

**LUVOTECH[®] eco
PPS GF40 BK**

**Different
recyclate contents**

**Sustainability
vs.
Performance**

Recyclates with virgin material content **Sustainability vs. performance**

The demand for the use of sustainable materials (recyclates) is increasing. Industry experts assume that the carbon footprint of a plastic granulate will soon become just as important a selection criterion as technical characteristics such as strength and toughness.

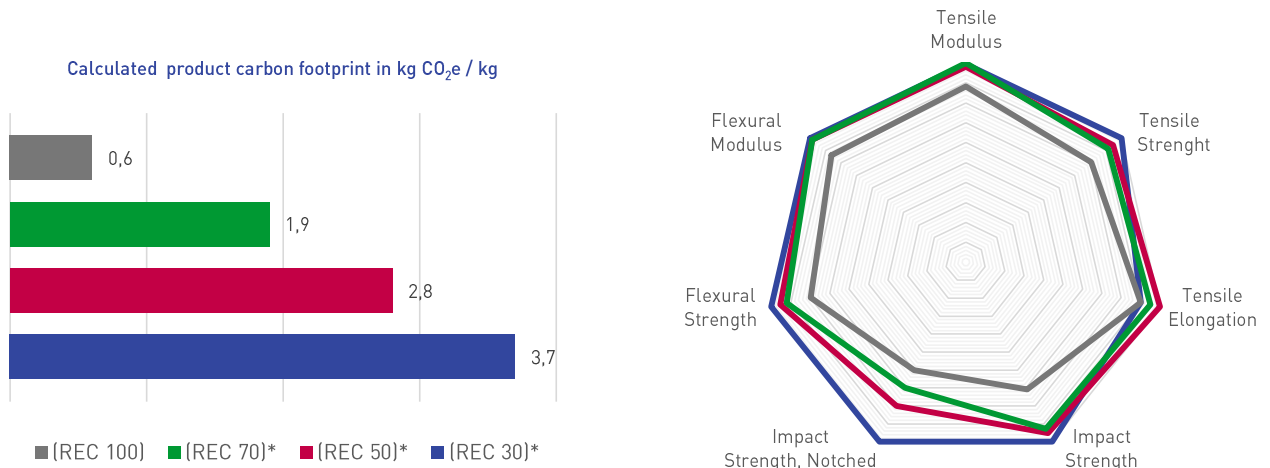
But how does the daily handling of the use of recyclates look like...?

- Are there enough raw materials available to cover the demand according to the requirements?
- Is the technical performance sufficient and is the greater tolerance acceptable for the processing industry?

The answer could be in the mixing ratio recyclates / virgin raw materials. Therefore, LEHVOSS considered different mixing ratios with 30% (REC 30), 50% (REC 50), 70% (REC 70) and 100% (REC 100) recycled content. Results see next page.

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Carbon footprint vs. technical performance



The Carbon footprint of the 100% the recyclates was calculated using established, science-based methods and the Life Cycle Assessment (LCA) software GaBi. The calculation was conducted based on the international LCA standards DIN EN ISO 14040, DIN EN ISO 14044 and the standard DIN EN ISO 14067 "Carbon footprint of products". The calculation of the mixtures are based on these results.

Technical data

Basic- and development types (*) with recycled content

Properties	Unit	(REC 30)*	(REC 50)*	(REC 70)*	(REC 100)
Tensile Modulus	MPa	15.200	15.000	15.300	13.500
Tensile Strength	MPa	196	185	179	158
Tensile Elongation	%	1,8	2,0	1,9	1,8
Impact Strength	kJ/m ²	41	39	38	30
Impact Strength, Notched	kJ/m ²	10	8	7	6
Flexural Strength	MPa	267	255	246	213
Flexural Modulus	MPa	13.700	13.500	13.500	11.800

The technical data of the development types (*) was determined on a non-representative number of samples. The test speeds used correspond to research and non-common series standards. The values listed are therefore only to be regarded as guide values.

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