

Wet Wipes – Plastic Content and Flushability



EDANA is the primary association representing the UK and global nonwovens industry and takes a leading role in the development of test methods to determine flushability criteria for nonwovens products and associated labelling requirements.

With increasing concerns over plastic in the environment and the potential for wet wipes to contribute to blocked sewers, the UK Government is committed to legislation seeking to remove plastic from the composition of wet wipes.

Wet Wipes

A diverse range of disposable wet wipe products play an important role in personal care, hygiene and cleaning. Such products are popular with the public, being convenient to use, effective and offering an alternative to traditional cleansing methods. Wet wipes are especially useful for cleansing and caring of the skin of both adults and babies, frequently combining washing with drying into one easy to use product.

By modifying the base material and ingredients, manufacturers tailor the properties of finished products to specific user needs, utilising a range of long fibres (giving tear strength), short fibres (allowing fast breakdown), fibre chemistry (degradability) and properties of the other ingredients (anti-microbial or detergent). These different types of product require correct disposal – some are designed to be flushed and some not.

Critically, the portability of wet wipes enables all types of users to more easily maintain hygiene standards. Antibacterial/cleaning wipes providing an easy way to reduce the spread of viruses, maintain clean hands and surfaces - especially in places where access to hand washing facilities is limited.

Plastic in Wet Wipes

Plastic content in wipes is not itself a problem as long as the wipes are correctly disposed of after use. There's particular concern that if plastic containing wet wipes are flushed or littered, this provides a route for plastic fibres to enter the environment. While clearer on-label

packaging has helped, this remains an issue, and with alternate biodegradable fibre increasingly available, there is logic in banning plastic from these types of wet wipes.

In recent years, in response to environmental concerns, UK manufacturers of consumer wet wipes have taken major steps to reduce and remove plastic content of products sold on the retail market. Surveys indicate that the majority of consumer baby wipes available in High Street shops are already plastic free.

Definition of plastics. This huge reduction in plastic content has been driven by innovation as bio-degradable alternatives to non-degradable plastic have been found. Any 'plastic ban' must take a science based approach, and allow for natural polymers derived from wood (such as viscose and lyocell) to be used in wet wipes, while also accounting for innovation from R&D in delivering new high-performance materials to the market.

It's also worth noting that the UK exports volumes of these products, and so any regulation should be UK-wide only and not impact on exports that are subject to regulation in their country of use.

Business to Business products. Some products are sold for specific applications direct to non-public users and often with specific properties. As such, they are not sold on the open market, and so the issue of incorrect disposal after use does not arise. Disposal of these materials is already heavily regulated under current legislation and new legislation is not required. It follows that these types of products should not be included in any plastics ban.

Flushability

Sewage systems are designed to transport waste products in water to sewage works where they can be properly treated. The large number of sewage overflow incidents are caused by insufficient capacity in sewers themselves and a lack of capacity at waste water treatment works – and generally not caused by blockages.

Flushable products are designed to pass through sewer systems and degrade in water - and assuming reasonable amounts of water - will not cause problems in modern sewage systems.

Unfortunately, some people flush anything down the toilet that physically fits. These materials are not designed to be flushed and don't travel easily through the system, especially in older sewers where the potential for materials to snag is higher.

The result is increasing numbers of clogged toilets, blocked sewers, unpleasant overflows, resulting in high costs for householders and water companies in clearing the blockages. Problems are generally triggered by the disposal of cooking oils, fats and grease (FOG) into drains; these oils solidify to make fatbergs that may eventually block sewers, even causing major blockages in some of the wider main systems.

FOG products are a problem in themselves, but the problem is magnified by the presence of items not intended to be flushed that don't break down easily in water. Examples would include some types of wet wipes, ear buds, sanitary pads and tampons. Such products can all contribute to the formation of 'fatbergs' and can also directly block smaller drains.

The key problem is behaviour change including the correct disposal of FOG products – and this will not be addressed by the regulation of wet wipes.

CPI supports the EDANA Code of Practice requiring prominent on-pack 'do not flush' labelling for items that don't degrade in water and raising consumer awareness to drive behavioural change.

<https://www.edana.org/industry-initiatives/flushability>

Recycling

Anything labelled as "do not flush" should not be disposed of via the sewer. Where possible, reasonably clean organic based and plastic free products should be recycled or composted; contaminated or products containing plastics should always be disposed of as solid waste via waste collections.

Consumer confusion. Research by manufacturers and water companies has identified consumer confusion about what can and what cannot be flushed, especially with items that look broadly similar to toilet tissue products but that are not intended to be flushed.

With an increasing number of different products on the market, work is continuing to provide guidance to better define which products can be safely flushed with no risk to the sewage system and which products cannot. EDANA and Water UK (endorsed by Defra) have formed a technical work group tasked with agreeing UK standards on flushability.

The results of this research should be communicated to consumers through clear on-pack guidance on disposal methods.

Example of on-pack labelling:



Further information

CPI represents the interests of the Paper-based Industries in the UK, while EDANA (<https://www.edana.org/>) represents the global nonwovens industry. EDANA lead for the industry on issues around wet wipes - please see the EDANA website for additional briefing.

A number of CPI Members produce both paper-type products and also nonwoven-type products (which may or may not be flushable), as well as varied hygiene products that are. All support the call for clear on-pack labelling.

Definition of nonwovens. Essentially a nonwoven product is a sheet of fibres, continuous filaments, or chopped yarns formed into a web and bonded without the use of weaving or knitting.

The manufacturing process is broadly similar to papermaking in that product is made by combining fibres or filaments together to make into a continuous sheet. For making paper, the fibres are then simply dried by presses and heat, while nonwovens are bonded together by the use of mechanical entanglement, adhesive or thermo-bonding.

A more technical description can be found on the EDANA website:
<https://www.edana.org/nw-related-industry/what-are-nonwovens>

Flushability. EDANA has published a guide for manufacturers to assess the flushability of product. The GD4 document can also be found on the EDANA website.

Biodegradability. After products break up, it's important they fully biodegrade and don't remain as contaminants in the environment, as would be the case with plastic fibres. CPI supports calls for flushable products to contain no plastic.

It follows that flushable products should be made from bio-degradable materials (including those derived from wood). However, biodegradability is only one of many criteria for determining if a product is flushable.

More information on the biodegradation of cellulose derived products can be found at:

<https://www.edana.org/industry-initiatives/flushability/biodegradability-of-viscose>

Confederation of Paper Industries

- The Confederation of Paper Industries (CPI) is the leading trade association representing the UK's Paper-based Industries, comprising paper and board manufacturers and converters, corrugated packaging producers, makers of soft tissue papers and collectors of paper for recycling.
- CPI represents an industry with an aggregate annual turnover of £11.5 billion, with 56,000 direct employees and supports a further 93,000 jobs in the wider economy.
- For facts on the UK's Paper-based Industries please visit: www.paper.org.uk.

Last Revised: October 2023