EDANA'S FREQUENTLY ASKED QUESTIONS ON SUSTAINABILITY

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Foreword

Consumers, customers, regulators and other stakeholders are increasingly urging for more sustainable solutions. Clearly defining sustainability proves to be a difficult task, resulting in sometimes even contradicting messages and stakeholder requests. This complexity poses a great challenge for converters and perhaps even more so for their supply chain partners. Information is abundantly available, however not always objective, or compiled in a comprehensive way, which impedes correct business decisions.

EDANA strives to support its member companies on all relevant topics, including sustainability. To this end, EDANA organises conference sessions on the topic, dedicated workshops and fora, issues a sustainability newsletter and manages working and steering groups.

EDANA staff furthermore helps by answering questions related to the topic of sustainability. Now, not only on individual requests, but also through this Frequently Asked Question document. This document will be always available for EDANA members (and only for EDANA members). The document will be updated frequently as new questions are raised or new information is shared. Needless to state that the content of this document will stay within the scope and legal boundaries of the industry association. If needed, EDANA will consult an anti-trust lawyer to review this document.

EDANA is therefore looking forward to hearing your questions, more than ever before.

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1. FAQ on Sustainable Supply Chain

1.1. General questions

Q. What does EDANA want to achieve with the pillar Sustainable Supply Chain?

The ambition for this pillar is to 'Promote fair and safe working conditions and green procurement in the supply chain'. As part of ongoing efforts to improve and enhance the sustainability of the supply chain, EDANA's members seek to increase green procurement as well as ensuring fair and safe working conditions. It takes into consideration human rights compliance, systematic partnerships and operational health and safety along the supply chain.
Most companies monitor these performances and are commonly required by others in the supply chain to do so. This is supported by suppliers' codes of conduct and different audit and certification approaches. Green procurement promotes business that reduces the impacts on natural resources and risks of hazardous chemical substances, and strengthens good relations within the entire supply chain.

1.2. Recycled content

Q. Are discarded materials in a production line considered as recycled content when they are reused in the production process?

The concept of recycling is defined in the Waste Framework Directive as:
'Recycling' means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations;
Whereas waste is defined as:
'waste' means any substance or object which the holder discards or intends or is required to discard;

Recovering and reusing scrap material can therefore only be seen as recycling if the discarded material is considered to be waste material. The Commission has developed a guidance document to the Waste Framework Directive. In this document, the notion of by-product is explained via a flow-chart (see p. 21). Following this flow-chart leads to the conclusion that the discarded material is not considered as waste material. As such, reprocessing the discarded material is not seen as recycling (as it defined as the recovery of waste materials).

Also confirming this position is the standard ISO 14021:2016, on self-declared environmental claims, which defines pre-consumer or post-industrial materials as:
Pre-consumer (post-industrial) Material. Also known as "post-industrial". Material diverted from the waste stream during a manufacturing process. Excluded is reutilization of material such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

2. FAQ on Eco-efficiency

2.1. General questions

Q. What does EDANA want to achieve with the pillar Eco-efficiency?

The ambition of this pillar is to accomplish 'efficient resource use for low carbon production and products'. Climate change is one of the most significant challenges we are facing today. The societal

challenge for mitigating climate change is induced by an exploding energy demand and increasing global consumption. There is a direct link between the quantity of raw materials used and carbon emissions. The importance and urgency for low carbon production and the efficient use of resources is thus seen as a top priority and opportunity by the majority of our members.

2.1. Life cycle assessment (LCA)

Q. Which life cycle assessment studies are performed by EDANA and can I get a copy of those?
A. EDANA lists all its life cycle assessments on its website. Please reach out to Christelle Tuncki to obtain a full report or a summary. Note that several studies have been sponsored by specific companies, restricting the spread of the LCA reports.

Q. Which publicly available life cycle assessment on absorbent hygiene products can I access?
A. The European Commission developed this LCA on Absorbent Hygiene Products in 2015: Evolution of disposable baby diapers in Europe: life cycle assessment of environmental impacts and identification of key areas of improvement.

Q. Are there any product category rules (PCR) for nonwoven products?
EDANA administrates Environmental Product Declarations (EPD) Product Category Rules (PCR) on absorbent hygiene products and nonwoven wipes. There are also EPD PCR for Nonwovens for clothing, protective clothing and upholstery.

Currently, there are no Product Environmental Footprint category rules (PEFCR) for nonwoven products. The full list of PEFCR can be found here.

Q. Can mass balance approaches be considered when making Environmental Product Declarations?
The General Programme Instructions (GPI) provide the basic rules for defining EPDs. The latest version, GPI 4.0 provides the following explanation on excluding mass balance approaches:
"Mass balance approaches (MBAs) are sometimes used in LCA contexts to claim biobased, renewable, and/or recycled product content. MBAs are based on organizations (e.g. integrated chemical production systems) and not on single product systems, and they apply calculations and mass balance criteria that are not based on the physical relationship between input resources and product content. This implies that if biobased, renewable or recycled raw materials are not physically present in the product, the content of the product may be accounted as being biobased, renewable or recycled. Because of this, the current position of the International EPD® System is that MBAs do not follow the ISO 14040 series and related standards and shall not be used in EPDs. If MBAs are further developed, exemptions may be done in specific PCRs. Such exemptions shall be justified and approved in the PCR development process."

3. FAQ on Building Trust

3.1. General questions

Q. What does EDANA want to achieve with the pillar Building Trust?
The ambition of this pillar is to 'increase transparency and safeguard quality to consumers'.
As the international association for the nonwovens and related industries, it goes without saying that EDANA's 50 years of serving and supporting the industry would not have been possible without trust. Given the wide array of sustainability challenges, building trust between consumers and our industry remains very important. It involves profound product stewardship and involvement of

third parties who can endorse our sustainability course as independent parties. Building trust through increased transparency and by safeguarding quality to consumers is crucial in maintaining and improving strong relations between all actors of the industry.

3.1. Environmental claims

Q. Is there any legislation on making biodegradability claims?
A. There is a Belgian legislation on making biodegradability claims on packaging materials. There might be more legislations or guidelines in place in other Member States, like the UK Green Claims Code checklist. Please note EDANA has also guidelines on environmental claims. The EU Commission is expected to publish a proposal for a Regulation on the substantiation of green claims and the environmental performance of products and businesses in July 2022.

3.1. Ecolabels

Q. Can wet wipes be certified according to the Blue Angel certification scheme?
A. No. The Blue Angel is the ecolabel of the federal government of Germany. The latest revision of the criteria was in 2020, leading to version DE-UZ 208, January 2021. In June 2020 the first meeting took place to start discussing the update of the Blue Angel criteria for single-use diapers with experts. The organizing team for the BA made the product scope very clear at the beginning. The goal was to enlarge the scope from single-use baby diapers and adult incontinence diapers to cover also other incontinence products such as pads and to include feminine hygiene products, nursing pads and armpit pads. It was further decided to list products in the criteria document that are not in scope. These are facial masks, medical dressings, wet wipes, cosmetic wipes & handkerchiefs, cotton pads and diaper changing pads. The focus was set on single-use hygiene products with the function to absorb body fluids and faeces and which stay in close contact to the body for a certain amount of time. The use of lotions and fragrances is explicitly forbidden.

4. FAQ on Responsible End-of-life

4.1. General questions

Q. What does EDANA want to achieve with the pillar End-of-life?
The ambition of this pillar is to 'engage with all stakeholders in developing optimal waste and circular economy solutions'.
Responsible end-of-life is considered the remaining biggest sustainability challenge by our members. The large share of single-use products in our industry hampers the development of circular loop systems and minimal waste processes. EDANA is conscious that first the waste disposal methods, and secondly the recycling or reuse of products are important challenges to increase responsible end-of-life and to build a more sustainable industry.
EDANA believes multilevel interactions with stakeholders will enable our members to transform this main challenge into a key opportunity. The industry's product responsibility must expand beyond the point of sale. By carefully designing every product and adding after-life value, our industry evolves towards a role of circular economy actor.

4.1. Biodegradability

Q. Which standards on biodegradability are relevant for Europe?
A. Currently, only industrial composting is standardised in Europe and by international standardization institutions, as the Organisation for Economic Co-operation and Development (OECD, Test No. 301: Ready Biodegradability) and the International Organization for Standardization (ISO, standard ISO 14855).

You will find the relevant standards below on this webpage of European bioplastics: for non-packaging plastic products it is EN 14995. The consultancy OWS features a very interesting overview of biodegradable standards on its website.

Q. Which biodegradable materialscan be used for nonwovens?

A. The association of bioplastic manufacturers provides a short overview of biodegradable plastics on its website.

Cellulosic fibers such lyocell and viscose, which are certified biodegradable in various environments including fresh water, marine water and soil and re-enter the natural cycle after biodegradation, can be used for nonwovens.

Some of EDANA's members produce biopolymers. You can find these members and contact details on our website with the products & supplier search (where you can filter on raw materials – biopolymers).

There are some studies proving the biodegradability performance. Wageningen university has recently analysed the fate of compostable packaging products in industrial organic waste treatment facility.

Note: For an overview of biodegradable polymers in various environments assessed according to established standards and certification schemes, see the graphics by Nova Institute (PDF format here).

4.2. AHP waste management data

Q. What is the average weight of an empty and filled absorbent hygiene product?

A. The average weight of AHPs is listed in several studies:

product	Average weight (g)	Source or explanation
Used diaper	212	Colón et al. (2011)
used adult incontinence product men	101	Dylewski et al. (2009)
used adult incontinence product women	204	Dylewski et al. (2009)
used adult incontinence product mean	150	assumption as made in Estimation of the Volumes and percentages of absorbent hygiene products in South African Municipal Solid Waste (2018)
used tampon	14.5	tampon weight of 2.5 g + medium absorption rate of 12 g
used towel	25	towel weight of 10 + medium absorption rate of 15 g

The EDANA LCA & Trend Analysis of Baby Diapers (2013) provides useful information on the weight of open and pant diapers.

Material	Units	Open diaper	Pant diaper
Diaper			
Fluff pulp	g/diaper	9.1	13.9
Superabsorbent polyacrylate (SAP)	g/diaper	12.6	13.8
Polyethylene (PE) film	g/diaper	1.8	1.3
Nonwovens	g/diaper	7.9	11.9
Adhesive	g/diaper	1.2	1.8
Elastics & adhesive tape	g/diaper	0.5	0.7
Other	g/diaper	0.2	-
Total	g/diaper	33.3	43.4

These figures are of course averages and therefore to be treated with care. This does however mean that a typical used diaper consists of roughly 15% diaper product and 85% faeces/urine.

Q. What is the average number of baby diapers used per age category?

age of child	# of days	# of changes	diaper/age bracket
0-12 months	365	4.9	1788.5
12-24 months	365	4.4	1606
24-36 months	365	1.9	693.5
36-42 months	182.5	0.4	73
		total / child	4161
source: EDANA AHPTC and HAPCO data			

Q. What is the proportion of hygiene products in the municipal solid waste?

It is estimated that today in the European Union absorbent hygiene products (baby diapers, feminine care products and incontinence products) represent approximately 2.3% of municipal solid waste depending on the degree of sorting and recycling achieved at national or regional level. However, due to differences in among others the amount of municipal waste per capita, sorting requirements of different waste fractions, there may be a large variation in this percentage.

In some regions the proportion is significantly higher than the European average. The Flemish waste agency estimates the fraction hygienic waste, consisting of diapers and incontinence products, at 12% of the municipal residual waste. This results in 84 million kg hygienic waste per year or 13.8 kg/inhabitant, compared to a total of 110 kg total municipal waste/inhabitant.

In a *comparative analysis of residual municipal waste from representative regions in Germany to determine the proportion of problematic substances and recyclable materials* the UBA estimates the proportion of hygiene waste in the household waste at 13.5%.

Q. Which waste management options are available for used Absorbent Hygiene Products?

Velasco Perez et all (2021) provide a review of existing literature on end of life for hygiene products.

Q. Which fees can be expected to be raised on absorbent hygiene products in case extended producer responsibility (EPR) measures are required?

Article 8 of the Waste Framework Directive (EU requires producers of products to bear at least 80% of the necessary costs. These costs are defined in article 8(a).4 and cover the costs of

- separate collection of waste and its subsequent transport and treatment,
- the costs of providing information to waste holder (about waste prevention measures, centres for re-use and preparing for re-use, take-back and collection systems, and the prevention of littering) and
- costs of data gathering and reporting.

The Flemish waste agency, OVAM, produced a social impact analysis on diaper waste collection scenarios from citizens and companies. The following costs are estimated in the report.

Collection from	households door to door	households specific	households recycling park	institutions

		collection points		
Collection cost (€/t)	1295	70	66	78

Treatment cost	Gate fee incineration in Belgium	assessment of recycling costs
Treatment cost (€/t)	102.4	108 - 342

Scenario A – minimum collection and treatment costs
This means the minimum possible costs for collection and treatment of diapers are to be estimated around € 168 per tonne diaper waste (i.e., €/t 66 + 102.4). A tonne of diaper waste consists roughly of 4717 used diapers. The cost per diaper can therefore be calculated at € 0.035. The minimum fee for producers can therefore be estimated at € 0.028 per diaper (= 80% of 0.035).

Scenario B – minimum collection and average recycling costs
In the scenario of diaper collected from households (€ 66 per tonne) and with an average recycling cost of € 288 per tonne (average of €/t 108 and 342) the cost for collection and treatment of diapers amounts to € 354 per tonne. The cost per diaper in this scenario can therefore be calculated at € 0.075. The minimum fee for producers can therefore be estimated at € 0.06 per diaper (= 80% of 0.075).

Q. Are hygiene products found in beach litter?

In the absence of a harmonised methodology of analysing and identification of beach litter, in 2017 the JCR created an overview of the most found marine litter items on European beaches. The study indicates Single-Use Plastics to represent 50% of the total marine litter items found on European Beaches in 2016. The cluster of "sanitary towels, panty liners and backing strips accounts for 0.81% of all litter found on European beaches. The cluster "tampons and tampon applicators" represents 0.22%. Diapers represent 0.01% of the total share (note that diapers are also found as part of the category "other", which accounts for 1.43% of total marine beach litter found in Europe).