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Tissue and other hand drying systems Their environmental impact

Introduction

It is all around us, this increased awareness that we all should take care of our planet, of the environment.

ETS is very much involved in environmental issues.

In this context, there is an ever increasing interest in the facts regarding the environmental impact of the different hand drying systems: paper towels, cotton rolls and hot air blower. In this context, ETS has collected the following information.

The environmental impact of industrial and domestic devices can be expressed in data. So far, the outcome of a number of research reports show that the impact of the different hand drying systems are about the same and that no system is environmentally preferable.

However, despite an increased interest in the environment, there has been only limited research and only one report has been ordered by an independent party.

The most relevant data have resulted from two studies.

LCA / Life Cycle Analysis of 3 hand drying systems

University of Utrecht, report requested by a Dutch Environmental Association, March 1995

Although the research conducted in 1995 by the University of Utrecht is more than 10 years old, the systems which have been compared are basically still the same. The only difference is that all hand drying systems have increased their performance and smart tissue dispensers have been introduced to reduce consumption. The main conclusion from this report is therefore still valid; it states that the environmental impact is equal for the 3 different systems.

Life Cycle Analysis of hand-drying systems, Cotton vs Paper Towels

Öko-Institut, report ordered by the European Textile Services Association, July 2006

Much recently, in 2006, a report has been published on research that was ordered by the European Textile Services Association (E.T.S.A) and that compares two systems: cotton rolls and paper towels. Although the conclusion of this study was that paper towels are less preferable for the environment than cotton roll towels, a number of elements shed a different light on this conclusion:

A. External panel review and recommendations

During the study the Öko-Institut asked an external panel to review the Life Cycle Assessment of hand-drying systems the Öko-Institut made. The panel consisted of experts from FORCE Technology, Denmark and ERM, United Kingdom. This expert panel concluded that a more extensive analysis looking at both major sensitivities and major assumptions, would probably show that it is very difficult to support any conclusion as to which alternative is the most favourable from an environmental point of view. The reviewers also recommended that E.T.S.A., in all marketing materials where the results are used, includes a reference to the LCA report with the indication on how to obtain a copy of the LCA report including their critical review.

B. Complete the cotton & paper parameters

ETS has also analysed the Öko report and has come to the conclusion that cotton roll towels do not outperform paper towels in environmental aspects. The arguments can be summarised as follows.

1. The weight parameter that is used in the research for paper towel is about 4 grams. Paper towels sold in Europe weight approx. 2-3 grams.
2. Another parameter that highly influences the outcome of the research is the assumption that for hand drying with cotton roll towels only 1 pull per hand drying is used whereas 2 paper towels are taken per hand drying. Observations show that on average 1,5-2 pulls per hand drying is more realistic for a cotton roll.
3. The report has calculated the outcome for 100% virgin towels and 50% virgin/50% recycled. In reality a big part of the towels in Europe are made out of 100% recycled fibres.
4. The exclusion of key environmental impacts associated with fertilizer and pesticide runoff and volatilization in cotton culture can highly influence the environmental impact of cotton rolls.

Consumption is the key

Based on the ÖKO-research and its report, the ETS notes that the impacts of the different hand drying systems are very comparable and that no system is preferable from an environmental point of view.

However, the result of the environmental impact of a hand drying system is highly influenced by the consumption level. The conclusion is that preventing over-consumption has the most impact on environment.

