# The toilet is not a trashcan!

In the news, we frequently hear stories about fatbergs, clogged pumps and other waste water management issues, along with major complaints about the many different products people flush down the toilet.

Consumers seem to use the toilet as a convenient trashcan, flushing sanitary napkins, tampons, diapers, toilet rolls, wet wipes and much more. Many of these products hook together creating long strings and blockages. In addition, wet wipes, such as baby, cosmetic and household wipes are blamed for a big part of these problems. None of these products are marketed as flushable, but consumers flush them anyway.

## The three P's: Pee, Poo and Paper

According to waste water organisations, the only products the waste water systems can process are represented by the three P's: Pee, Poo and Paper. But what about flushable wipes?

## Edana and INDA setting the stage

To meet mounting pressures, the industry, represented by Edana and INDA, is cooperating with governments, waste water associations, pump developers, machine manufacturers and converters to develop guidelines and appropriate test methods in seven steps to qualify and recommend adequate ways of disposal. In addition, the image of a crossed-out toilet should be placed on the front or top of packages of non-flushable wipes according to the 2nd version of the CoP, Code of Practice, which takes effect in October this year. (Editor's note: the first CoP was introduced in 2009.)

From a technical point of view, producing nonwovens for flushable wipes is somewhat of a contradiction, as they must combine sufficient strength especially during production, but also during consumer usage, with rapid disintegration after flushing. In the process, the material is wetted and packed. The end-users expect that the wipes do not disintegrate during use just like toilet paper when flushed. Modern flushable wipes – or rather moist toilet paper – are mostly made by biodegradable cellulose and short-cut viscose fibers. They hold together and are flushable, because of the unique production technologies, while spunlace wipes do not disintegrate due to longer fibers.

## New technologies for flushable wipe materials

Andritz developed the Wetlace technology to produce flushable/dispersible wipes. This technology combines wetlaid wire formation and hydroentanglement without the addition of chemical binders, which makes the materials completely biodegradable. "Andritz also developed an innovative process for patterning flushable wipes. Individual artwork for signature Wetlace fabrics, such as flush-friendly symbols, sustainable logos or earth-friendly markings, can respond to disposal correctness. In addition, this process can steer future regulations towards labelling as an unmistakable product identification", Mr. Wolfgang Schumacher, Head of Sales – Wetlaid – Andritz Nonwoven Division, said. A Wet-Laid-Spunlace technology, WLS, was developed by Voith-Trützschler and eight complete lines have been sold since 2013 by Voith-Trützschler and others. The technology builds on the classical paper production process for web forming and nonwovens technologies for web bonding, drying and winding. Here the bonding of the wet web with binders that are not biodegradable is replaced by a hydroentanglement process. In this wet-in-wet WLS process, wet-laid and spunlaced web can be tailored for flushable wipes that break down to single fibers when flushed. The latest machine investment was made by EcoWipes in Poland.

## Unique cooperation between Albaad and the German Wastewater Association

Mr. Tenbusch CEO at Albaad, a major producer of hygiene products and wet wipes, has established a cooperation with the German Wastewater Association and the pump development department at the Technical University Berlin to assess the impact of various types of blocking materials. "Wet baby wipes that consist of hydroentangled 80 percent polyester and 20 percent viscose fibers are difficult to tear and must not be flushed in the toilet, while truly flushable wipes made of only cellulosic and viscose fi-bers can be flushed without any problem. It is important to teach consumers and the trade about the accurate ways of disposal. We as a company have invested in the latest technologies to produce biodegradable flushable wipe materials. This investment has already been recognized as a move in the right direction and all tests carried out show significant or sufficient disintegration of flushed wipes", Mr. Tenbusch said. This article is the first of two on flushable wipes. The next article by Helena Engqvist will appear in the coming issue, avr 3/2018. |

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**Wolfgang Tenbusch, CEO at Albaad**

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**Wolfgang Tenbusch, Geschäftsführer bei Albaad**