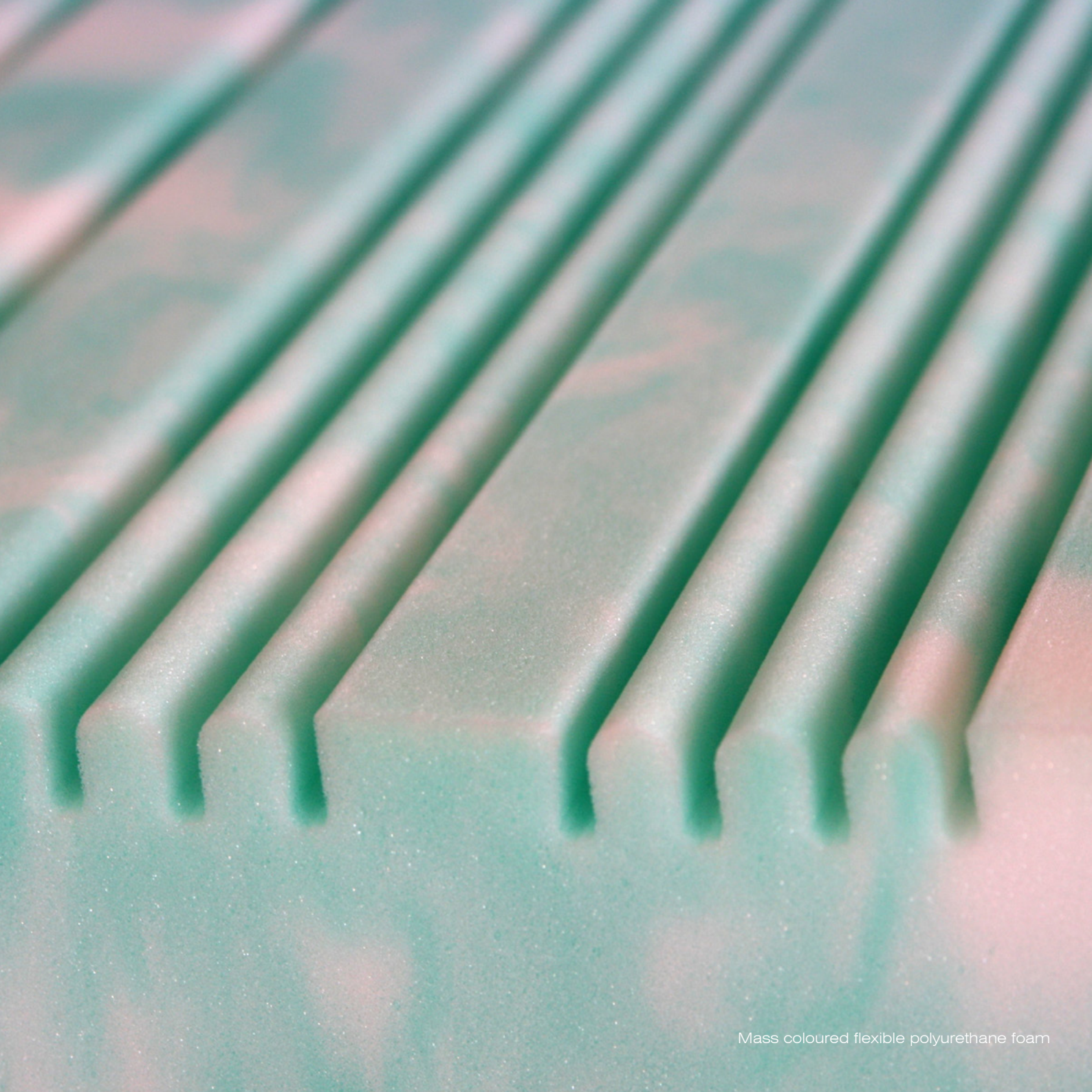


polyurethane **is** quality

the multiple characteristics of
flexible polyurethane foam

**Volatile Organic Compounds
In Bedding**





Mass coloured flexible polyurethane foam

Introduction

In each issue, “poliuretano is quality” presents one of the many characteristics of flexible polyurethane foam, a versatile material with many qualities that are enhanced in the various fields of application.

An in-depth knowledge of the intrinsic qualities of polyurethane is a fundamental factor for designers and manufacturers who can take full advantage of the many possibilities it offers in terms of performance and add new applications to the many already present in the industry. For those working in the world of distribution, deepening the knowledge of the material contributes to a more complete communication and sales strategy for products made of polyurethane. Thanks to interdisciplinary collaboration with leading Research Centres, leading Universities and experts in the field, each issue is an in-depth written study accompanied by drawings and images.

Poliuretano-é represents an innovative and unique project of its kind, born in Italy 15 years ago by the will of some of the most important Italian companies in the production' sector of flexible polyurethane foam. Over the years to companies producers have also supported the project with a number of companies protagonists at international level in the production of additives and related raw materials to the production of flexible polyurethane. Poliuretano-é has carved out in recent years its own authoritativeness and a precise identity in the world of communication, production and design. Initially developed as a project oriented to improve the knowledge of the flexible polyurethane foam at the distribution operators, Poliuretano-é has progressively widened its range of action, involving in a way more and more companies producing industrial products in polyurethane, from furniture to packaging. Poliuretano-é promotes a wide range of initiatives for the dissemination of culture on the polyurethane material, which include the organization of exhibitions and themed presentations, conferences dedicated to deepen the different themes related to polyurethane, training meetings with retailers and the publication of research and documentation on the subject.

www.poliuretano-e.it

Polyurethane é is promoted by the following leading companies in the polyurethane sector flexible foam:

Promoters - Flexible polyurethane foam



www.cires.it



www.nir-spa.it



www.olmogiuseppespa.com



www.orsafoam.it



www.pelma.it



www.sip-srl.it

Supporters - Manufacturers of raw materials and additives



www.covestro.com



www.evonik.com



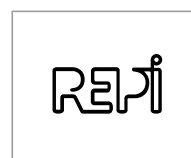
www.borsodchem-group.com



www.dow.com



www.huntsman.com



www.repi.com



www.shell.com

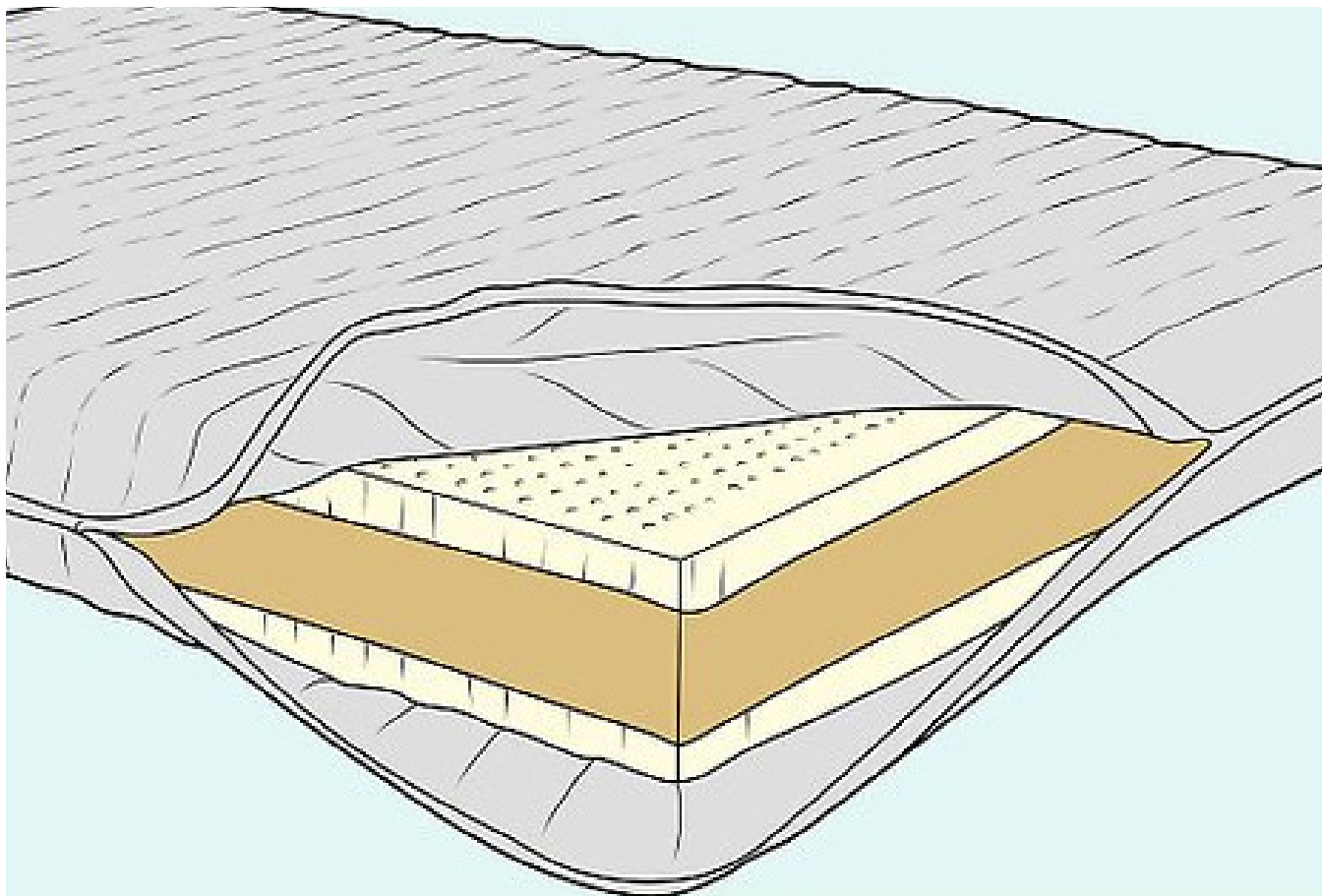
Volatile Organic Compounds in bedding

During the period of use of polyurethane mattresses and pillows, the material releases microscopic compounds: how are they monitored and are they dangerous to health?

Giulio Volponi – Pelma spa

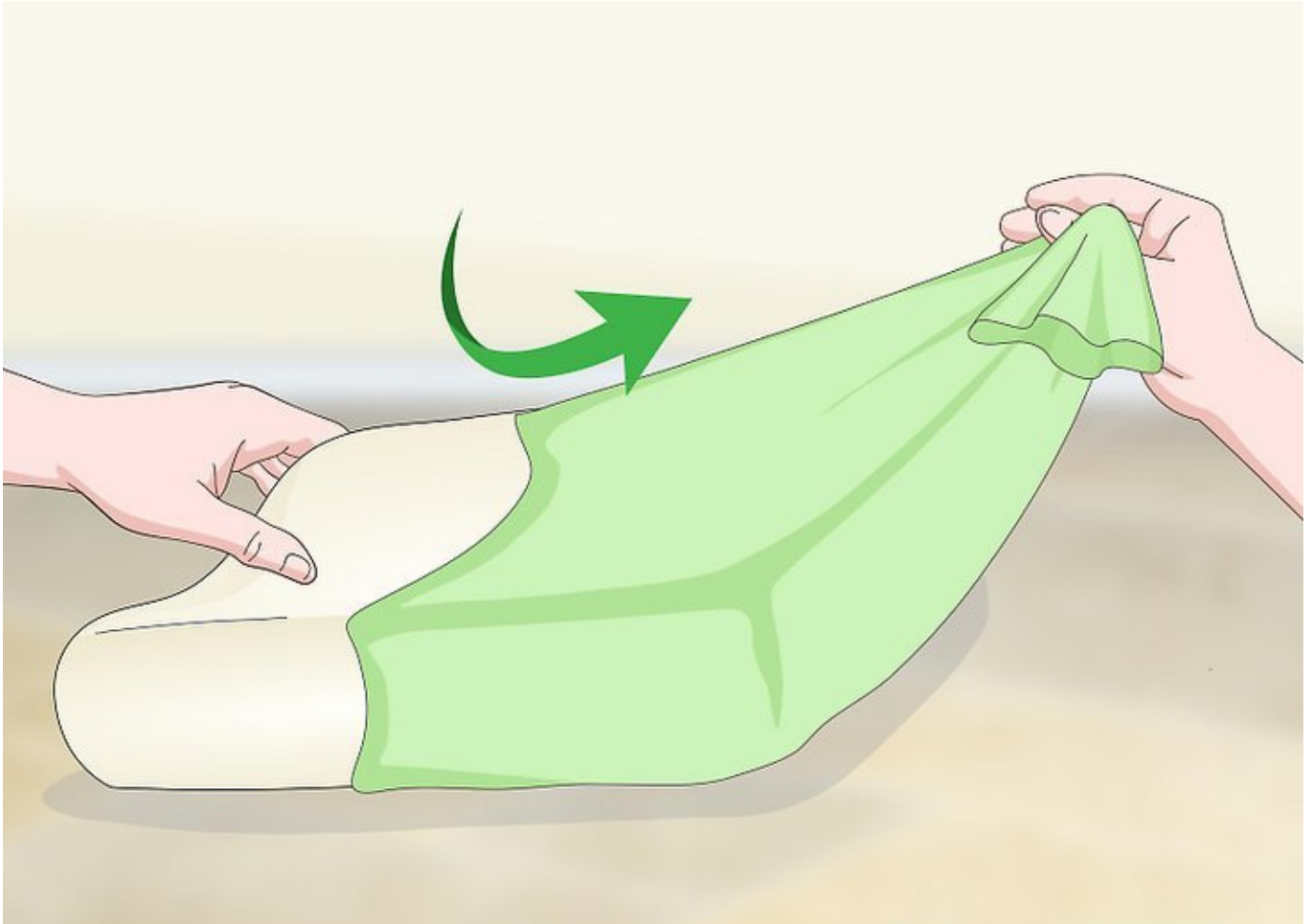
The class of volatile organic compounds, (COV) or VOC (Volatile Organic Compounds), includes several chemical compounds made up of molecules with different functional groups, which have different physical and chemical characteristics. COVs are characterised by a certain volatility, and can be released from the material both during processing of the polyurethane block and later during daily use of the product. The emission of such COVs generally decreases over time depending on the typical volatility of each substance. Among the many components that can escape from the material are non-reactive amine catalysts, cyclic and linear siloxane derivatives, compounds derived from antioxidant agents, degradation products of metal catalysts, ethers derived from polyol fractions and aldehydes. However, in order to avoid unnecessary alarmism, two important factors should be clarified: firstly, that most of the materials that make up the domestic habitat release volatile organic compounds, for example textiles and upholstery materials. Secondly, that the decisive factor is the quantity and type of compounds released.

From this point of view, manufacturers who promote Poliuretano E' adopt a series of certifications issued by specific bodies such as CertiPUR® and OEKO-TEX®, which through a complete and exhaustive series of specific analyses the presence, quantity and quality of COVs in the production of polyurethane foams and to ensure that

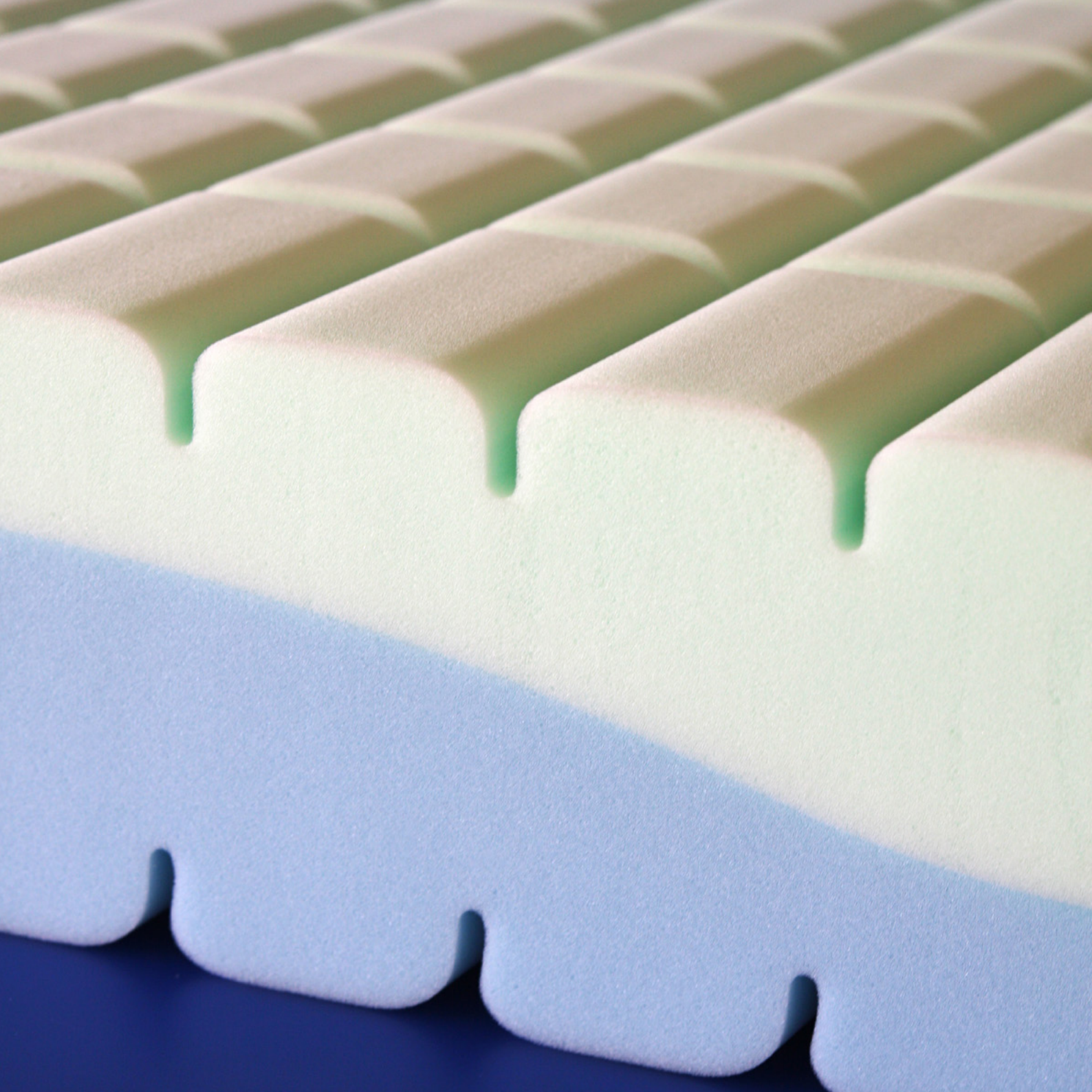


Most of the materials that make up the domestic habitat release volatile organic compounds.

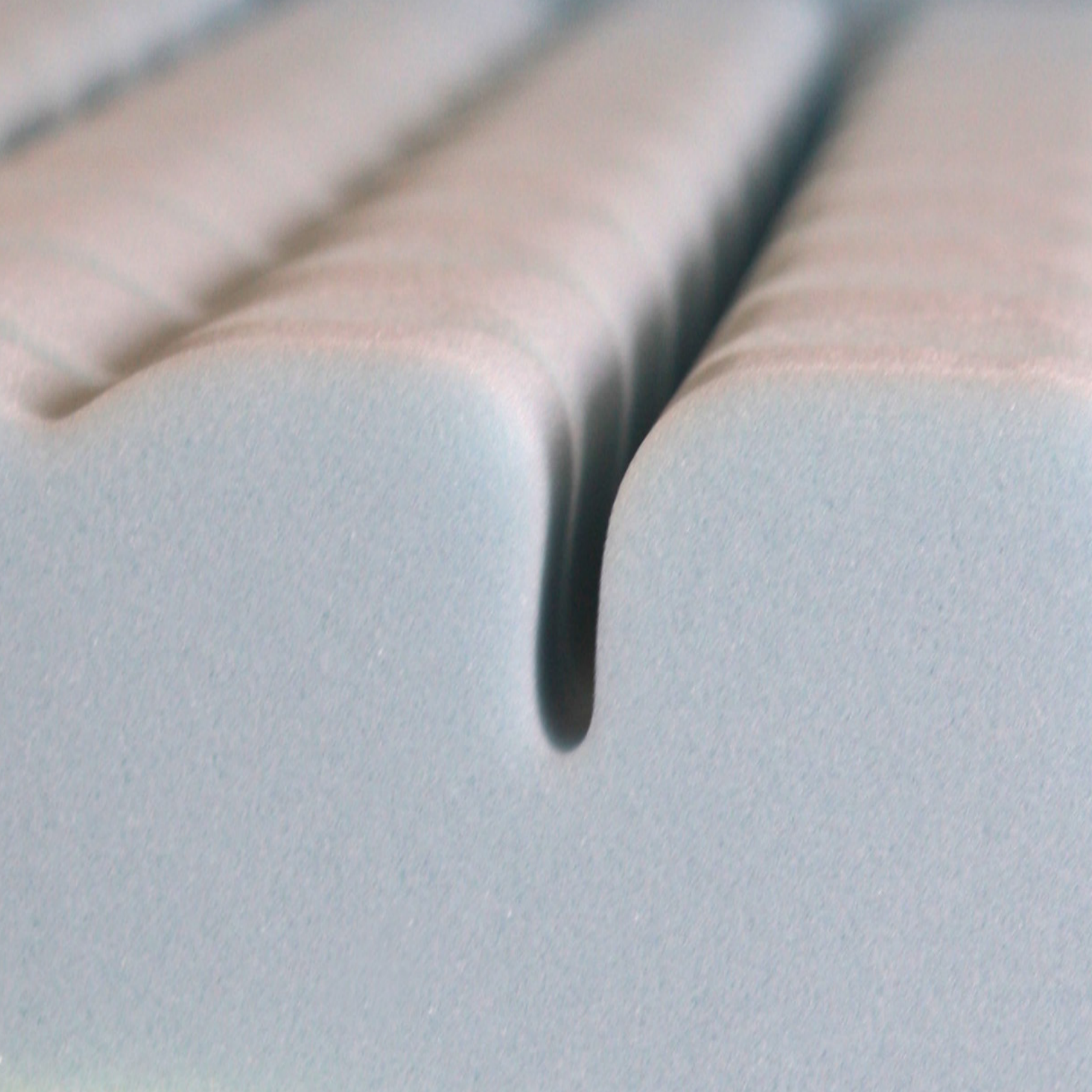
the presence of volatile compatible with normal mattress and pillow applications, thus guaranteeing that the material is not hazardous to the health of the end user. For flexible polyurethane foam companies, the existing certification systems offer a uniform and scientifically proven assessment standard for the human-ecological safety of polyurethane products, which takes into account the different application areas of the material, including bedding applications. The CertiPUR® and OEKO-TEX® labels, although they differ in their COV detection methodology, indicate to interested end consumers flexible polyurethane foam materials that have the added value of having been tested for harmlessness to human health. In other words, they are a tool at the service of the retailer and the end user for a quality and healthy product.



Existing certification methods offer a uniform and scientifically proven standard of assessment.







poliuretano è

a project promoted by

Promoters

The logo for CIRES, featuring the word "CIRES" in a bold, black, sans-serif font.The logo for NORDITALIA resine, with "NORDITALIA" in blue and "resine" in a smaller, black font below it.The logo for ORSA foam, with "ORSA" in blue and "foam" in a smaller, italicized blue font.The logo for PELMA, featuring a green square icon followed by the word "PELMA" in green.The logo for SIP Sud Italia Poliuretani, with "SIP" in bold, "Sud Italia" below it, and "Poliuretani" at the bottom.

Supporters

The logo for EVONIK, with a stylized "E" icon followed by "EVONIK" and "POWER TO CREATE" below it.The logo for BorsodChem and WANHUA, with "BorsodChem" and "Chemistry for generations" above "WANHUA" and its Chinese characters.The logo for HUNTSMAN, with "HUNTSMAN" in blue and "Enriching lives through innovation" below it.The logo for REPI, featuring the word "REPI" in a stylized, outlined font.