

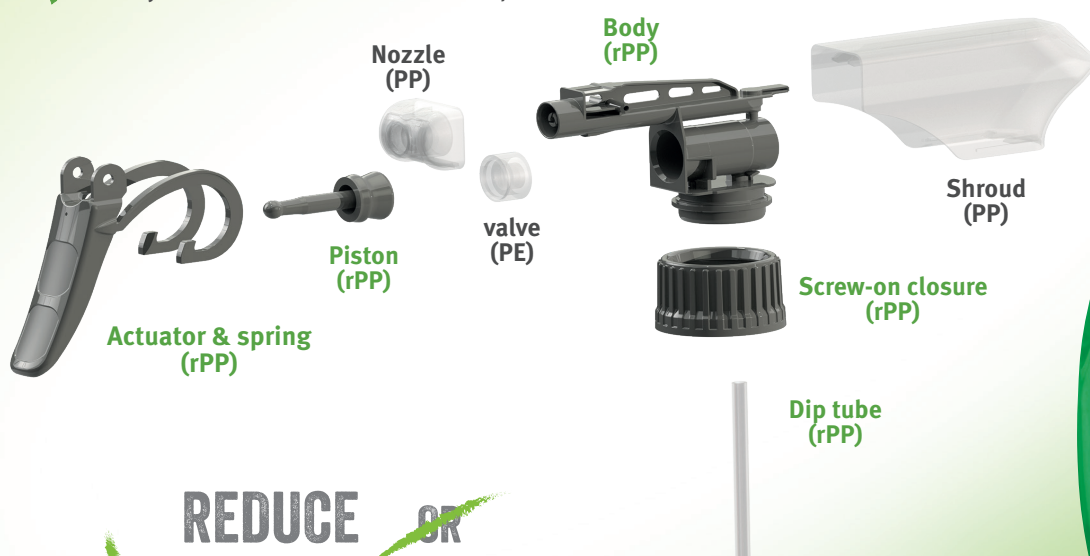
# A Recordholder in Sustainability

## The new spray head

from Werner & Mertz and Berry Global



- ✓ Made of a monomaterial (PP) – except for the valve (only 2.4%)
- ✓ For the first time – completely recyclable
- ✓ Contains no dyes
- ✓ Internal functional components of the pump mechanism made for the first time of post-consumer recycle (29%)
- ✓ Maximum reduction of weight
- ✓ Screw-on closure made from post-consumer recycle
- ✓ Recycled material content now 41 %



REDUCE ~~OR~~  
 REUSE ~~OR~~  
 RECYCLE

**100% EFFECTIVE CIRCULARITY**

The first spray head for the circular economy – honored with the German Packaging Award



### Evaluation of the Jury:

The circular economy is a challenge when it comes to complex functional parts such as spray heads. These contain many individual parts that must be precisely coordinated with each other. The **complex technical requirements** are usually solved using different materials. Werner & Mertz and Berry Global have succeeded through **consistent design** in developing a spray head that is made of over **97% PP**. At the same time, it is **18% lighter** on average than the market standard. The functional parts have a **post-consumer recycled content of 29%**. It is noteworthy that the design compensates for the drawbacks of the PCR material, so that the customer can use it just as easily. The screwable spray head also means that the spray bottle is refillable.

**Reduce:** Maximum reduction of weight: Lightweight, **weighs less** than common trigger sprayers.

**Reuse:** The spraying performance has been **optimized** so that the spray pump is **more efficient and effective than the previous model**.

**Recycle:** Spray head, including dip tube, completely recyclable and, worldwide, the first made in part with **post-consumer recycle (PCR of 29%)**.

## Research & Development in Record Time:

Werner & Mertz in cooperation with Berry Global developed the innovation in record time of just two years.



### The starting point for conventional triggers

- Made of virgin plastic
- Composed of different types of plastic
- Piston and cylinder with ideal gliding properties
- Specially adapted to production with injection molding process

### New spray head:

- Technical innovation: Use of smallest possible amount of homogenous material (polypropylene, PP) conserves resources and increases recyclability
- Completely novel design: Maximum use of recycled content with the same durability
- Compact shape: Pump technology with adjustable pre-compression in smallest amount of space
- Modular construction: Spraying and/or foam spraying possible

## Now in retail market:



All **Frosch** cleaning product bottles will be equipped successively with the new spray head.

- Share of polypropylene: **97.6%**
- Share of polyethylene: **2.4%**
- Both polymers are classified in the same group and can be mixed for **recycling purposes**.
- Share of PCR in the spray pump: **41%**
- Share of PCR in 500-ml bottle + spray pump: **75%**

## Already an award winner!

