

INNOVATIVE SOLING SOLUTIONS: DALTOPED® *PERFORM* TECHNOLOGY

High quality shoes

Our DALTOPED® *PERFORM* technology is an innovative, high performance polyether material. This novel solution is the result of years of continuous technology optimization, which began back in 1994 when we pioneered the footwear industry's first fully water-blown polyether solution.

Combining good system flow-ability and a high foam quality, DALTOPED® *PERFORM* materials are an attractive proposition for footwear manufacturers looking to produce unit soles and shoes in line with industry standards.

Free from Sn (tin) catalysis and other components listed as substances of very high concern (SVHC), DALTOPED® *PERFORM* technologies – like all other products in the DALTOPED® range – can help footwear manufacturers eradicate consumer concerns about the use of potentially harmful ingredients in their shoes and boots.

DALTOPED® *PERFORM* solutions are suitable for direct-on and casting unit soles, and are a popular, lightweight choice for the production of high quality casual shoes (mens and ladies); children's shoes; PU clogs and quality slippers.

Benefits

Excellent mechanical properties

- Technology can be based on polyether and / or polyester chemistry
- Good aesthetics (surface definition).

Robust and easy to process on conventional machinery

- Injection molding and casting process.

High productivity



DALTOPED® *PERFORM* recommended commercial systems:

DALTOPED® AF 46501 / SUPRASEC® 2444
DALTOPED® AF 55400 / SUPRASEC® 2445
DALTOPED® AF 55403 / SUPRASEC® 2445
DALTOPED® AF 56500 / SUPRASEC® 2445
DALTOPED® AF 66328 / SUPRASEC® 2445
DALTOPED® AF 66403 / SUPRASEC® 2445
DALTOPED® AF 66408 / SUPRASEC® 2445

Additional DALTOPED® systems are available to suit customer needs.

Typical technical properties

| | DALTOPED® <i>PERFORM</i> systems |
|--|----------------------------------|
| Density (kg/m ³) | 400 - 600 |
| Hardness (Shore A) | 45 - 65 |
| Trouser tear (N/mm) | 4.5 - 8.0 |
| Tensile strength (MPa) | 2.5 - 3.5 |
| Elongation (%) | 350 - 400 |
| Flex life (DEG flex 10 ⁵ cycle mm cut growth) | < 2 |
| Abrasion (mg loss) | 35 - 80 |

Committed to sustainable soling solutions

Adding DALTOPED® *PERFORM* products to our existing footwear range demonstrates our dedication to creating sustainable innovations for the polyurethane soling materials market, and our ability to anticipate industry trends. Responding to demands for ever lighter soling solutions – free from harmful substances – we are helping footwear manufacturers deliver on their commitment to customers, without compromising quality.

Committed to customers

Alongside an extensive range of polyurethane soling materials, our highly skilled, technical footwear team can help optimize customer production processes for success. Working in-house – on the very latest injection molding and casting equipment – we can replicate manufacturing conditions. This considerable investment in our research and development capabilities, means our footwear products are well suited to the needs of our customers and can be processed extremely efficiently. It also enables partnerships with customers who have a specific brief to fulfill or a complicated manufacturing challenge to overcome.

- Dedicated to sustainable innovation
- Supporting customers with tailor-made solutions
- Committed to long-term partnerships
- In-house customer prototyping
- Helping footwear manufacturers stay one step ahead.

For more information

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HUNTSMAN

Enriching lives through innovation

About Huntsman

Huntsman Corporation is a publicly traded global manufacturer and marketer of differentiated chemicals with 2012 revenues of over \$11 billion. Our chemical products number in the thousands and are sold worldwide to manufacturers serving a broad and diverse range of consumer and industrial end markets. We operate more than 75 manufacturing and R&D facilities in over 30 countries and employ approximately 12,000 associates within our five distinct business divisions. For more information about Huntsman, please visit the company's website at www.huntsman.com.

Disclaimer

Huntsman Polyurethanes warrants only that its products meet the specifications agreed with the buyer. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications.

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Products may be toxic and require special precautions in handling. The user should obtain Safety Data Sheets from Huntsman Polyurethanes containing detailed information on toxicity, together with proper shipping, handling and storage procedures, and should comply with all applicable safety and environmental standards.

Hazards, toxicity and behavior of the products may differ when used with other materials and are dependent on the manufacturing circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.

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