The Products and Their Development

Wet wipes are used for baby hygiene, facial cleansing, and intimate personal hygiene as well as household, industrial, medical and institutional cleaning.

The first wet wipe, the Wet Nap, was invented in 1958 as the first saturated paper product specifically designed for transport and ease of use. Since then there has been rapid and diverse development of products for use in a wide variety of settings.

By modifying the base material and lotion types, manufacturers are able to tailor the properties of finished products to specific end uses. For example, in facial and baby wipes consumers benefit from improved softness and skincare features whilst domestic tasks are made easier by the use of more durable materials with highly effective cleaning formulations in household wipes.

Societal and Individual Benefits:

- The appeal of wet wipes is primarily one of convenience and ease of use. In most cases, wipes replace separate ‘wet and dry’ combinations in cleaning tasks (e.g. cotton wool and water, antibacterial cleaning spray used with cleaning cloths). In an increasingly mobile society, the ability to access easy to use cleansing products while on the go has taken on growing importance.

- The portability of wet wipes also has important hygiene benefits. They enable users more easily to maintain and even raise both personal hygiene standards and the cleanliness of their surroundings whether it is in the workplace, at home, or in medical institutions. Baby wipes can be kept handy for cleaning up food spills and dribbles in addition to their use in ensuring cleanliness during diaper changes. Antibacterial wipes can help to sanitize shopping trolleys, restaurant tables, and food preparation areas. Hand sanitizing wipes can help prevent the transmission of germs, especially when access to hand washing apparatus is limited. Moist toilet tissue effectively removes urine and fecal residue from the skin and is often used in combination with dry toilet tissue to provide both hygiene and comfort benefits.

What Are They Made Of

As the European wet wipes market has evolved, a range of base materials (substrates) has been developed for products to suit different consumer needs. The fundamental building block is a nonwoven fabric. These are engineered fabrics made from synthetic polymers (e.g. polyester, polypropylene and polyethylene), viscose pulp, or cotton. Commonly used materials are known by names which describe the processes used to make them such as ‘spunlace’, ‘wetlaid’, ‘airlaid’, hydro-entanglement and ‘thermobonded’.

The choice of the base material of a wipe will depend on the desired function of the wet wipe, including:

- required feel and appearance;
- compatibility with the active ingredients or treatments to be used;
- wettability and degree of absorbency;
- durability;
- surface texture, for example for skin exfoliation or surface cleaning;
- release or transfer of a lotion or other formulation;

The specific characteristics of each wipe product are also derived by the addition of active ingredients or treatments to the wipe so that it can perform the required task. Common treatments of the wipe include the addition of wetting agents to help absorbency, softeners, binders and colorants.

How They Are Made

There are three basic processes in the manufacture of wet wipes:

- The manufacture of the wipe by combining various types of fibres through mechanical, thermal or chemical processes;
- The addition of the active ingredients or treatments often using highly purified water and/or heat;
- Shaping, cutting, folding and packaging.

While these 3 basic processes have remained constant, the way they are done has changed with the introduction of new technologies. Major progress has been made in increasing production line efficiency and reducing manufacturing waste.
**Did You Know?**

- Mothers of children under nine in Germany, the United Kingdom and France asked to indicate their preference for baby wipes over other means of keeping their babies clean listed convenience, portability and hygiene as the top three reasons for opting for baby wipes.
- In the last 3 years there has been an explosion in the number of types of wipes available to the consumer from baby wipes and facial wipes to disinfecting wipes and polishing wipes - there are now around 30 categories of wet wipes available.
- The phenomenal growth of the household and facial wipes, which barely existed a few years ago, highlights the convenience and hygiene benefits they bring.
- For household cleaning products consumers typically show a preference for products that make their cleaning activities simpler and easier.
- Long after their children are diaper-free, many parents keep baby wipes on hand, in the car, in restaurants, wherever, to clean up messes quickly and conveniently.
- Wet wipes sales in Western Europe grew by more than €1.5bn Euros between 1999 and 2006 to reach €2.38bn. Of this, baby wipes accounted for 43%, facial wipes 16% and household wipes 35%.

**The Industry**

The members of EDANA who manufacture absorbent hygiene products and wet wipes employ some 100,000 people in Europe; making a substantial contribution to the economic wellbeing of families and communities in the countries of Europe. In 2006 some 20,000 of those were directly employed in the manufacture of absorbent hygiene products in Europe. This is matched by a similar number upstream within raw materials supplier industries; not to mention those employed downstream in logistics and commercial operations.

The industry invests widely in its European product development and manufacturing facilities, with over 50 facilities spread across some 20 countries in the region.

**Safety Assurance**

Wet wipes are safe for consumers, employees and the environment. Within the European Union wet wipes must comply with the General Product Safety Directive that holds manufacturers responsible for providing consumers with products that are safe to use. The industry not only complies with the legal framework to ensure that products are safe; it also runs its own safety evaluation programmes and individual companies continuously monitor their products in use and any concerns users may have.

Specifically, wet wipes marketed in the EU must comply with relevant regulations including the Cosmetic Products Directive, the Detergents Regulation, the Biocidal Products Directive and the Medical Devices Directive. The materials used in wet wipes need to be safe for humans to use as well as environmentally safe in terms of manufacture and disposal.

**Sustainability through Innovation**

EDANA members continuously strive to improve the sustainability performance of their wet wipe products by, for example:

- Incorporating new materials with improved environmental performance;
- Improving the effectiveness of their use of resources;
- Reducing solid waste;
- Improving energy efficiency in the manufacturing process.

Alternative materials are regularly assessed and new and innovative ways to combine natural as well as renewable synthetic fibres are being explored, creating the potential for a new generation of biodegradable/compostable products derived from renewable raw materials. Of primary concern is to ensure that in assessing and using new materials in wipes the quality, safety and softness of the final product are maintained and extended.

**Product Disposal**

Depending on their intended use, wet wipes are designed to be disposed of via either the municipal solid waste system or, where public health and hygiene considerations prevail, the waste water disposal system (for example, moist toilet tissue).

Wet wipes are safe and compatible with prevailing municipal solid waste disposal and treatment methods. Within Europe most wipes are disposed of in normal household waste destined for either a landfill or an incineration facility.

As wet wipes consist of materials that are also used in many other consumer products, in landfill they can be expected to behave like other forms of waste; neither the ingredients nor the waste from wet wipes should migrate from properly constructed and maintained landfills.

The use of the waste water system for the disposal of personal care wipes should be limited to products which are flushable. This means that they will not block toilets, drainage pipes, water conveyance and treatment systems. The industry has recently developed guidelines for manufacturers to determine whether their products are flushable. Work is also underway to propose product labelling guidelines and appropriate consumer education activities to ensure that products are only disposed of via the waste water system when it is appropriate to do so.

**Summary**

The rapid evolution of the European wet wipe market in recent years has been driven by the needs of consumers to maintain and improve hygiene standards in an increasingly mobile society. Whilst today’s wet wipes perform these duties with ease, manufacturers are continuously developing improved products which continue to meet consumer needs while at the same time reducing the impact of wet wipes on the environment.