

climatop-Certification: rubbish bag

Analysis of the Life Cycle

This fact sheet shows the results of the life cycle analysis of greenhouse gas emission and the relevant environmental impacts. The greenhouse gas emissions were summed up over the entire life cycle of the product, i.e. of the provision of raw materials to the transportation, to the production in the factory through to the usage and the disposal of the product. This life cycle analysis shows the environmental advantage of the Pely® rubbish bags compared to conventional customary rubbish bags and rubbish bags made from recycled PE with regard to its climate and environmental impact.

Product information

The 20L rubbish bag from the pely-plastic GmbH & Co. assortment was analysed. The reference for the comparison is a standard bag of 20L filling volume and an area of 5'841cm². The results of the comparison apply to all Pely® bags equally, as the different types of the bags were taken proportionally into account.



Pely® bag:

20L, HDPE
thickness: 10.2 µm, weight: 5.7 g/bag

Conventional customary bag*:

20L, HDPE
thickness: 13.6 µm, weight: 7.6 g/bag

Bag made from recycled PE:

20L, PE
thickness: 20.0 µm, weight: 11.2 g/ bag

*The term „conventional customary“ is defined herein as a typical standard bag on the market.

Functional unit: 1000 bags

Results

The comparison of the bags shows that the Pely® bag performs best with 32.8 kg CO₂e/1000 bag while the conventional customary bag causes 43.7 kg CO₂e/1000 bag and the bag from recycled PE 39.8 kg CO₂e/1000 bag.

climatop certification

This is the first life cycle analysis of the Pely® bags. The life cycle analysis shows that the Pely® bags can be awarded with the label „approved by climatop“. The award remains valid for two years, afterwards a re-evaluation is necessary.

Validity: April 2014 - March 2016

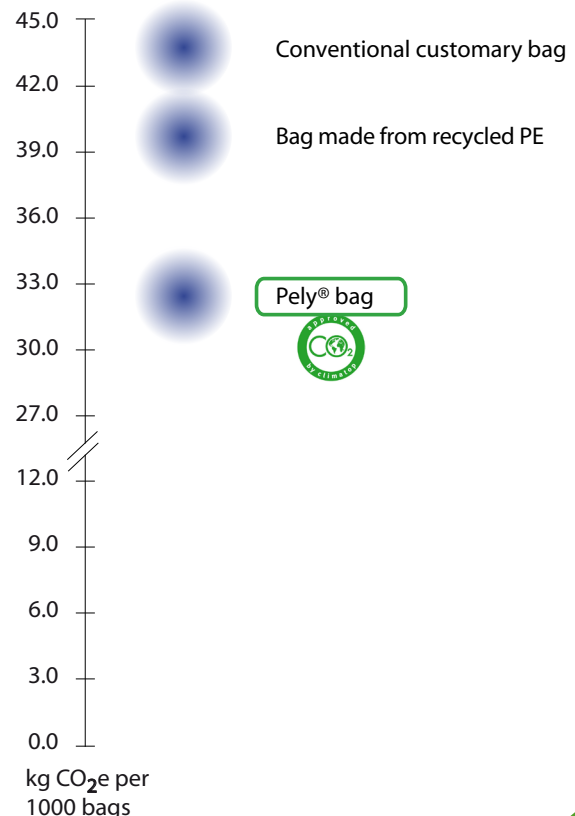


Fig. 1: climate impact of the compared bags



Discussion

The advantage of the Pely® bag arises mainly due to the lower material consumption due to reduced thickness of the bag - with better tensile strength! Although in the bags made of recycled PE no emissions through the primary production arise, it cuts - due to the thickness of the bag - still worse than the Pely® bag. The thin thickness of the Pely® bag can be explained by the innovative production technology which the pely-plastic GmbH & Co. KG is using for their bags.

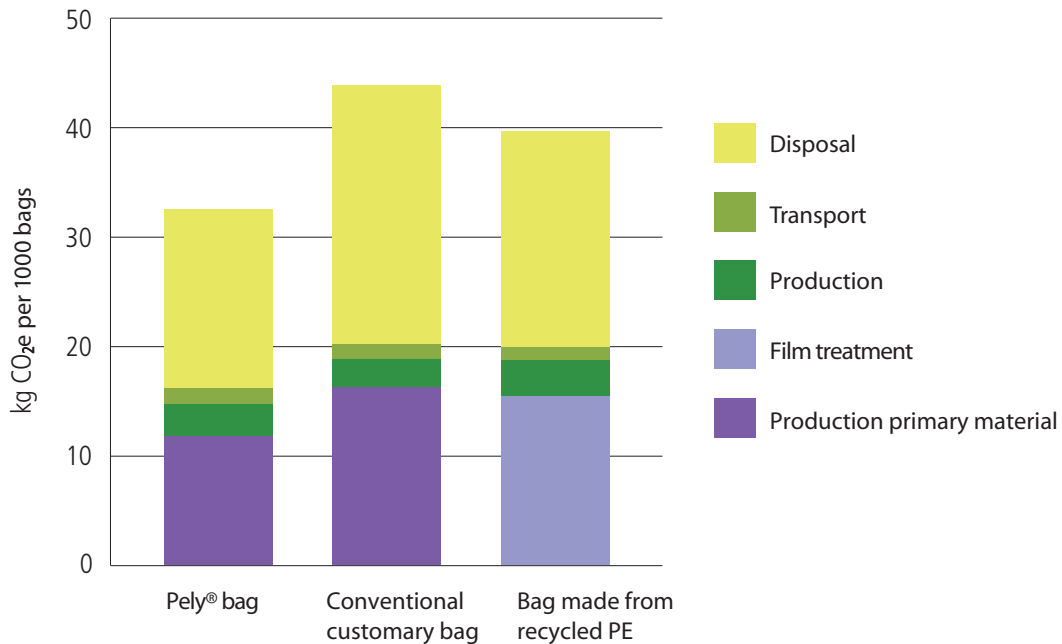


Fig. 2: The climate impact of the bags divided into the source of the impact

Overall environmental impact

Regarding other indicators such as fossil resource consumption, summer smog, acidification, terrestrial eutrophication, aquatic eutrophication, human toxicity or particulate matter, the results of the Pely® bag show advantages in terms of all this impact categories compared to the conventional customary bag.

In conclusion, the Pely® bag shows a lower environmental impact than the bag made from recycled PE.

Nice to know!

- The climate impact of rubbish bags can also have a positive influence through the use of an appropriate bag type!



The Pely „bag-finder“ helps you to find the right model (e.g. size) for your needs (www.beutelfinder.de).

Furthermore: With the Pely®clean identification-strip you have all information of a bag on every package.

- To go for the climate-friendly Pely® bag can make a big difference! About 200 million packages of rubbish bags are sold every year in Germany. If all these rubbish bags are supplied by pely-plastic, you would - at a conservative estimate of the Pely® savings and calculating only a very small base package contents (number of bags) - achieve a saving of around 30,000 tonnes of CO₂ per annum! This amount corresponds to about 188 million kilometers or 4.400 times around the world with a passenger car in the compact class (e.g. VW Golf)!