Recycling is getting better and better

- New technologies increase the quality of recycled materials
- First technical solutions for black plastics on the market
- Cooperation is crucial for the circular economy

Düsseldorf, 19 October 2019 – The EU has set itself ambitious targets for the introduction of a circular economy for plastics. One of them: ten million tonnes of recycled material should be used in new products by 2025. At present, however, the figure is only two million tonnes. In order to achieve this goal, the quality of recycled plastic must improve. It should come as close as possible to that of virgin material. “This is a major challenge. Our task is to provide the technologies for this”, said Dr Gerold Breuer, Head of Marketing & Business Development of the recycling specialist Erema, on Saturday in the VDMA Pavilion at the K. The subject of recycling was the focus of discussions and lectures in the VDMA Pavilion on the fourth day of the fair.

Nine billion tonnes of plastics have been produced worldwide in the past 60 years. To date, this has resulted in 6.3 billion tons of waste. “Of this amount, only 600 million tonnes were recycled”, Breuer said. Time is pressing to do more, also because with the growing world population, plastics consumption will increase by one billion tonnes by 2050. The generation of the millennials, which will have the say by then at the latest, wants sustainable use of plastics. “If the companies in our industry do not respond to this, they will lose business. So we have to adapt,” Breuer was convinced.

A ray of hope for black plastics

In fact, the demand for highest possible recyclate quality poses a major technological challenge - which however many experts believe will be gradually
solved by the industry. For example, the problem of black plastics. For a long time it was not possible to filter this material out of the waste streams in automatic sorting systems. Its dark colour absorbed too much light. They could not be detected by the systems, which were mostly based on cameras. However, it is now possible.

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The company Steinert has introduced a solution to the market that allows black material to be sorted out. It is based on the idea that black material remains in the waste stream at the end of a complex sorting process and is removed from there. "Sorting out black plastics makes economic sense. Because without extraction, the material would remain in the residues that eventually go to the waste incineration plant or to landfill, where every tonne has to be paid for", said Hendrik Beel, Managing Director of the Steinert Group, which specialises in sorting plants.

Other materials have a time advantage
In Germany, only about seven percent of recycled material is currently used in new products. Too little for an attractive market with good prices, according to many experts. Prof. Thomas Probst of the BVSE Federal German Association of Secondary Raw Materials and Disposal did not want to join in with the critics in the VDMA discussion. "The 1.2 million tonnes of recycled materials processed in Germany are not a bad result when you consider that the circular economy is still in its infancy", he said. Other materials, such as wood or metal, have a great advantage in terms of time, with which plastics have to catch up first. However, Probst certainly agreed with the assessment that a circular economy that also functions economically needs recyclate that can compete with virgin materials. The most important prerequisite for this is good sorting. Technologies are being refined throughout the plastics machinery industry, which will improve the quality of recycled materials. In addition to sorting at the beginning of processing, shredding and cleaning also play an important role, if quality is to be right at the end. A new trend, for example, is hot washing, as offered by the company Herbold Meckesheim. "We achieve very high degrees of purity by combining cold and hot washing", said Vice-President Daniel Zeiler. The hot water also makes it possible to remove stubborn impurities such as glue or grease. In addition, the bad odour of the material can be at least partially eliminated.
Cooperation is the be-all and end-all
Recycling is on everyone’s lips today. This has not always been the case. "When Erema started 36 years ago, we were pioneers in this field", said CEO Manfred Hackl. "Our aim since then has been to develop products, technologies and business models for the plastics industry". Erema is therefore also a partner of the Californian start-up company Bureo, which collects used fishing nets in Chile, recycles them and gets them turned into new products such as skateboards. "Co-operation is very important in the circular economy", said co-founder David Stover. "There are many things we cannot do. We rely on partners like Erema".

Daily programme, video clips and more: https://plastics.vdma.org

In our world, plastics are indispensable. The downside is the littering. Carelessly discarded plastics products condense to form thick carpets, not just on rivers and seas, but also on land. A complete circular economy could prevent this evil and put the focus back on the benefits of plastics. In order for this to be a success, we all need to work together: processors, raw material manufacturers, mechanical engineers and recyclers, but also brand owners, end consumers and politicians.

VDMA will shine the spotlight on circular economy at the leading K 2019 trade fair in Düsseldorf in October and show how closed loops can work effectively. Throughout the process, stakeholders will be having their say in the association’s daily programme during this international industry event.

CIRCULAR ECONOMY @ K
Plastics shape the future

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About VDMA Plastics and Rubber Machinery

More than 230 companies are members of the association, covering more than 90 percent of the industry’s production activities in Germany. Ten percent of our member companies come from Austria, Switzerland and France. The German member companies represent sales of EUR 7 billion in core machinery and EUR 10 billion including peripheral technology. Every fourth plastics machine produced in the world comes from Germany; the export rate is 70 percent. Ulrich Reifenhäuser, Member of the Management Board of the Reifenhäuser Group, is the chairman of the association.