

**High-performance,
sustainable solutions
for the active consumer**

DOW

®



Dow is investing in a more sustainable future for PU

At Dow, we are committed to unlocking the full sustainability potential of polyurethanes and addressing sustainability along the whole product lifecycle.

Our polyurethanes sustainability strategy has three areas of focus:

- **Enabling a circular economy**
- **Addressing climate protection**
- **Innovating safer materials**



CO₂/kg savings vs fossil naphtha



No food/feed competition



Replacing fossil products and raw materials



Sustainable sourcing

Safe, sustainable footwear solutions

Dow's footwear product offering addresses some of the most pressing challenges facing the footwear industry, including some of the health hazards that existing materials pose. In addition to using non-hazardous alternative chemistries that are dioctyltin (DOT) and fully tin free, it also uses fully water blown materials, all of which go towards high-quality shoe sole production for different applications.

At Dow, we have identified water blown technology as the smart choice of the new generation of blowing agents, with the smallest environmental footprint.

Sourcing sustainable materials

Today, polyurethanes are still mostly produced from fossil feedstocks, which are a finite and valuable resource. A key challenge facing the industry is to include more bio-based and circular feedstock into the production of materials and to scale the technology for greater impact.

Our latest footwear offerings tackle that challenge, offering brand owners innovative solutions that use bio-based and circular content without compromising on performance.

Find out more about our sustainability journey



Sustainable polyurethane footwear innovations for active lifestyles

PRODUCT SPOTLIGHT

ENERLYTE™

To deliver both comfort and performance for the active consumer, it is essential to strike the right balance between ergonomics and sensation. Targeting the growing athleisure trend, Dow's latest footwear solution, ENERLYTE™ Polyurethane Elastomer, has been designed to maintain precisely that balance. The composition and morphology of ENERLYTE™ elastomers was specifically developed to enhance the performance of midsoles in casual, trekking and athletic footwear. Polyurethane (PU)/Thermoplastic Polyurethane (TPU) and PU/Rubber combinations further help in performance and design freedom.

TYPICAL TECHNICAL PROPERTIES

The properties shown are typical but not to be construed as specifications.

End-use application	Midsole
Density (kg/m ³)	350
Hardness (Shore A)	35
Tear strength (N/mm)	3.3
Tensile strength (N/mm ²)	4.5
Elongation (%)	360
Split tear (N/mm)	2.4
Compression set (%)	< 10
Ball rebound (%)	60

Benefits of ENERLYTE™



Weight

Lightweight soles reduce the fatigue of walking over long distances or long periods of time



Durability

High hydrolysis resistance
Good compression set ensures long-term performance and maintains aesthetics
Superior mechanical properties



High rebound

High energy return
Enables good performance dynamic between high rebound and cushioning



Touch

Rubbery and pleasant feel
Soft to medium hardness to ensure comfortable experience
Retains soft and bouncy feel in cold conditions (-20 °C)

VORALAST™ LYTE

VORALAST™ LYTE is part of the new generation of light and sustainable polyurethane solutions designed to address the needs of active consumers. Produced using our proven ether building blocks and with our advanced water blown technology, VORALAST™ LYTE is a natural option for brand owners and customers who want to prioritize sustainability without compromising on comfort, durability and performance.

TYPICAL TECHNICAL PROPERTIES

The properties shown are typical but not to be construed as specifications.

End-use application	Midsole	Unitsole (Types A & B)
Density (kg/m ³)	350	400-500
Hardness (Shore A)	35	38-45
Tear strength (N/mm)	2.7	3.8-5.3
Tensile strength (N/mm ²)	3.2	3.5-4.9
Elongation (%)	320	350-460
Split tear (N/mm)	2.3	3.0-3.8
Compression set (%)	< 10	-
Ball rebound (%)	42	45-50
Flex fatigue resistance	-	> 100 kcycles
Abrasion resistance (mg lost)	-	< 120

Benefits of VORALAST™ LYTE



Weight

Lightweight soles reduce the fatigue of walking over long distances or long periods of time



Processability

Polyurethane (PU)/ Thermoplastic Polyurethane (TPU) and PU/Rubber combinations maximize design freedom

Easier processability using conventional working conditions



Sustainability

Diocetyl tin (DOT) and fully tin free

Available with bio-based feedstock



Medium rebound

Improved ball rebound performance ideal for designing comfortable, casual shoes

Staying a step ahead in footwear

As consumers become more active in their daily lives, light, comfortable, durable footwear is increasingly important. To help the global footwear industry meet these demands, Dow continues to advance material quality and performance, all while keeping to our sustainability promise.

[Find out more about our full range of footwear solutions for active lifestyles](#)



About Dow

Dow (NYSE: DOW) combines global breadth; asset integration and scale; focused innovation and materials science expertise; leading business positions; and environmental, social and governance (ESG) leadership to achieve profitable growth and deliver a sustainable future. The Company's ambition is to become the most innovative, customer centric, inclusive and sustainable materials science company in the world. Dow's portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of differentiated, science-based products and solutions for its customers in high-growth market segments, such as packaging, infrastructure, mobility and consumer applications. Dow operates 104 manufacturing sites in 31 countries and employs approximately 35,700 people. Dow delivered sales of approximately \$55 billion in 2021. References to Dow or the Company mean Dow Inc. and its subsidiaries. For more information, please visit www.dow.com or follow [@DowNewsroom](https://twitter.com/DowNewsroom) on Twitter.

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