Plastic

Our approach to sustainable materials

Plastics are everywhere in our daily lives - including at our workplaces. They provide us with comfort, give us access to the digital world, hold our coffee and provide us with light. Their technical properties including strength, sustainability, and versatility combined with affordability make them one of the most widely used materials in the twenty-first century.[1] However, despite the great service plastic products provide to us every day, the material also has a significant negative impact on our ecosystems. According to The Ocean Clean Up, humans produce more than 400 million tonnes of plastic every year. That's roughly the weight of all the people on the planet! And plastic production is expected to continue to grow. In 2023, only 9% was recycled while around 22% of plastic waste worldwide remains uncollected, improperly disposed of or ends up as litter.[2]

How we use plastic

At Ahrend, we aim to minimise our contribution to plastic pollution by following the Value Hill model, where materials are used to their maximum utility for as long as possible and reused over multiple economic life cycles. Working towards a circular system where nothing is wasted and old materials become new raw materials in closed systems is one of the greatest opportunities to shape a better future for our planet. We are committed to using as many recycled materials for our products as possible because the waste heap is already so large.

At the same time, we select materials that are suitable for infinite reuse with a view to the future, to reduce the extraction of new materials as much as possible.

Ahrend uses various recycled plastics (polypropylene, ABS, polyamide, polythene, ASA) to produce finished products or component parts. Parameters such as application, construction, strength, comfort, colour and haptics determine the choice of a type of plastic. Applying recycled materials can be challenging; sometimes the design has to be adapted to the properties of the material.

We test reused or recycled materials according to the same standards as new materials to ensure the quality and lifespan of our products. We thus select our materials according to strict criteria when it comes to responsible sourcing, material health, environmental impact, lifespan and circularity of a material.

[1] Plastic was found in 1907 by Leo Baekeland invented Bakelite, the first fully synthetic plastic, meaning it contained no molecules found in nature.
[2] The Ocean Clean Up - How much plastic enters the ocean, 2024

Illustrative example: Well Circular Black

Consider our Well Circular Black. The deep black plastic moulded seat of the Well Circular Black is made of polypropylene, a 100% recycled post-consumer plastic. No concessions have been made as regards appearance, comfort or quality. Since launching the Well Circular Black in 2020, we saved up to 65,000 kg in plastic by 2023 and we expect to save around 16,250 kg every year going forward.[3] On average, we save up to 80% in CO_2 emissions per kg compared to new polypropylene. The effect of one kg of recycled post-consumer propylene is to cut 3.1 kg of CO_2 emissions compared to virgin polypropylene, which on an annual basis is 50,375 kg of CO_2 emissions. That's about four times around the world by car!

Recycled content

We prefer not to produce new plastics, but rather to reuse what is already there. Recycled plastics are therefore our preferred choice. We apply both post-consumer (PCR)[4] recycled plastics and post-industrial recycled plastics (PIR)[5] in our products but we also look at the recyclability of a material. We aim to increase the proportion of recycled content in every new (design) product we launch.

Recyclability

We also take into consideration the recyclability of a material. We aim to select only those plastics that are recyclable at the end of their life cycle. Most plastics used in Ahrend products can be recycled at the end of the product's life cycle. However, it is sometimes challenging to determine the recyclability of a material because recycling technologies are developing rapidly. This is why we, together with our suppliers and waste management partners, are constantly trying to anticipate the latest developments. For example, we avoid thermosetting plastics because of their cross-linked/knotted molecular structure, which makes them difficult to recycle. We also avoid mixing bio-based materials such as grass or wood fibres with (bio-based) resins, as these are not recyclable and/or renewable at the end of the product's life cycle.

Compliance

At Ahrend, we set strict requirements and limits for chemicals used during production and limit indoor emissions from finished products. We test all our products in accordance with ANSI-BIFMA M7.1. At Ahrend, we set strict requirements and limits for chemicals used during production and limit indoor emissions from our furniture. We test all our products in accordance with ANSI-BIFMA M7.1. Our use of chemicals complies with REACH and RoHS regulations. We inventorise and screen the materials in our products using our Restricted Substances List. And we constantly assess our suppliers regarding SVHC (Substances of Very High Concern). When a substance on the candidate list exceeds the permissible limit, we establish a procedure to phase out the material.

[3] Based on average sales volume between 2020 and 2023.
[4] Post-consumer recycled material is material that has already been used by consumers and will serve as a source of new material after use.
[5] Post-industrial "leftover" material from previous production processes. This post-industrial waste is collected and processed into new fibres to be reintroduced into the production process.