World Plastics Production 1950 – 2015

- Plastics are a global success story.
- Continuous growth for more than 50 years.
- Plastics production ramped up from 1.5 Mio. t in 1950 to ~322 Mio. t in 2015. In 2015 global plastic’s production grew by 3.4% compared to 2014.
- Compound Annual Growth Rate (CAGR) from 1950 to 2015 is about 8.6%.


Source: PlasticsEurope Market Research Group (PEMRG) / Consultic Marketing & Industrieberatung GmbH
World Plastics Production 2006 - 2015

- Asia with the leading country China (28%) mean-while accounts for more than 49% of worldwide production.

- Europe and NAFTA are on a similar level each with a share of around 18%~19%.

- Within a few years, China has risen to the most important plastics producer. All other regions lost global production shares.

* w/o Other Plastics (includes Thermosets, Elastomers, Adhesives, Coatings and Sealants and PP-Fibers. Not included PET-, PA- and Polyacryl-Fibers), 2014 = ~53 Mio. t

Source: PlasticsEurope Market Research Group (PEMRG) / Consultic Marketing & Industrieberatung GmbH
World Plastics Materials Demand 2015 by Types

- Polyolefins account for more than 55% of global Plastics Materials demand.
- PVC is the second largest resin type following Polyolefins.
- Standard Plastics (Polyolefins, PVC, PS & EPS, PET) account for approx. 85% of the total demand.

2015 269 Mio. t*

*Source: PlasticsEurope Market Research Group (PEMRG) / Consultic Marketing & Industrieberatung GmbH

*W/o Other Plastics (includes Thermosets, Elastomers, Adhesives, Coatings and Sealants and PP-Fibers. Not included PET-, PA- and Polyacryl-Fibers) = ~53 Mio. t
World
Thermoplastics Demand by Types 2015

- Standard Plastics dominate the global market in tons
- Around 10% of the globally demanded plastics are Engineering plastics

**Standard Plastics**

- PP 26.8%
- HDPE 17.9%
- PVC 18.3%
- LDPE, LLDPE 20.3%
- PS; EPS 8.1%
- PET* 8.6%

**Engineering Plastics**

- PC 16.8%
- PA 14.3%
- ABS, SAN 35.3%
- POM 5.2%
- PBT, PET** 6.4%
- Others 10.2%
- Blends 11.7%

229 Mio. t

~ 25 Mio. t

*PET Bottle grade  **PET Injection grade
Source: PlasticsEurope Market Research Group (PEMRG) / Consultic Marketing & Industrieberatung GmbH
Plastics in 1989, passed steel production by volume

Global Production 2015:
- Plastics: 322 Mio. t = 322 billion litre
- Steel: 1,623 Mio. t = 203 billion litre

Calculation Model:
- 1 kg plastics = 1 litre
- 8 kg steel = 1 litre

Source: Stahl-Zentrum/International Iron and Steel Institute (IISI), PlasticsEurope Market Research Group (PEMRG) / Consultic Marketing & Industrieberatung GmbH
Thermoplastics Market Share 2015

Triangle of Thermoplastics
Classified by Market Share

- **Standard Plastics** are the basics materials.
- **Polyolefins** are the largest product group. Polyethylene: 34% Polypropylene: 24%
- **Engineering Plastics** are a small but valuable part of the market.
- **High Performance Polymers** are specialized for very demanding applications.

Source: PlasticsEurope Market Research Group (PEMRG) / Consultic Marketing & Industrieberatung GmbH
9 countries in Europe reached a recovery ratio of more than 95% of the Post-consumer Plastic Waste.

These countries have a landfill ban.

Also 6 of these countries are amongst the 11 countries with the highest recycling rates (>30%).

Therefore „divert from landfill“ boosts higher recovery and recycling quantities, also of waste streams, which have not been recovered so far.
In the period 2006-2014 the analysis of waste generation shows a slight growth. Besides economical impacts, plastic parts with lower weight (e.g. plastic bottles) play a significant role in that process. After the economical crisis, the waste quantity rose from 2009 to 2014 by about 1.7 mill. tons during the last five years. While disposal quantities decreased by ~4.9 million tons in the last eight years, recovery quantities rose by 6.2 mio. tons up to 17.9 mio. tons.

Source: Consultic Marketing & Industrieberatung GmbH