

Automotive: tesa produces acrylic foam adhesive tapes without PFAS chemicals

'Free' journey into a more sustainable and safe future

Attach, seal, protect against cold and heat: Adhesive tapes provide a secure hold in many areas of automotive production – for example, in the demanding task of fixing attachment parts to the car body. As an international manufacturer of innovative adhesive tapes and self-adhesive product solutions, tesa offers manufacturers and suppliers the right products. First and foremost, the innovative and reliable range of high-performance acrylic foam adhesive tapes (tesa® ACX^{plus}) is continually growing. Here, tesa is taking a more sustainable approach: All acrylic foam tapes from tesa are already free from harmful PFAS chemicals. These could be banned throughout the EU from 2025.

PFAS: harmful to humans and the environment

PFAS, known as 'forever chemicals', are a group of more than 10,000 different, non-natural substances. Chemically, PFAS are organic compounds consisting of carbon chains of different lengths in which the hydrogen atoms are completely (per-fluorinated) or partially (polyfluorinated) replaced by fluorine atoms. Due to their properties (water-, grease- and dirt-repellent, chemically and thermally stable) they are used, among other things, in the production of cosmetics, cookware, paper coatings, textiles, pesticides, fire extinguishing agents and occasionally also adhesive tapes. They are also used in the surface treatment of metals and plastics. However, there is a problem: The extremely slowly decomposing PFAS substances are considered harmful to humans and the environment. Denmark, the Netherlands, Norway, Sweden and Germany have therefore launched a joint initiative to ban the production, use and import of PFAS in the European Union. The German Federal Environment Agency does not expect restrictions until 2025 at the earliest.

Recipe for success for a safe alternative

A possible ban would also affect the automotive industry, which relies on adhesive solutions in many areas. Where they contain PFAS, product ranges would have to be changed or replaced – an annoying and labour-intensive process for manufacturers and suppliers. The good news for tesa customers: tesa already offers a tried and tested safe alternative. "The patented formulations for our acrylic foam adhesive tapes have worked entirely without PFAS from the very beginning", explains Marco Balbo-Block, Program Manager Exterior in the Automotive business unit. "In addition, the tapes show no difference in terms of performance to those with these chemicals." This is good news for automotive manufacturers (OEM) and suppliers (OES) worldwide for which tesa develops high-performance adhesive tapes. The acrylic foam adhesive tapes from the ACX^{plus} range, which were launched on the market in 2012, have proven their worth particularly when it comes to fixing attachment parts – from emblems and body mouldings, window frames, roof trims and aerials to parking distance sensors and front and rear valances. They fix attachment parts – whether these are made of metal or plastic or have a rough or smooth surface – securely to the vehicle body and at the same time provide reliable sealing and vibration damping. They are also ideal for compensating for thermal expansion and stresses. "High static and dynamic loads act on the structural connection between the body and the attachment part. Our adhesive solutions withstand these excellently, even at extreme temperature differences of minus 40 to plus 120 degrees," says Christoph Voss, Regional Market Segment Manager Exterior.

Product portfolio growing

In view of the increasing demands of the automotive industry for fixing solutions and process efficiency, tesa is constantly developing its product portfolio. The range of acrylic foam adhesive tapes already comprises eleven product lines, most of which are used for outdoor applications, followed by e-mobility and interior bonding. A new primerless product line has already been launched in the first quarter of 2024. Felix Neubauer, Global Market Segment Manager Exterior, says: "We want to continue to grow with our acrylic tapes and the corresponding product ranges. With our PFAS-free acrylic foam adhesive tapes, we offer our customers a future-proof and more sustainable solution."

Sustainability has high priority

As an internationally active company, tesa assumes responsibility along its entire value chain in order to reduce, among other things, the ecological footprint of its products and production. The sustainability agenda developed for this purpose reflects a holistic view of the environment, society and customers and has five strategic areas of action: Reduction of emissions, responsible procurement, use of recycled and bio-based materials, circular economy and waste avoidance as well as supporting customers in their sustainability goals. Specifically, tesa wants to increase the proportion of recyclable or bio-based raw materials in product and packaging materials to 70 per cent by 2030 and reduce the use of non-recycled fossil-based plastic by half. In the case of packaging, this is due to be achieved by 2025.

Further information on adhesive solutions for the automotive industry:

<https://www.tesa.com/en-gb/industry/automotive/automotive-applications/attachment-part-mounting>

Further information on sustainability: <https://www.tesa.com/en-gb/about-tesa/sustainability>

Tapes in automotive production: Rising trend

Adhesive tapes play a key role in automotive production. They not only help to reduce vehicle weight and thus fuel consumption and emissions. Compared to screws, tapes are also lighter and invisible, and they adapt flexibly to different surfaces. The forecast growth in the automotive adhesives market is estimated at 4.4 per cent by 2025. The increasing share of electromobility is proving to be a driver. Speciality adhesive tapes are predicted to have the greatest demand potential on the market. As a leading global manufacturer of innovative and reliable adhesive solutions, tesa offers a broad portfolio for the automotive industry, including e-mobility, vehicle electronics, cable fastening, surface protection, safety marking, mirror mounting and interior bonding.

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