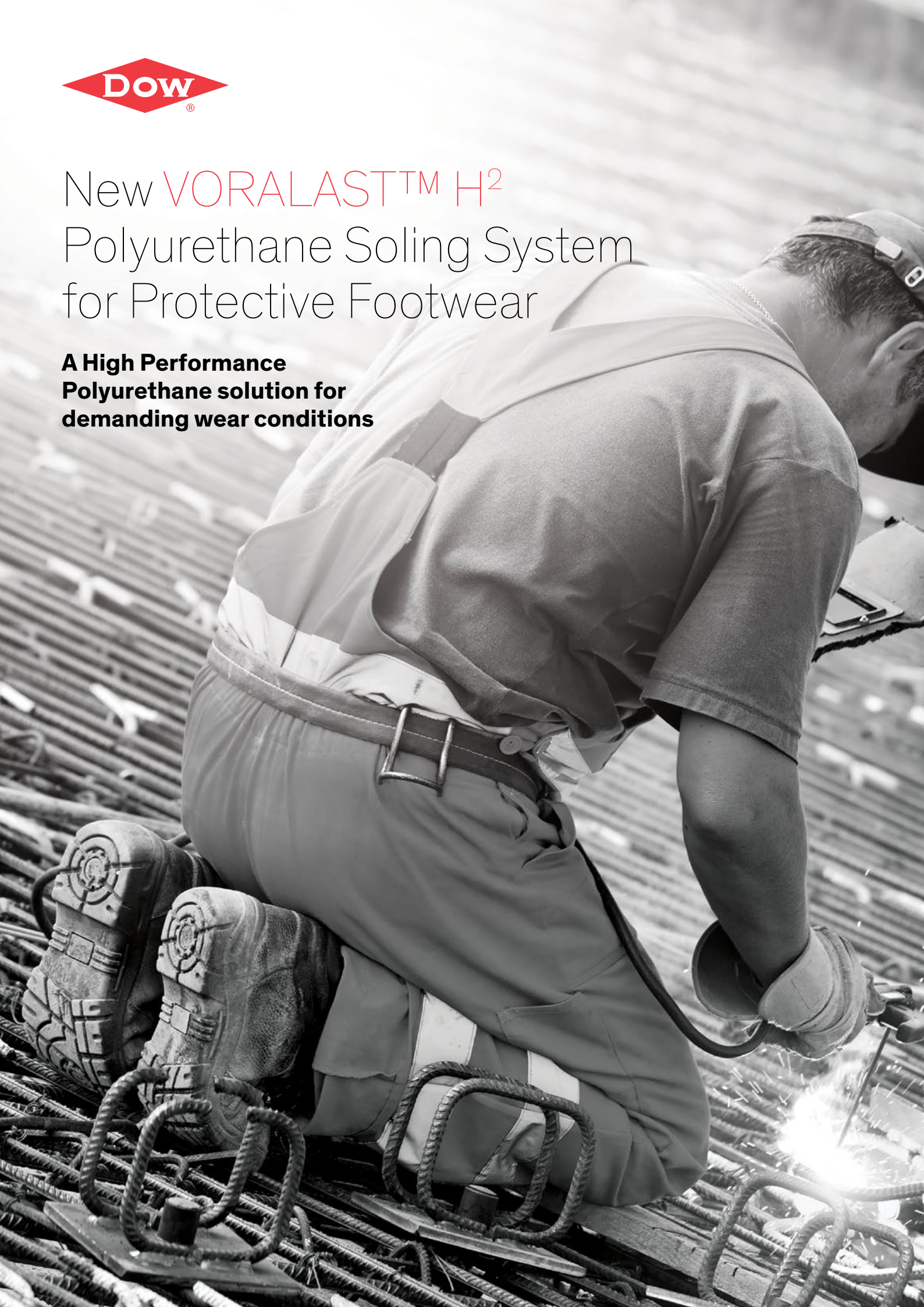




New VORALAST™ H² Polyurethane Soling System for Protective Footwear

**A High Performance
Polyurethane solution for
demanding wear conditions**





ADDRESSING WORK SAFETY NEEDS

Rapid economic development in various industries has increased the size of the global workforce. As a result, the number of workplace accidents has augmented along with regulatory pressure in Europe and North America to ensure work safety standards are adhered to. This greater focus on safety is driving demand for protective wear and shoes that are able to address safety needs.

The protective footwear market includes safety and work shoes for a variety of industries, such as construction, manufacturing, chemicals and agriculture, amongst others. Designed to provide protection, comfort and to help reduce foot fatigue, they contribute to the safety of workers, improving their working conditions and efficiency.

For over two decades, Dow has been providing the footwear industry with a broad portfolio of advanced polyurethane soling systems, helping protective footwear manufacturers and brand owners create reliable, more comfortable and longer lasting shoes with performance characteristics tailored to the requirements and needs of specific industries.

PROTECTION AND COMFORT FOR PROTECTIVE FOOTWEAR

For over 20 years, VORALAST™ from Dow has been a trusted brand in the footwear industry for high-class soling systems, delivering remarkable quality and performance for the safety, business, outdoor and casual footwear market segments. This family of polyurethane soling systems is designed to address consumer needs for comfortable, stylish, light weight and long lasting shoe soles.

With the new VORALAST™ H², Dow broadens its footwear portfolio with a polyurethane soling system specifically designed for protective shoes requiring a combination of comfort and protection in a variety of working conditions and addressing the needs of the industrial, agriculture, cold store, trekking and wellington professional shoe manufacturers.

Used for mono and bi-density, VORALAST™ H² provides superior flex fatigue and elasticity, while also offering enhanced hydrolysis resistance, abrasion endurance, and excellent anti-static and grip properties. It is tailored to help footwear producers address the most pressing consumer demands and at the same time, comply with the European Union's EN 344/345 safety standards.

BENEFITS OF VORALAST™ H² POLYURETHANE SOLING SOLUTION

VORALAST™ H² polyurethane soling solution is designed to provide a wide range of benefits to brand owners, shoe manufacturers and consumers alike and opens the door to almost limitless opportunities in the protective footwear industry.

PARAMETERS

COMFORT

- Lightweight & Soft Touch soles which help reduce fatigue in tough work conditions

DURABILITY

- High hydrolysis and abrasion resistance
- Systems formulated to offer oil and solvent resistance
- Good anti-static properties

FLEXIBILITY

- High flexibility, flex fatigue properties even at low temperatures

GRIP

- Good slip resistance to avoid slipping accidents in work and travel conditions



PROPERTIES

Figure 1: Technical Properties of VORALAST™ H² Polyurethane System

		Single	Midsole	Outsole
Molded Density	Kg/m ³	450-550	400-450	900-1050
Hardness	Shore A	50-60	40-50	58-63
Tensile strength	N/mm ²	5.5-6.8	4.5-5.7	12-13
Tensile strength after hydrolysis (14 days)	N/mm ²	5.0-6.2	4.1-5.2	11.1-12.2
Tear Strength	(N/mm)	8.9-10.5	5.2-8.0	15.5-19
Elongation	%	360-420	330-370	550-800
Abrasion	mg lost	120-150	n.a.	60-80
Flex Fatigue at 25°C	nr. of cycles	>50.000	>30.000	>50.000
Flex Fatigue at 25°C after hydrolysis (14 days)	nr. of cycles	>30.000	>30.000	>30.000
Flex Fatigue at 25°C after hydrolysis (21 days)	nr. of cycles	>30.000	>30.000	>30.000

These are typical properties and should not be construed as specifications.

Source: Dow

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