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Expertise on the proportion of recycled material and renewable raw materials (NWR) in various edding products

The evaluation was carried out for the edding 21, 22, 24, 25, 28, 29, 31 and 32 markers, which all consist of a barrel, cap, mouthpiece, fibre reservoir and tip. Different materials are used depending on the marker.

The **task** of the report is to determine the respective proportion of **post-consumer** and **post-industrial** recycled material as well as the proportion of **renewable raw materials** for the edding 24.

Procedure:
The components of each marker to be evaluated were weighed individually (shaft, cap, mouthpiece, fibre reservoir, tip).
In order to obtain a representative value, 1000 parts were weighed and the average value of an individual part was determined on this basis.

edding 21, 22, 28, 29, 31 and 32:

The edding 21, 22, 28, 29, 31 and 32 markers all consist of the same three body parts (barrel / mouthpiece / cap). These are identical for all six products and the markers are available in four colours (01-black / 02-red / 03-blue / 04-green). There are differences in the fibre reservoirs between fibre reservoirs for permanent / flipchart and board markers and in the tips for the individual markers.

The average value was determined for the different fibre reservoirs and tips of the various markers. The fibre material of the edding 21, 22, 28, 29, 31, 32 and 25 markers consists of Post Industrial Material (PIM), while the barrel, cap and tip are made of Post Consumer Material (PCR)

Due to the fluctuating qualities of the post-consumer material (depending on the raw material), more batch must be used for some material batches than for other materials in order to achieve the desired colour shade. For this reason, the batch proportion for the calculation was increased from four to 5% across the board and deducted from the weight of the plastic content.

For the **edding 21, 22, 28, 29, 31 and 32** markers, **the proportion of recycled material in total (PIM and PCR) is 91% and 84% of post-consumer material in relation to the total weight of the pens without ink.**

edding 25

The barrel, cap and mouthpiece of the edding 25 are also made from post-consumer recycled material (PCR) and the fibre material from post-industrial recycled material (PIM).

With the edding 25, **the proportion of recycled material in total (PIM and PCR) is 92% and of post-consumer material 85% in relation to the total weight of the pens without ink.**

edding 24

The barrel and cap of the edding 24 are made from renewable raw materials. In its current declaration dated 13 May 2024, the manufacturer of the base material states **that** it contains **at least 93%** bio-based carbon (renewable raw materials).

Due to the batch proportion of 3%, the proportion of renewable raw materials for the barrel and cap is at least 90%.

Total mass balance for post-consumer and post-industrial materials and renewable raw materials for 2023

The material quantities used in the production process were determined from SAP: all posted disposals between 1 January 2023 and 31 December 2023 were taken into account.

The total quantity of edding 21, 22, 24, 25, 28,
29, 31 and 32 from SAP.

On the one hand, the corresponding markers are manufactured from the injection-moulded parts during assembly, and on the other hand, injection-moulded parts are also stored temporarily depending on the order.

The input-output balance is in good agreement, especially if one takes into account that parts are stored temporarily, that there are slight weight fluctuations that cannot be fully recorded by weighing 1000 parts at a time and that there is also a certain amount of scrap, especially start-up scrap during colour changes.

The deviation across all materials is around 2 %

Translated from German to English by: David Barrett, Barrett Translations Limited, United Kingdom.

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