



European Plastics Industry (EU 28)

PlasticsEurope Market Research Group

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PlasticsEurope
Association of Plastics Manufacturers

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This presentation based on official statistics by Eurostat and the European Commission.

Since 2015 report data and graphs had been changed from EU27 to EU28.

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Please note the definitions on slide 19.

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European Union (EU28) Plastics Industry - Economic Summary

Overview

The positive development of the EU28 Plastics Industry after the bounce back from the great recession continued until the beginning of 2011. After decreasing production trends in 2012, total production quantities of Primary Plastics and Plastics Products increased in 2013 and 2014. After the time period from January to July 2015, the Primary Plastics sector recorded lower production quantities compared to 2014. On the other hand, production of Plastics Products and Plastics Machinery exceeded the level of 2014.

Sectors

During the first quarter of 2015, the **production** trend in the Primary Plastics sector remained quite stable, but showed a decreasing tendency in the second quarter. Latest available data for July 2015 recorded a slightly increasing production trend. After the time period from January to July 2015, total production quantity in the Primary Plastics sector was finally 3.3% below the level of the same period in 2014. Plastics Products production showed a slightly growing tendency from January to July 2015 and finally exceeded the production level from first half of 2014 by 2.0%. Output in the Plastics Machinery segment reached high levels, especially during the second half of 2014 as well as in January and April 2015. After the time period from January to July 2015, Plastics Machinery production was above the level from 2014 (+2.4%). At the end of 2014 and beginning of 2015, **producer prices** of Primary Plastics showed a decreasing tendency, but grew again from March to June 2015. At the same time, Plastics Products and Plastics Machinery prices remain on a high level in total.

End Use Industries

After primarily decreasing production tendencies in 2011 and 2012, the following two years were primarily characterized by growing production tendencies in most of the Plastics Customer Industries. After the first seven months of 2015, production of the total Manufacturing segment in the EU28 increased by 1.5% compared to the same period in 2014. After a slight slowdown of production growth in the Automotive sector in mid 2014, production continued to grow during the first seven months of 2015. Output of the Electrical Machinery segment also grew slightly during 2014 and the first months in 2015. The Construction Industry showed a more or less stable tendency in 2015 so far. Production of Food and Beverages generally remains very stable in long-term view.

External Trade

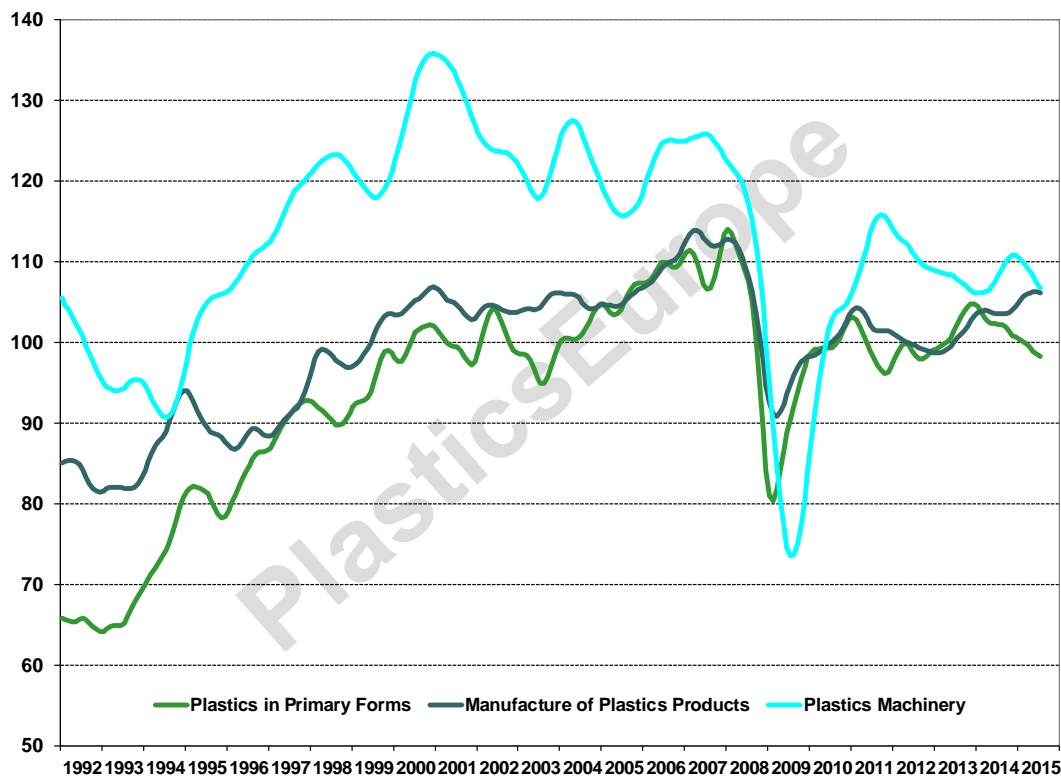
In total, Export and Import quantities of **Primary Plastics** developed very stable from mid 2011 to the end of 2014. After slightly increasing for total Export quantities at the beginning of 2015, slight upward trends had been recorded May and June 2015. Export quantities of **Plastics Products** recorded an increasing tendency in 2015 so far, while Import quantities remained more or less stable.

Outlook

Based on seasonally adjusted data, Primary Plastics production shows first slight signs of a possible increase – nevertheless, production level remains on a clearly lower level compared to last year further on. A positive outlook can be assumed for the Plastics Products segment, which recorded an increasing production trend during 2015 so far as well as positive production expectations for the months ahead. Production of Plastics Machinery develops more volatile, but generally remains on a high level.

European Union (EU28) Plastics Industry Production

Production Index
(2010 = 100, Trend cycle data)

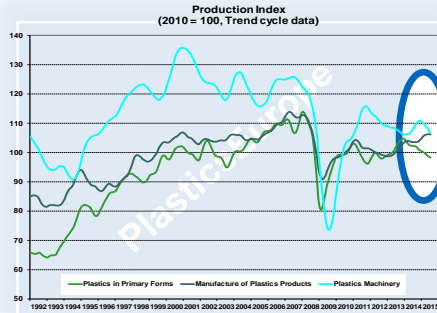


Actual data status of Production: 07/2015

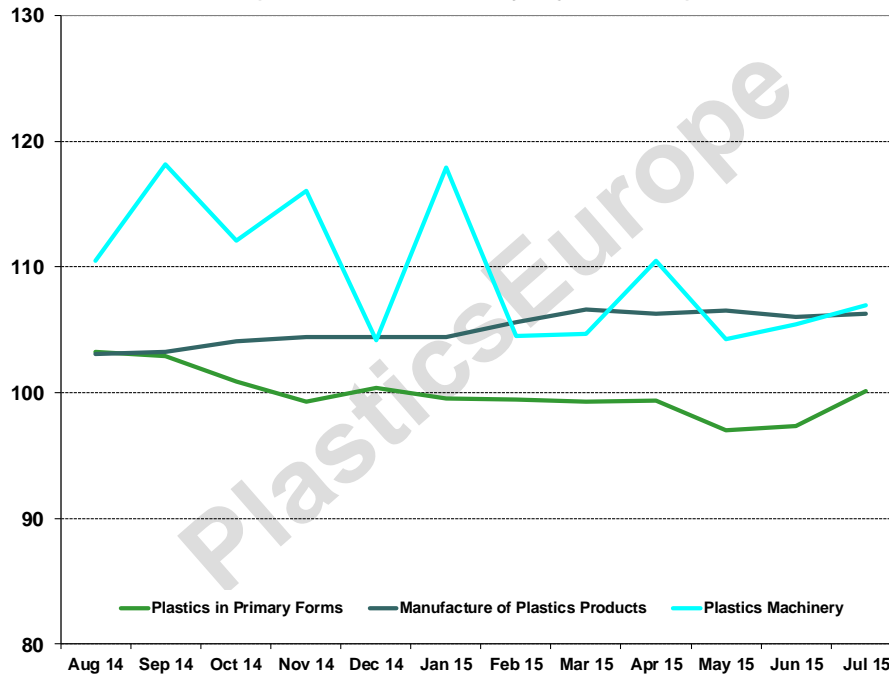
Plastics Industry Production trend by long term view (1992-2015):

- Long time series shows strong growth for production of Primary Plastics and Plastics Products during the 1990's and a more sideways development from 2000 to 2005. Plastics Machinery shows a more fluctuating development in long-term view.
- After strong growth in all the three segments in 2006 and more constant development in 2007, the effects of the economical crisis are clearly recognizable in 2008 and first half of 2009.
- Economic recovery in all three segments lasted from mid 2009 to first half of 2011. Until the end of 2014, production quantities did not increase significantly.

European Union (EU28) Plastics Industry Production



Index - Last 12 months
(2010 = 100, Seasonally adjusted data)



Plastics Industry Production by short-term view (last 12 months):

- Primary Plastics production quantity reached high levels in the third quarter of 2014, but decreased during the fourth quarter. The year 2015 recorded a stable tendency during the first quarter, but another decreasing trend in May. Latest available data for June and July 2015 recorded slightly increasing production trends.
- In total, Plastics Products production quantities showed just minor ups and downs during the last 12 months. February and March 2015 recorded slightly increasing production trends, while months from April to July remained quite stable.
- Plastics Machinery production develops more volatile in general, but reached high levels in the second half of 2014, but also in January and April 2015.

European Union (EU28) Plastics Industry Production

Production Index (working day adjusted)

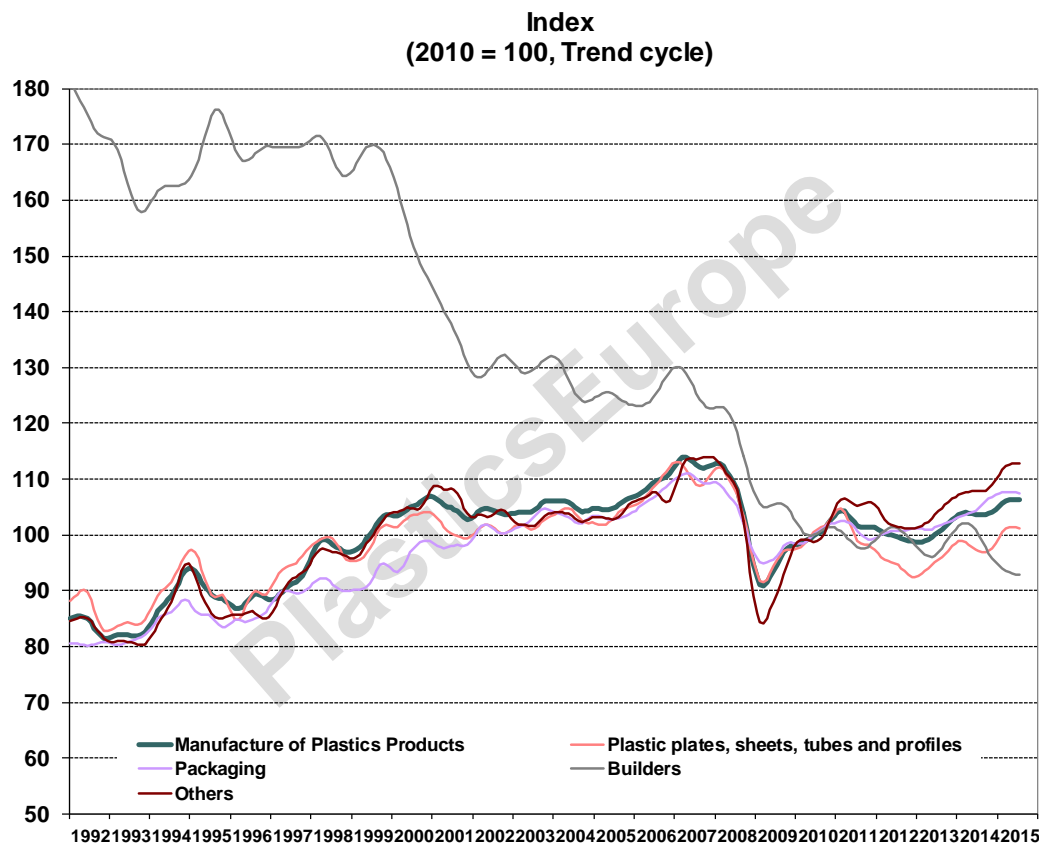
Sectors	Jul 15	Jan - Jul 15	Jul 15	Jan - Jul 15
	Index 2010 = 100		y-o-y (%)	
Primary Plastics	105.0	102.1	-1.1	-3.3
Plastics Products	114.7	109.3	1.6	2.0
Plastics Machinery	102.5	105.9	-4.3	2.4

Production Index (seasonally adjusted)

Sectors	Apr 15	May 15	Jun 15	Jul 15
	Change in % against previous month			
Primary Plastics	0.1	-2.4	0.4	2.8
Plastics Products	-0.4	0.3	-0.4	0.2
Plastics Machinery	5.5	-5.6	1.1	1.5

- After the time period from January to July 2015, production quantities in the Primary Plastics sector had been 3.3% lower compared to the same period in 2014.
- On the other hand, with +2.0%, production of Plastics Products from January to July 2015 was on a higher level compared to 2014.
- The Plastics Machinery segment recorded high output quantities in January and April 2015, but slightly lower quantities in the following months. Nevertheless, total production in the first seven months of 2015 exceeded previous year's level by 2.4%.

European Union (EU28) Manufacturing of Plastics Products



- From 2002 to 2005 production quantities of the Plastics Products sub-categories remained on a stable level.
- 2006 and 2007 showed clearly increasing production quantities, before the effects of the economical crisis are clearly recognizable in 2008 and first half of 2009.
- From mid 2009 to end of 2010 main segments of Plastics Products, except "Builders", have recovered strongly after the deep recession.
- 2011 and 2012 showed slightly decreasing trends for most of the Plastics Products sub-categories, followed by a growth in 2013 and a stable development in 2014.

For the classification of the segments, see under "Definitions" on last page

Actual data status of Production: 07/2015

European Union (EU28) Manufacturing of Plastics Products

Production Index (working day adjusted)

Sectors	Jul 15	Jan - Jul 15	Jul 15	Jan - Jul 15
	Index 2010 = 100		y-o-y (%)	
Plastics Products	114.7	109.3	1.6	2.0
Plates, Sheets, Tubes and Profiles	108.6	105.4	2.9	2.9
Packaging	116.9	111.1	1.3	3.0
Builders	107.9	93.9	-8.0	-7.9
Others	119.9	116.1	3.5	4.2

Production Index (seasonally adjusted)

Sectors	Apr 15	May 15	Jun 15	Jul 15
	Change in % against previous month			
Plastics Products	-0.4	0.3	-0.4	0.2
Plates, Sheets, Tubes and Profiles	-0.7	1.1	0.3	-2.3
Packaging	1.7	-1.5	-0.5	-0.3
Builders	-1.1	1.2	-2.0	2.1
Others	-0.9	-0.2	0.4	0.0

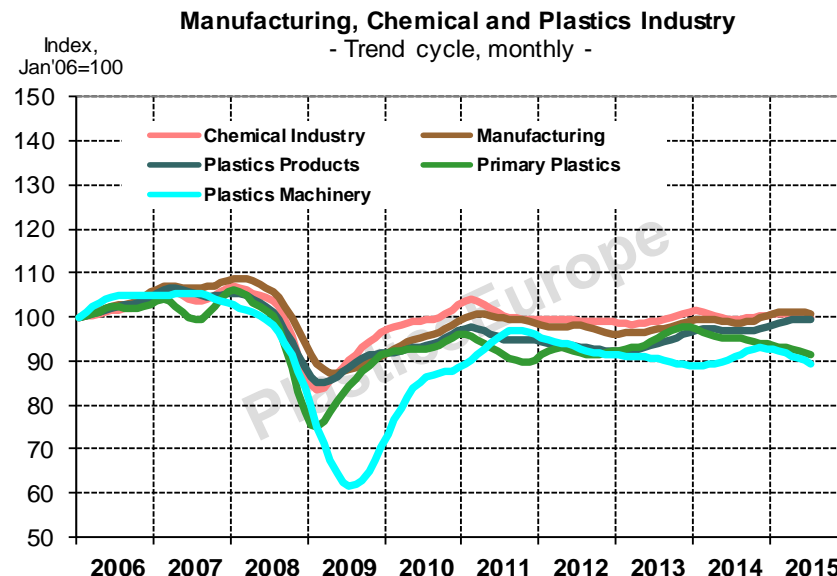
- Compared to 2014, total production quantities of Plastics Products from January to July 2015 had only been lower in the “Builders” segment. The other segments (“Plastics Packaging” as well as “Plates, Sheets, Tubes and Profiles” and “Other Plastics Products”) had been on a higher level compared to the same period in 2014.
- The month-over-month comparison of production indices showed slightly decreasing tendencies in April and June 2015, but slightly increasing trends in May and July.

European Union (EU28) GDP, Chemical and Plastics Industry



Actual data status: Q2/2015

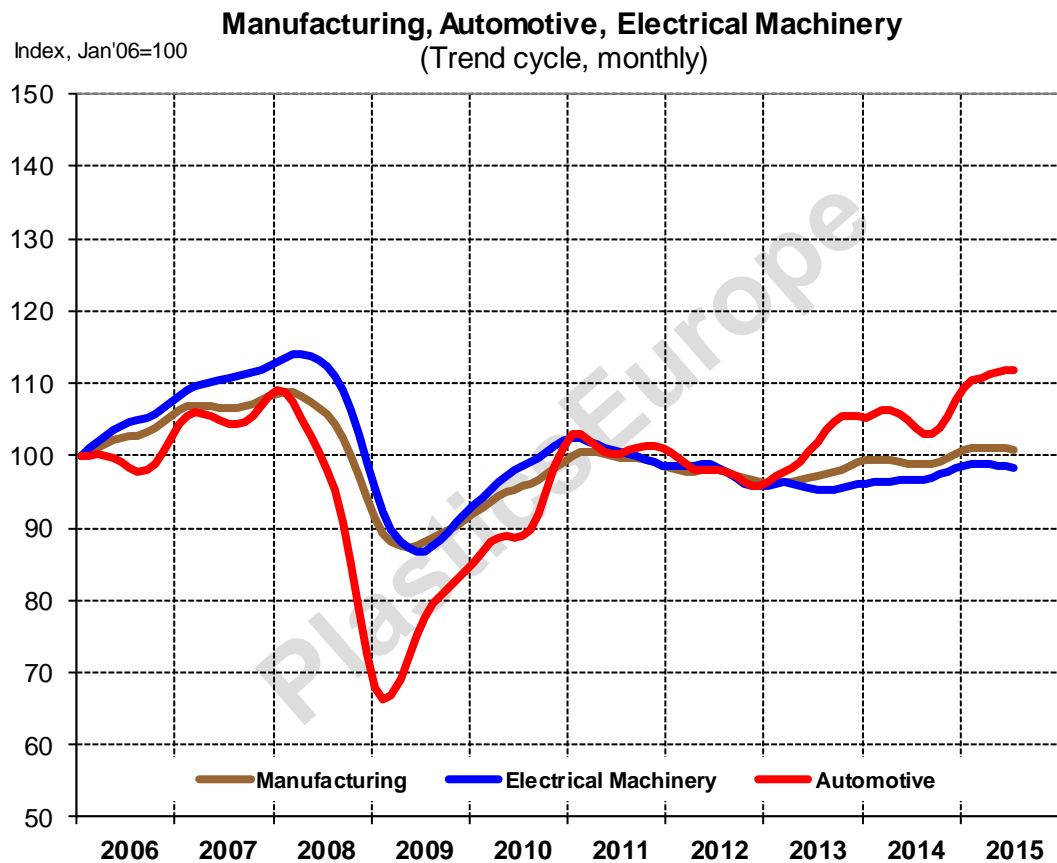
- Based on actual Eurostat data, the EU28 GDP increased by 1.4% in 2014, after stagnation (+0.2%) in 2013 and a 0.5% decline in 2012.
- For the second quarter of 2015, quarterly GDP data by Eurostat indicates another 0.4% growth compared to the first quarter.
- Actual GDP growth estimations for the EU28, published by the European Commission: 2015: +1.8%; 2016: +2.1%



Actual data status of Production: 07/2015

- Uptrend in total Manufacturing and Chemical Industry especially in 2009 and 2010. After slightly decreasing tendencies in 2011 and 2012, slight upward trends had been recorded for both of the industry segments in 2013. The year 2014 and the first seven months of 2015 showed more stable production tendencies.
- The Primary Plastics segment showed a slightly decreasing production tendency in 2014 and 2015, while Plastics Products production remained more stable in total.

European Union (EU28) Plastics Customer Industries - Part I



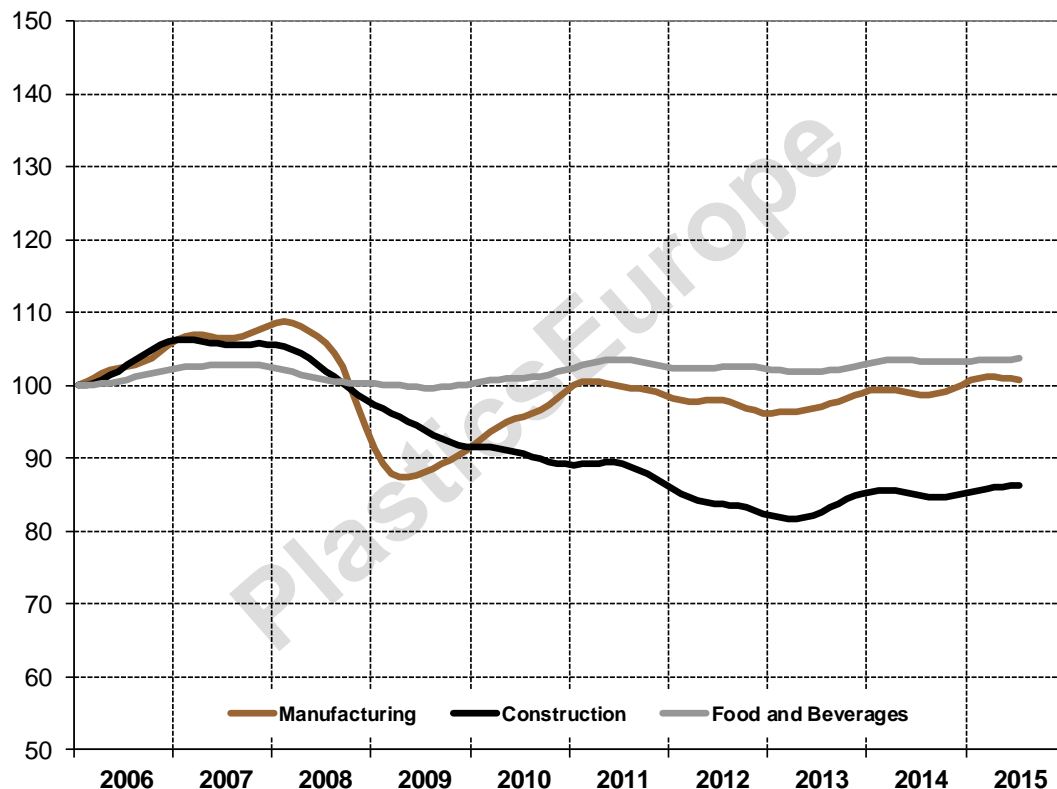
Actual data status of Production: 07/2015

- The Manufacturing Industry in the EU28 countries slightly decreased in 2011 and 2012, but increased in 2013. A slight uptrend is being recorded at the end of 2014, while the first seven months of 2015 remained more stable.
- The Automotive Industry recorded clearly growing production quantities during 2013. After a slight slowdown in mid 2014, production continued to grow until July 2015.
- After three years with primarily decreasing production tendencies in the Electrical Machinery Industry, a slight upward trend had been recorded during 2014 and the beginning of 2015.
- After seven months of 2015, industrial production activity in the EU28 manufacturing industry was still below the pre-crisis level from 2008.

European Union (EU28) Plastics Customer Industries - Part II

Manufacturing, Construction, Food and Beverages
(Trend cycle, monthly)

Index, Jan'06=100



Actual data status of Production: 07/2015

- The Construction Industry in the EU28 recorded a continuously decreasing trend from 2008 to 2012. In the second half of 2013, a slight upward trend had been recorded, followed by a stagnating tendency since the beginning of 2014.
- The Food and Beverages Industry was less hit by the recession than other industries and develops very stable in long-term view.

European Union (EU28) Plastics Customer Industries - Part III

Production Index (working day adjusted)

Sectors	Jul 15	Jan - Jul 15	Jul 15	Jan - Jul 15
	Index 2010 = 100		y-o-y (%)	
Manufacturing	107.5	106.1	1.5	1.7
Electrical Machinery	99.6	99.9	0.2	2.3
Automotive	128.0	125.5	2.5	4.4
Construction	97.0	91.9	2.4	0.5
Food & Beverages	105.3	100.2	0.4	-0.1

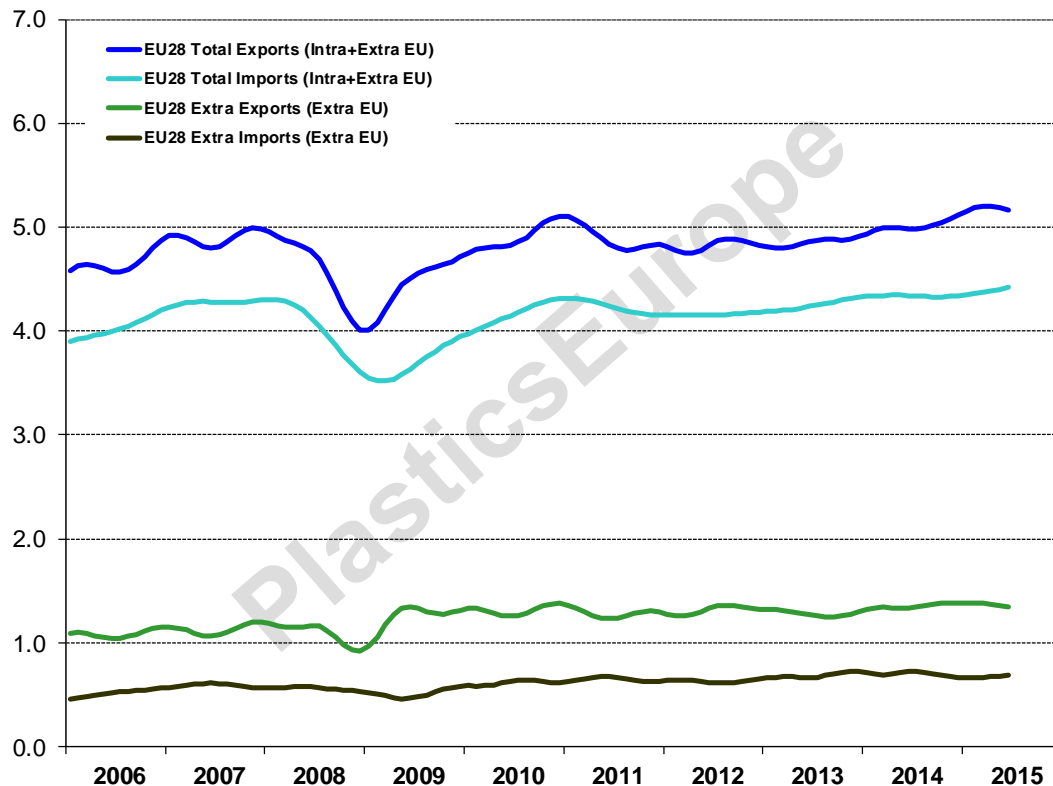
Production Index (seasonally adjusted)

Sectors	Apr 15	May 15	Jun 15	Jul 15
	Change in % against previous month			
Manufacturing	0.1	0.0	-0.5	0.1
Electrical Machinery	0.4	0.0	-0.1	-0.6
Automotive	-1.1	2.7	-2.9	5.0
Construction	-0.6	-0.2	-0.5	0.7
Food & Beverages	-0.5	0.5	-0.1	0.8

- After the time period from January to July 2015, production quantities of the Electrical Machinery Industry (+2.3%) as well as in the Automotive Industry (+4.4%) had been on a higher level compared to the same period in 2014.
- Output of the Construction Industry from January to July 2015 remains more or less on the level of the previous year (+0.5%), but in mid-term view remains on a relatively low level in total.
- Month-over-month comparison of seasonally adjusted production indices showed almost no changes for the total Manufacturing segment in April, May and July 2015, but a slight decrease in June.

European Union (EU28) Trade Primary Plastics

Trends in EU28 Trade with Primary Plastics
(Mio tons, Trend cycle, monthly)



Actual data status of EU28 Trade: 06/2015

Intra EU Trade: Trade between the Member States of the European Union
Extra EU Trade: Trade of the European Union with Non-Member Countries

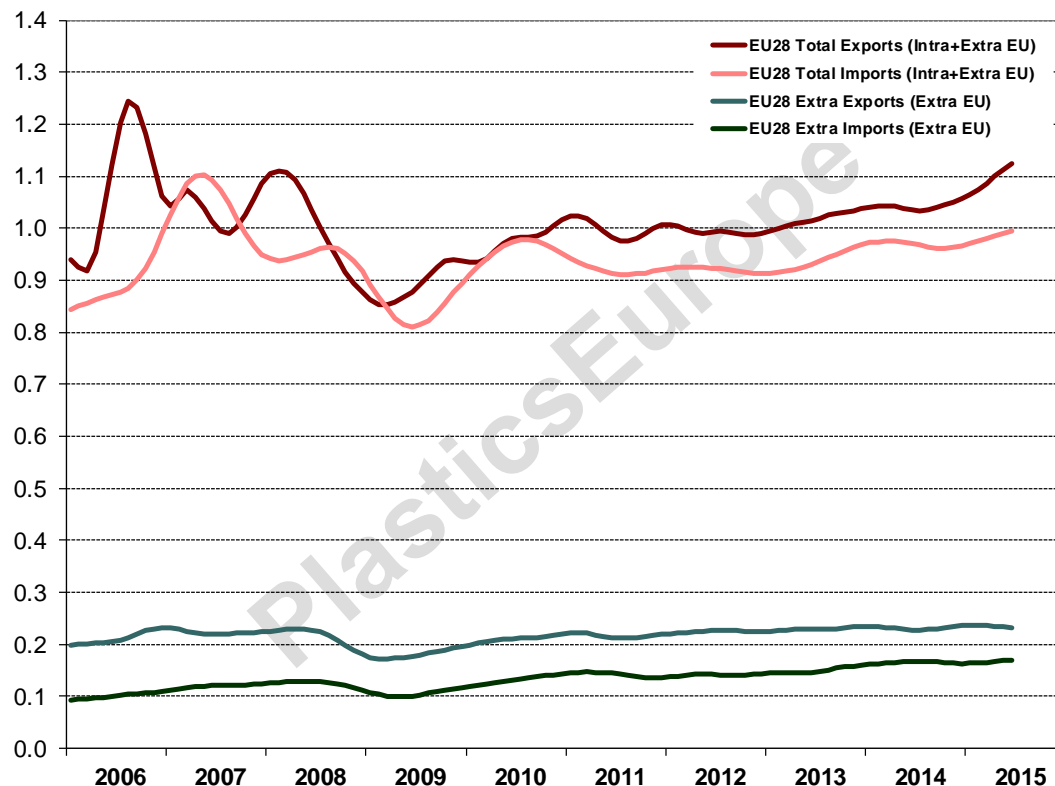
- From mid 2011 to June 2015, total Import quantities of Primary Plastics developed very stable in total. Total Export quantities of Primary Plastics show a growth at the beginning of 2015 and remain on a high level in May and June 2015.
- In 2014, the share of Exports to Non-EU countries (27.1%) was slightly higher compared to 2013 in total. The share of Imports from Non-EU countries remained on a level of around 16%.

Extra EU Trade - Primary Plastics
Share in Total (%)

Year	Exports	Imports
2008	23.8	13.9
2009	28.2	13.8
2010	26.8	14.8
2011	26.2	15.3
2012	27.2	15.2
2013	26.5	16.2
2014	27.1	16.1
2015YTD 06	26.0	15.4

European Union (EU28) Trade Plastics Products

Trends in EU28 Trade with Plastics Products
(Mio tons, Trend cycle, monthly)



Actual data status of EU28 Trade: 06/2015

Intra EU Trade: Trade between the Member States of the European Union
Extra EU Trade: Trade of the European Union with Non-Member Countries

- While Import quantities of Plastics Products remain more or less stable since the beginning of 2014, total Export quantities show an increasing trend since mid 2014.
- The Extra EU Export share reached a peak in 2012 (22.6%) and slightly decreased in 2013 (22.5%) and 2014 (22.2%).
- The share of Plastics Products Imports from Non-EU countries continued to increase in 2014 and finally reached 16.9%.

**Extra EU Trade - Plastics Products
Share in Total (%)**

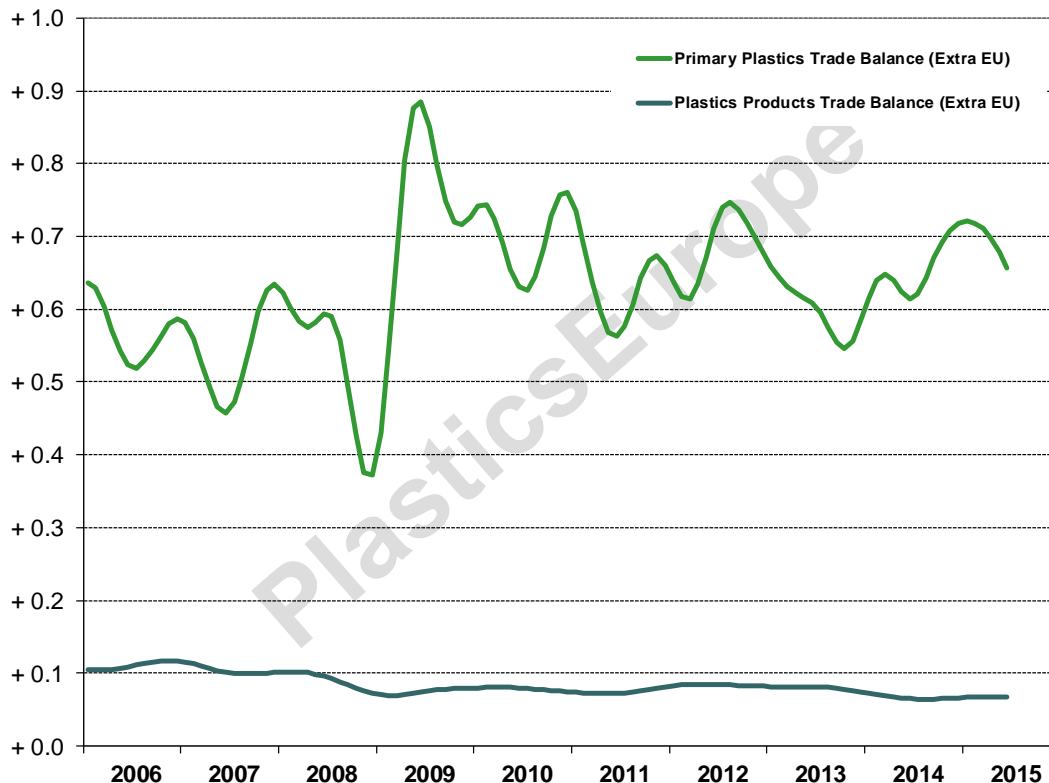
Year	Exports	Imports
2008	21.3	12.8
2009	20.2	12.8
2010	21.6	13.5
2011	21.7	15.5
2012	22.6	15.3
2013	22.5	16.0
2014	22.2	16.9
2015YTD 06	20.7	17.1

European Union (EU28) Trade Balance with Non-Member Countries

EU28 Plastics Industry: Trade Balance with Non-Member Countries

(+ Surplus, - Deficit)

(Mio tons, Trend cycle, monthly)



Actual data status of EU28 Trade: 05/2015

- Last years showed a quite volatile trend for the Primary Plastics trade surplus.
- The trade surplus of the EU28 Primary Plastics Industry in 2014 exceeded the level of 2013.
- In the last years, the Plastics Products trade surplus varied just slightly around a level of 0.9 to 1.0 Mio. tons, but fell below this range in 2014 with around 0.8 Mio. tons.

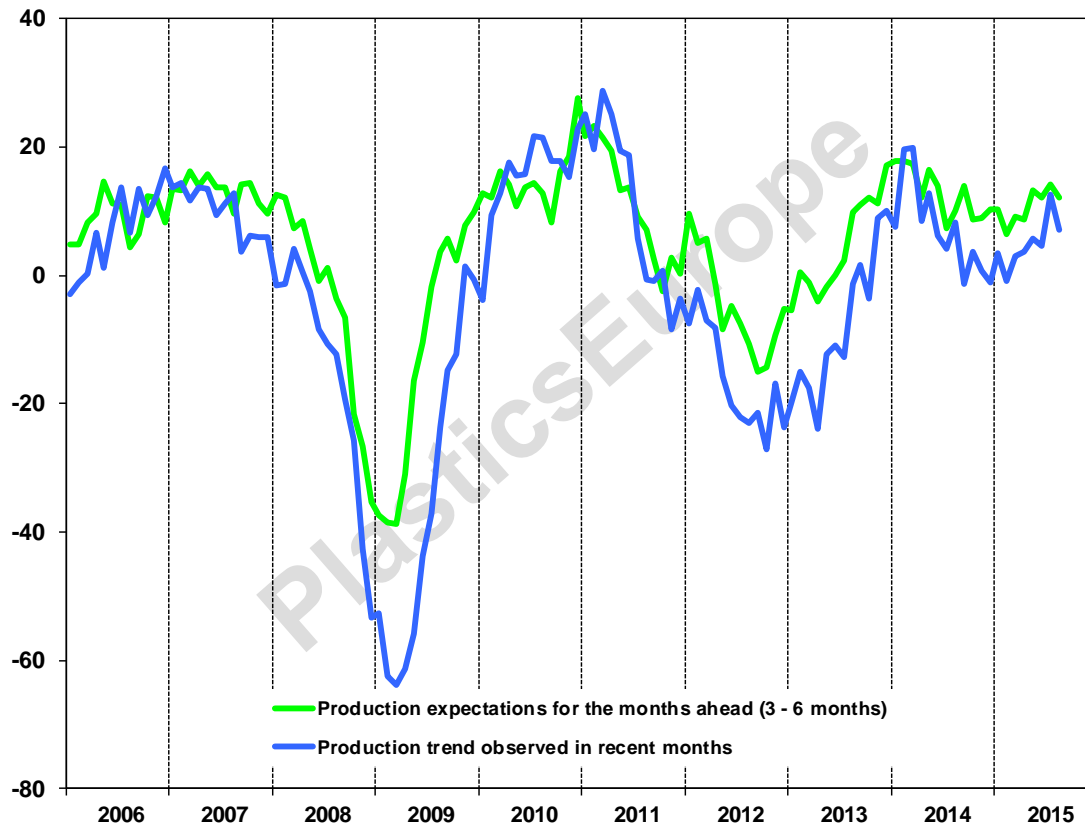
Extra EU28 Trade Balance (Mio tons) (+ Surplus, - Deficit)

Year	Primary Plastics	Plastics Products
2008	+ 6.44	+ 1.10
2009	+ 8.96	+ 0.90
2010	+ 8.33	+ 0.94
2011	+ 7.60	+ 0.90
2012	+ 8.18	+ 1.00
2013	+ 7.10	+ 0.95
2014	+ 7.92	+ 0.80
2015YTD 06	+ 4.10	+ 0.38

European Union (EU28) Outlook Manufacturing of Plastics Products

Balance of positive and negative answers, seasonally adjusted

balance in % (+ increasing production, 0 remain unchanged, - decreasing production)



Actual data status: 08/2015

The business surveys includes the EU28 Plastics Products Industry (incl. Rubber).

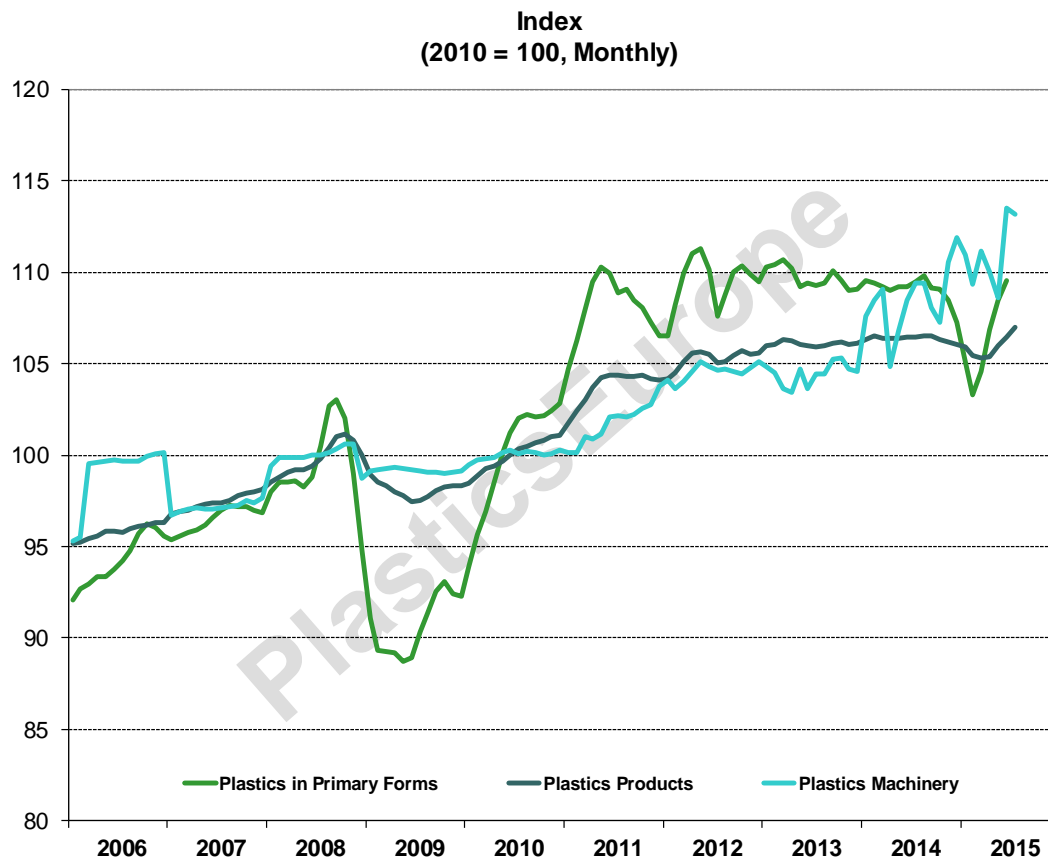
- Production trend observed in recent months became slightly weaker over the course of 2014, but increased again in 2015. The latest August 2015 index remains positive.
- The business outlook for the months ahead (production expectations) remained positive in 2014 and 2015 so far. The August 2015 index (+12) remains on a relatively high level.

Production Expectations

balance in %

Sep 14	14
Oct 14	9
Nov 14	9
Dec 14	10
Jan 15	10
Feb 15	6
Mar 15	9
Apr 15	9
May 15	13
Jun 15	12
Jul 15	14
Aug 15	12

European Union (EU28) Plastics Industry Producer Prices



- The Primary Plastics sector recorded a strong increase from mid 2009 to mid 2011. Until the third quarter of 2014 prices remained on a high level. After a decrease at the end of 2014 and beginning of 2015, prices grew again until June 2015.
- Prices for Plastics Products showed a steady growth over the last years and remain more or less stable since the beginning of 2013.
- Plastics Machinery prices developed more or less stable during 2012 and 2013. The year 2014 recorded some diverging tendencies on a high level. In 2015, the price index reached another peak in June 2015.

Producer Prices: Total Output Prices (Domestic Market + Foreign Market)

Actual data status for Producer Prices: 07/2015 for Plastics Products and Plastics Machinery

06/2015 for Plastics in Primary Forms

European Union (EU28) Plastics Industry Producer Prices

Producer price index (cumulative)

Sectors	Jul 15	Jan - Jul 15	Jul 15	Jan - Jul 15
	Index 2005 = 100		y-o-y (%)	
Primary Plastics	n.a.	106.3	n.a.	-2.7 ¹⁾
Plastics Products	107.0	105.9	0.5	-0.5
Plastics Machinery	113.2	111.0	3.4	2.9

Producer Prices: Total Output Prices (Domestic Market + Foreign Market)

Producer price index (monthly)

Sectors	Apr 15	May 15	Jun 15	Jul 15
	Change in % against previous month			
Primary Plastics	2.1	1.5	1.0	n.a.
Plastics Products	0.0	0.6	0.5	0.5
Plastics Machinery	-1.1	-1.3	4.5	-0.3

1) For Primary Plastics: January – June 2015

- **Primary Plastics**

Compared to 2014, Primary Plastics prices in the first half of 2015 had been 2.7% lower. This results from the decreasing price trend which had been recorded from September 2014 to February 2015.

- **Plastics Products**

In total, Plastics Products prices in the first seven months of 2015 had been on a slightly lower level (-0.5%) compared to the same period in 2014. After a stable tendency in April 2015, months from May to July recorded slightly increasing price indices.

- **Plastics Machinery**

In total, Plastics Machinery prices from January to July 2015 recorded an increase of 2.9% compared to 2014. Latest available data for July 2015 recorded a decrease of 0.3%.

Data Sources: Eurostat, European Commission, PlasticsEurope Market Research Group (PEMRG).

Since February 2015 report data and graphs had been changed from EU27 to EU28.

Classification of Economic Activities: New Nace Rev.2 Classification of Eurostat since 2009.

Sectors of the Plastics Industry are classified by the following NACE codes: C2016 (Plastics in Primary Forms), C222 (Manufacture of Plastics Products), C2221 (Plates, Sheets, Tubes and Profiles), C2222 (Packaging), C2223 (Builders), C2224 (Others), C2896 (Plastics Machinery incl. Rubber).

Main plastics related industries NACE codes: C10_12 (Food and Beverages), C20 (Chemical Industry excl. Pharmaceuticals), C26_27 (Electrical Machinery), C291 (Automotive), F (Construction).

Since end of 2012, Eurostat publishes the Production Indices for EU28 as “seasonally adjusted” and as “working day adjusted” data only. The “trend cycle” was calculated on base of available working day adjusted data by using the X-11 method. With first publication of production indices for 2012, Eurostat changed from a direct to an indirect method of seasonal adjustment. The new method is applied to the complete time-series of production indices. This also affects data before 2012.

As of 26 February 2013, Eurostat publishes short-term statistics indicators with the new base year 2010. This process involves the update of the weights used by national statistical institutes to calculate aggregate indicators for their countries.

The producer price index for the plastics industry (base year 2010 = 100) measures the average price development of all goods resulting from that activity that are sold on the domestic market and foreign markets. The producer price index for the plastics industry is divided by NACE C2016 (Plastics in Primary Forms), C222 (Manufacture of Plastics Products) and C296 (Plastics Machinery incl. Rubber).

GDP real: Gross Domestic Product at 2010 prices and exchange rates, seasonally adjusted. The GDP Forecast for the upcoming years is taken from the “European Economic Forecast”, published three times per year by the European Commission.



Plastics

The Material for the 21st Century