



Desmodur® white

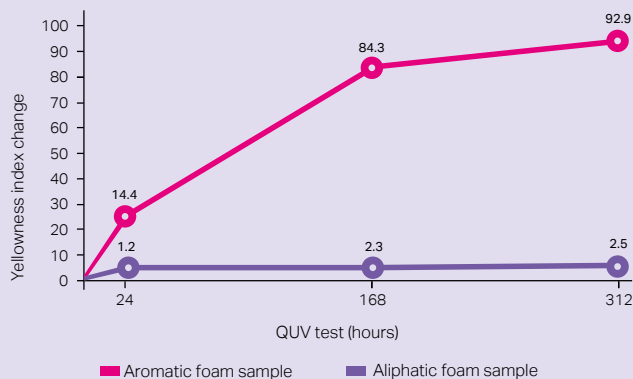
Unfading support for lingerie

New binder brings remarkable haptics
and unfading color to polyurethane foam



Infuse brightness: the future's bright for foam products and lingerie designs with color and light stable Desmodur® white from Covestro.

QUV quick ultraviolet light aging test comparison



Desmodur® white is a new binder for polyurethane (PU) soft foam technology providing light fastness, remarkable haptics and high breathability that allows ultimate design freedom.

Traditional foam is made using aromatic PU raw material, which fades quickly under ultraviolet light exposure. Color-stable Desmodur® white is derived from aliphatic PU raw materials. Aliphatic PU was once reserved for high-grade cosmetic and medical base materials, owing to its lightness and stability. Now, with innovative foam technology a high-performing aliphatic PU foam solution is available and comes with remarkable performance characteristics.

Tests show that aliphatic PU foam offers unfading support, with non-discoloring performance, superior color fastness, haptics, air permeability, washability, and stretch resilience. Aliphatic PU foam offers foam products and high-end lingerie designers the material difference to infuse long-lasting brightness and color into their designs.

Key technical features:

Color and light stability

Under sunlight exposure, traditional PU foam fades rapidly. High-intensity ultraviolet light accelerating tests on both aliphatic and traditional foam show superior light fastness after 312 hours of exposure. Additional tests reveal good resistance to heat and gas fumes.

Breathable comfort

Aliphatic PU foam has a high degree of breathability and comfort. Thanks to its ability to withstand demanding process conditions, aliphatic PU foam has the potential to increase breathability even further by using classical pore opening treatment.

Highly washable

Excellent shape and color retention, even after multiple wash cycles, makes aliphatic PU foam an excellent choice for lingerie products.

Stretchable support

Stretch resilience provides support and comfort with good elongation stretch and support performance in both break tests and ball rebound tests.

Remarkable haptics

Aliphatic PU foam's more flexible molecular structure provides a remarkably soft and elastic feel, ideal for designing for comfort.

Notes:

1. QUV quick ultraviolet light aging test is specified as follows:

Standard: GB/T 30669-2014

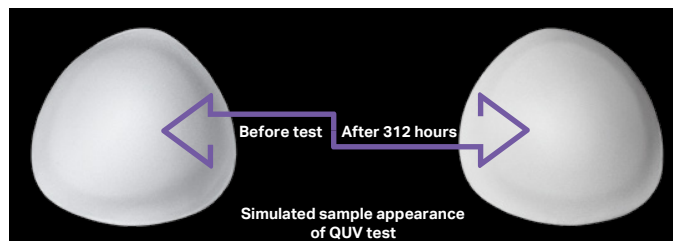
Light type: UVA-340 nm (similar to sunlight ultraviolet light spectrum)

Irradiance: 0.68 W/m

Conditions: continuously exposed to ultraviolet light at 60 °C

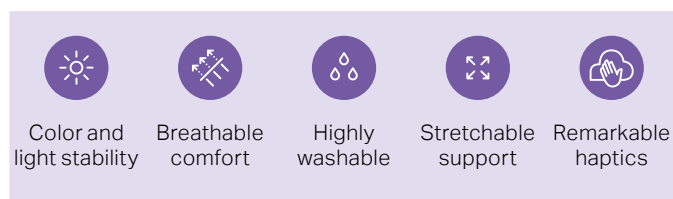
2. Compared with aromatic polyurethane foam sample:

Density 30 kg/m³, hardness 50 (Asker F)



Foam performance (exemplary):

| Test standard ASTM D3574 | Alipatic polyurethane foam | After pore opening treatment |
|------------------------------|----------------------------|------------------------------|
| Density (kg/m ³) | 40 | 40 |
| Hardness (Asker F) | 12 | 20 |
| Elongation (%) | 142 | 178 |
| Tensile strength (kpa) | 92 | 112 |
| Ball rebound (%) | 62 | 65 |
| Maximal air flow (l/min) | 72 | 128 @44Pa |



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Learn more about
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