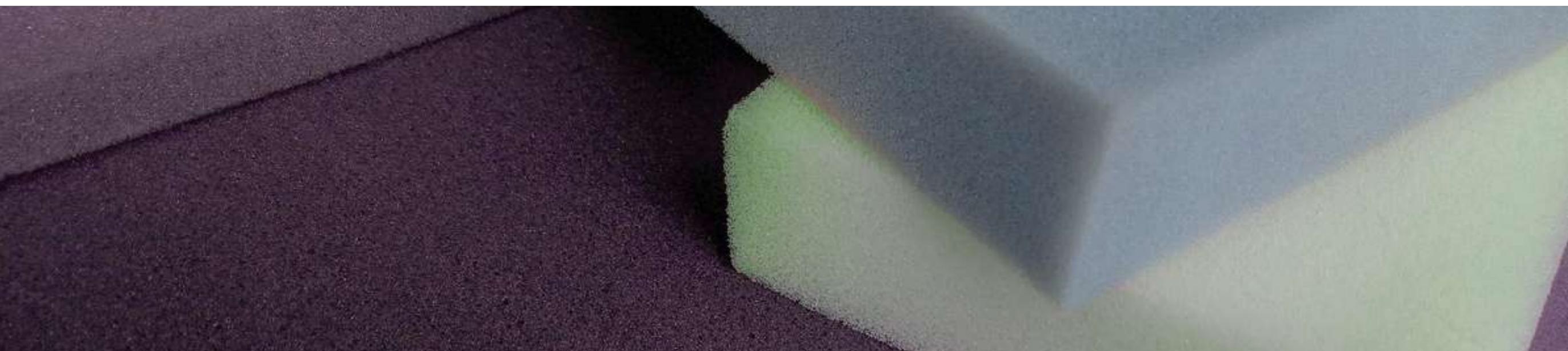


# THE RANGE OF SURFACTANTS FOR HIGH RESILIENCE POLYURETHANE FOAMS



## INTRODUCTION

Flexible HR PU, also known as flexible polyurethane, is a highly versatile material that has become an increasingly popular engineering option for a variety of industrial applications. It has been widely used in the transport industry.

A **high resilience** indicates that a product completely and quickly recovers its original shape, while a low resilience indicates that a product partially and slowly recovers its original shape.

## Surfactants:

- Act as surface tension depressants, reducing the pressure differences between the bubbles formed.
- Provide better bubble stability
- Condition the formation of cells
- Influence the final properties of the foam

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## Volatile compounds

Due to the increasingly strict legislation of the automobile and mattress industries, one of the priorities is to minimize the contribution of volatile compound emissions.

These emissions are divided into VOC (volatile organic compounds), FOG (organic compounds of "fogging"), VVOC (very volatile organic compounds) and SVOC (semi-volatile organic compounds).

In recent years Concentrol has investigated the way to reduce VOC, FOG and aldehydes of silicone surfactants with a new generation of products that allow obtaining PU foams with emission **values related to stabilizers lower than 20ppm (for a dose of 1pphp)**.

## Phthalates

The regulations do not restrict the use of all phthalates and some surfactants still contain these products. In addition, in some markets there are low smell requirements, mainly attributed to aldehyde compounds.

For these reasons, there are currently three types of products within the STB PU-12XX line, although among them there are no performance differences in PU foam:

### STB PU-12XX

First designed line that carries phthalate compounds.

### STB PU-12XX PF

Second line designed free of phthalates but with high content of aldehydes and aromatics

### STB PU-12XX PFJ

Third line designed, free of phthalates with low content of aldehydes and aromatics

**Concentrol** carries out constant research to develop surfactants for flexible HR PU that meet the needs of its customers and the market.