

# Principles of Quality and Environment

## Technical Specialist Group PUR Flexible Foam

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### Introductory remarks

Polyurethane (PUR) flexible foam is used as a material in many everyday products – in mattresses and upholstered furniture, in automobiles, in mechanical engineering and in the leisure and sports sector. The variety of PUR flexible foam types enables the realization of a wide variety of tasks for seating or sleeping comfort, acoustics, packaging, fire protection or filtration.

Polyurethane contributes to environmental friendliness in many areas, e.g. by reducing CO<sub>2</sub> emissions from insulating materials or reducing weight in automotive engineering. PUR applications are ecologically and toxicologically harmless. PUR is also a very versatile material that makes numerous innovative solutions possible in the first place.

The protection of people and the environment is of particular importance for the manufacturers of PUR flexible foam in the FSK and is a central guideline along the manufacturing process over the entire service life of the products through to disposal. They are therefore committed to principles for safe production, high product quality and environmental protection.

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### Principles for ensuring high product quality

The PUR flexible foam manufacturers in the FSK are committed to high product quality. The high quality goes beyond the quality aspect and is understood as a comprehensive system that also includes harmlessness for human beings and their living space as well as effects on the environment.

High product quality begins with the selection and quality monitoring of the raw materials used. Only raw materials compliant with the REACH regulation and approved according to its specifications are used.

The manufacturers of PUR flexible foam in the FSK exchange information on undesirable or unnecessary ingredients, which may be contained in the raw materials used or which arise during production, at association level with the aim of avoiding such substances.

All foams for common applications close to the body, such as mattresses, furniture upholstery and inserts in textiles are tested for harmful substances and are subject to the applicable norms and standards. There are no health risks when used as directed. Compliance with the above-mentioned FSK standards underlines this.

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## Principles of quality-assured production processes

Taking into account processor-oriented, ecological and safety-relevant aspects, the PUR flexible foam manufacturers in the FSK employ state-of-the-art production and testing technology as well as quality assurance.

The production process from the receipt of raw materials to the dispatch of the products is integrated as a core process in a quality management system. The relevant parameters of substances, products and plants are measured and monitored during the manufacturing process, thus serving quality-oriented process control.

The quality management systems of the PUR flexible foam manufacturers in the FSK are certified according to current quality standards such as ISO 9001:2008 and ISO/TS 16949:2009 and are continuously developed further through in-house audits, supplier and customer audits and product certifications by independent testing institutes.

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## Principles of environmental and health protection

In addition to product quality and technical requirements, environmental protection and health requirements have top priority in the production of polyurethane flexible foams. This includes the supply chain.

Comprehensive environmental protection management systems ensure compliance with and monitoring of both statutory and additional company-specific environmental standards. This ensures, among other things, that even the latest limit values of the Technical Instructions on Air Quality Control (TA-Luft) are clearly undershot. This also includes the use of water and CO<sub>2</sub>-based foaming agents to support the foaming process. It goes without saying that ozone or atmosphere damaging greenhouse gases are not used in polyurethane manufacturing.

All legal regulations for the protection of the environment, air, water, soil as well as for the employees' safety at work are fully observed.

To avoid health restrictions, the PUR flexible foam manufacturers in the FSK ensure compliance with the European chemicals regulation REACH, in particular the non-use of substances from the SVHC candidate list.

In addition to legal restrictions and external inspections by independent institutes, PUR flexible foam manufacturers in the FSK voluntarily refrain from using substances that are suspected of being harmful to health. For example, no organotin compounds containing TBT (DBTL) are used and the use of critical flame-retardants such as polybrominated diphenyl ethers (PBDE) or tris (2-chloroethyl) phosphate (TCEP) is also avoided.

## Further information

The Technical Specialist Group PUR Flexible Foam in the FSK publishes further information in particular Technical Data Sheets on foam products, their properties and ingredients as well as other current topics, e.g. chemicals legislation and recycling, on the FSK homepage.

This DOCUMENT was developed in the Specialist Association Foamed Plastics and Polyurethanes by the Technical Specialist Group PUR Flexible Foam.



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