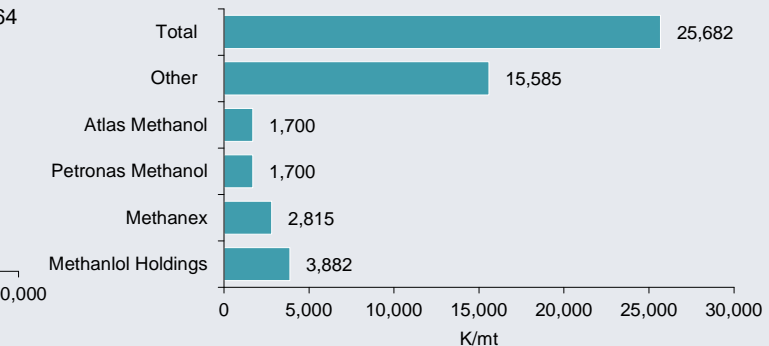
Annual capacity of Middle East



Annual capacity of China



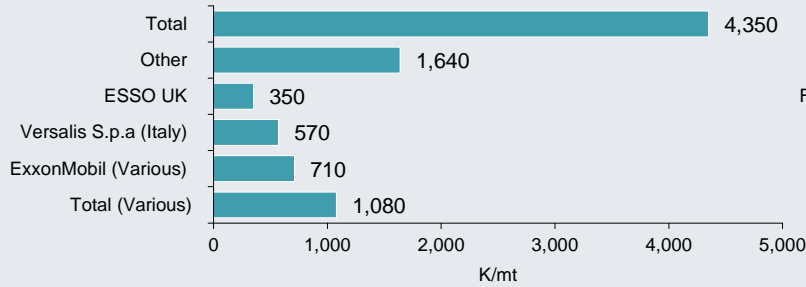
Annual capacity of the rest of the world



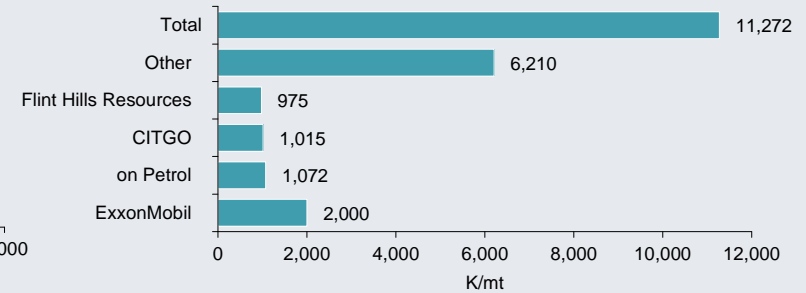
Source: Morgan Stanley Research, 2014

Annual capacity of toluene and xylenes producers

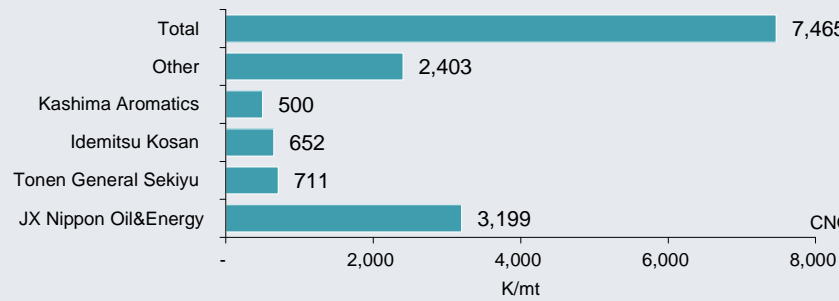
Annual capacity of Western Europe



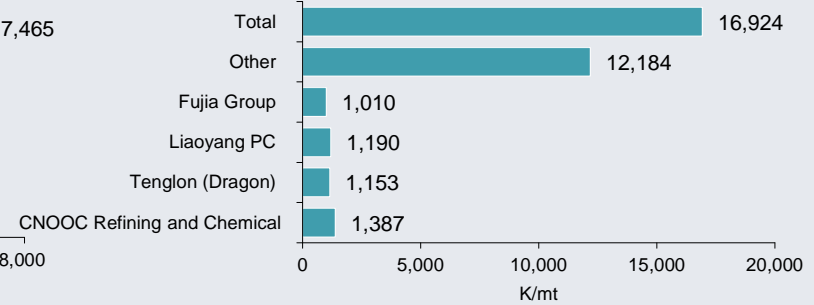
Annual capacity of US



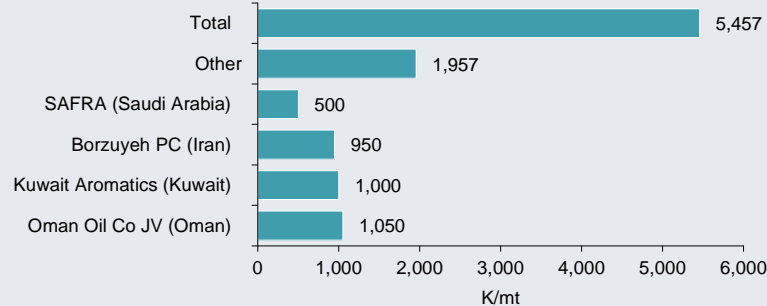
Annual capacity of Japan



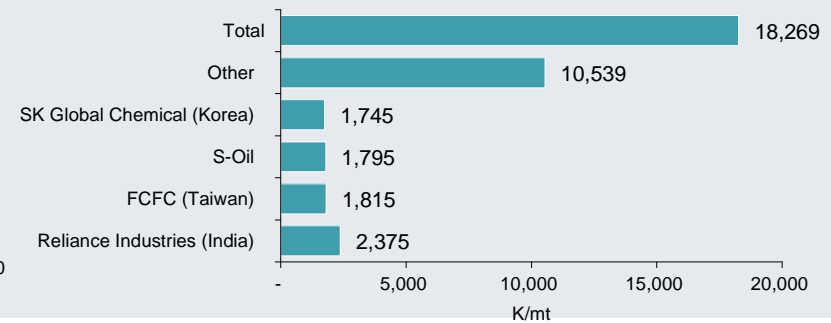
Annual capacity of China



Annual capacity of Middle East



Annual capacity of the rest of world



Source: Morgan Stanley Research, 2014

Pipeline for Soap, washing, polishing and cleaning supplies

P&G is planning to open multi-category manufacturing facility in 2017

Project	Pipeline
Procter & Gamble Plans USD 500 Million Multi-Category Manufacturing Hub In Berkeley County, West Virginia	<p>The Procter & Gamble Company will build a more than 1-million square foot, approximately \$500 million, multi-category manufacturing facility in Berkeley County, in the Eastern Panhandle of the state near the town of Tabler Station, West Virginia. The facility is planned to be opened in 2017.</p> <p>The new, multi-category manufacturing plant is part of a redesign of P&G's North American supply network.</p> <p>In the initial phase, the facility will create over 1,000 construction jobs, and, when it opens, will employ approximately 700 full-time, skilled P&G workers.</p>

Company	Country	Investment	Capacity	Launch data	Other details
Unilever	Turkey	EUR 150 million	-	-	On 22/11/2013 the company announced to make investment in a new manufacturing plant in Konya (Turkey) to increase its capacity in Home and Personal Care.



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