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Questions and answers on recycling plastics and masterbatches

What are the different types of recycled plastics?

Recycled plastics are divided into two types: PCR (post-consumer recycled) and PIR (post-industrial recycled).

What is the difference between mechanical and chemical recycling?

Mechanical recycling

Plastic waste is processed into secondary raw materials or products in which the chemical compounds of the plastics are not broken down. The waste is mechanically shredded and melted in an extruder (often after being washed). Plastic granulate is then produced in the same process.

This form of recycling is particularly suitable for waste streams of a type of relatively clean plastic.

Chemical recycling

Chemical or raw material recycling refers to the conversion of plastic polymers into their monomers, basic chemical components or base chemicals, i. e. depolymerisation using thermochemical or chemical processes.

These basic chemical components or base chemicals are then used to produce new polymers with properties identical to those of virgin materials.

What factors need to be considered when developing masterbatches for recyclates?

It is important to take the specific properties of the recyclates into account to ensure that the desired results are achieved. This requires precise knowledge of the composition and quality of the recyclate.

This knowledge is essential for selecting suitable additives and pigments and for optimizing the manufacturing process to ensure consistently high quality of the masterbatch.

If the masterbatch itself is also developed on a recycled basis, the properties of the recycled material for the masterbatch must also be matched to those of the compound.

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Masterbatch Verband – German Masterbatch Association
The association represents the interests of German manufacturers of colour and additive masterbatches. It is a sector group of Verband der Mineralfarbenindustrie e. V. (VdMi).

The VdMi is listed in the Lobbying Register for the Representation of Special Interests vis-à vis the German Bundestag and the Federal Government (Lobbyregister des Deutschen Bundestags, number R000760) as well as in the Transparency Register of the EU Commission (number 388728111714-79).

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