## ENVIRONMENTAL LIFE-CYCLE ANALYSIS OF SINGLE-USE AND REUSABLE MOPS

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## **SUMMARY & RESULTS**

**The Advantex® Single-use Mop has a significantly lower environmental impact** than a reusable laundered mop in every category assessed in the EPA TRACI model. A contribution analysis on the global warming potential of the two indicates that the electrical power and chemistry needed to wash and dry the reusable mop dominates environmental adverse implications.

This report summarizes the findings of an environmental impact analysis of two types of mops, the Advantex<sup>®</sup> Single-use Microfiber Mop (disposable) and a reusable microfiber mop. Each type of mop was evaluated for 100 uses. The Advantex<sup>®</sup> Single-use Mop included 100 mops that were each used one time and then disposed of after being transported 20 miles to an incineration facility.

The reusable mop system was used one time for each application, followed by a washing and disinfection step, followed by drying. The reusable mop was used, cleaned, dried, and transported 20 miles to an incineration facility. Cleaning of the reusable mop included the use of a washing machine and both detergent and bleach. For the Advantex<sup>®</sup> Single-use Mop, it was assumed that 93% of the chemistry was delivered to the floor. The reusable mop was assumed that 40% of the chemistry was delivered to the floor.

The life-cycle inventory (LCI) chart tabulates all the environmentally-relevant mass and energy streams included in the study. The key difference is that the raw materials for the Advantex<sup>®</sup> Single-use Mop are much higher than the reusable mop since 100 single-use mops are used. This also translates into more waste for the single-use mops. The reusable mops, on the other hand, require a washing/drying step for reuse and as such use considerable water, chemicals, and energy.

NOTE: The complete report, all data, tables and results are available upon request.

## **REPORT MODEL**

The LCI results were input into an OpenLCA environmental life-cycle analysis software package that used the Environmental Protection Agency (EPA) TRACI model to calculate the environmental impact categories for each type of mop.



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