## g-sole

## Insoles and Midsoles

Premium Quality, High-tech PU


## Damping and Dynamics perfectly matching

Getzner g -sole is the innovative solution for insoles and midsoles. It is made of PU (polyurethane) and is ideal for applications in the medical, leisure and sporting sectors.

The combination of an outer sole and insole or midsole with g-sole ensures comfort and provides all the stability and support the foot requires. The interplay between damping and dynamics is perfectly balanced in both versions. Constant long-term elasticity and a high capacity for recovery ensure its effectiveness across the entire life span of the shoe in which it is fitted without any loss of comfort. This makes $g$-sole suitable for use in customised soles, too-be it for medical or sporting applications.

## Be on the safe side with g-sole

g -sole is designed and manufactured in Austria. In addition to its unique product properties, g-sole scores extra points for its short delivery routes within Europe. Due to state-of-the-art storage, individual materials can be delivered at short notice. This means that delivery times can be carefully planned, ensuring a reliable and punctual service. Last but by no means least, service is a top priority at Getzner and our team is always on hand when you need support.



## Skin friendly

All g-sole products have been dermatologically tested and approved for skin compatibility. They fulfil the requirements of Regulation (EU) 2017/745 (MDR) with regard to harmful substances and are suitable for medical applications in orthopaedics. Direct skin contact is harmless even over a longer period of time.

## Breathable

Selected g-sole materials are open-cell, which ensures better breathability.

We are very satisfied with the consistently high quality of the Getzner foams. Short delivery times and exceptional communication make this the perfect solution for us.

## Added value:

- A strategically focused product range for optimised cost effectiveness
- Produced in Austria for quick and reliable availability of goods
- Sustainability in practice in a family company
- Ongoing innovation to meet growing market demands
- Personalised service for individual customer requirements



## $g$-sole range of use

The $g$-sole product portfolio contains a range of six foams, which are suitable for use in the medical, recreation and performance sectors.


MEDICAL
g-sole Medical help ensure shoes are comfortable to wear and provide stability. The foot is optimally cushioned, guided and relieved.

- Comfortable to wear with a light and, if required, thin material
- Supports stability and balance
- Increased damping protects joints
- Retains its shape even with a continuous compressive load




## RECREATION

g-sole Recreation provides the perfect balance between comfort and dynamic support for recreational use.

- Durable and reliable
- Helps ensure shoes are comfortable to wear
- Abrasion-resistant and temperature-insensitive
- Economic



## PERFORMANCE

g-sole Performance provides optimal support during sporting activities. Its distinctive dynamic behaviour fulfils the highest requirements.

- High energy return for greater performance in sports
- Protects against overload under high stress
- Consistent performance over the long term thanks to low material settlement



## Polyurethane products for the shoe industry

g -sole is a polyurethane (PU) product used in insoles and midsoles to achieve the best possible damping or enhanced dynamics as required. It is extremely durable and ensures consistent performance over the entire lifespan of a shoe.

## Unique product properties of g-sole:

- Lasting long-term elasticity
- High capacity for recovery
- Outstanding damping characteristics
- Unrestricted life span


## Facts:

Material: PU elastomer
Open-cell or mixed-cell depending on type

## Mats:

Standard delivery dimensions
Thickness: 2 to $6 \mathrm{~mm}, 18 \mathrm{~mm}$
Strips: $\quad 1,370 \times 1,200 \mathrm{~mm}$

## XL rolls:

Standard delivery dimensions
Thickness: 2 to $6 \mathrm{~mm}, 18 \mathrm{~mm}$
Width: $\quad 1,370 \mathrm{~mm}$
Length: Dependent on thickness

Other dimensions on request

## g-sole portfolio

$g$-sole products are classified into three different segments according to their properties. Products with pronounced damping are found in the Medical segment. Those featuring particularly
dynamic properties are placed in the Performance segment. Any products displaying both of these properties fall within the Recreation segment.


## g-sole Medical

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C45
g-sole MED C45


| Material properties | Test procedure ${ }^{1}$ | Value | Comment |
| :---: | :---: | :---: | :---: |
| Medium density | ASTM D3574 Test A | $\begin{gathered} 23 \mathrm{lb} / \mathrm{ft}^{3} \\ 360 \mathrm{~kg} / \mathrm{m}^{3} \end{gathered}$ |  |
| Compression set ${ }^{2}$ | ASTM D3574 Test D | <4\% | At $50 \%$ compression, $23^{\circ} \mathrm{C}$ ( $73.4{ }^{\circ} \mathrm{F}$ ), 72 h |
| Compression hardness ${ }^{2}$ | ASTM D3574 Test C | $\begin{gathered} 15 \mathrm{psi} \\ 100 \mathrm{kPa} \end{gathered}$ | At 25\% compression |
| Min. rupture stress under tension | ASTM D3574 Test E | $\begin{aligned} & 102 \mathrm{psi} \\ & 700 \mathrm{kPa} \end{aligned}$ |  |
| Min. elongation at rupture under tension | ASTM D3574 Test E | 140\% |  |
| Min. tear resistance | ASTM D624 Test C | $\begin{gathered} 18.9 \mathrm{lbf} / \mathrm{in} \\ 3.3 \mathrm{kN} / \mathrm{m} \end{gathered}$ |  |
| Mechanical loss factor | DIN 53513 | 0.47 |  |
| Rebound resilience | ISO 8307 | 15\% |  |
| Water absorption | ASTM D1056 | 175\% |  |
| Temperature range |  | $\begin{gathered} -30 \text { to } 70^{\circ} \mathrm{C} \\ -22 \text { to } 158^{\circ} \mathrm{F} \end{gathered}$ | A higher temperature is possible for short periods. |
| Chemical resistance |  |  | A separate chemical resistance data sheet is available. |

${ }^{1}$ Tests carried out in accordance with relevant standards $\left.\right|^{2}$ The measurement is performed on a density-dependent basis with differing test parameters.

C25 g-sole MED C25


| Material properties | Test procedure ${ }^{1}$ | Value | Comment |
| :---: | :---: | :---: | :---: |
| Medium density | ASTM D3574 Test A | $\begin{gathered} 16 \mathrm{lb} / \mathrm{ft}^{3} \\ 260 \mathrm{~kg} / \mathrm{m}^{3} \end{gathered}$ |  |
| Compression set ${ }^{2}$ | ASTM D3574 Test D | < 4 \% | At 50\% compression, $23^{\circ} \mathrm{C}\left(73.4{ }^{\circ} \mathrm{F}\right)$, 72 h |
| Compression hardness ${ }^{2}$ | ASTM D3574 Test C | $\begin{gathered} 7 \mathrm{psi} \\ 46 \mathrm{kPa} \end{gathered}$ | At 25\% compression |
| Min. rupture stress under tension | ASTM D3574 Test E | $\begin{gathered} 61 \mathrm{psi} \\ 420 \mathrm{kPa} \end{gathered}$ |  |
| Min. elongation at rupture under tension | ASTM D3574 Test E | 123 \% |  |
| Min. tear resistance | ASTM D624 Test C | $8.0 \mathrm{lbf} / \mathrm{in}$ $1.4 \mathrm{kN} / \mathrm{m}$ |  |
| Mechanical loss factor | DIN 53513 | 0.2 |  |
| Rebound resilience | ISO 8307 | 55 \% |  |
| Water absorption | ASTM D1056 | 250 \% |  |
| Air permeability | Densitometer |  | Open-cell - breathable |
| Temperature range |  | $\begin{aligned} & -30 \text { to } 70^{\circ} \mathrm{C} \\ & -22 \text { to } 158^{\circ} \mathrm{F} \end{aligned}$ | A higher temperature is possible for short periods. |
| Chemical resistance |  |  | A separate chemical resistance data sheet is available. |

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## g-sole Recreation

g-sole REC C10


Skin friendly


| Material properties | Test procedure ${ }^{1}$ | Value | Comment |
| :---: | :---: | :---: | :---: |
| Medium density | ASTM D3574 Test A | $11 \mathrm{lb} / \mathrm{ft}^{3}$ $170 \mathrm{~kg} / \mathrm{m}^{3}$ |  |
| Compression set ${ }^{2}$ | ASTM D3574 Test D | <4\% | At $50 \%$ compression, $23{ }^{\circ} \mathrm{C}$ ( $73.4{ }^{\circ} \mathrm{F}$ ), 72 h |
| Compression hardness ${ }^{2}$ | ASTM D3574 Test C | $\begin{gathered} 6 \mathrm{psi} \\ 44 \mathrm{kPa} \end{gathered}$ | At $25 \%$ compression |
| Min. rupture stress under tension | ASTM D3574 Test E | $\begin{array}{r} 53 \mathrm{psi} \\ 364 \mathrm{kPa} \end{array}$ |  |
| Min. elongation at rupture under tension | ASTM D3574 Test E | 132\% |  |
| Min. tear resistance | ASTM D624 Test C | $2.3 \mathrm{lbf} / \mathrm{in}$ $0.4 \mathrm{kN} / \mathrm{m}$ |  |
| Mechanical loss factor | DIN 53513 | 0.48 |  |
| Rebound resilience | ISO 8307 | 15\% |  |
| Water absorption | ASTM D1056 | 442\% |  |
| Air permeability | Densitometer |  | Open-cell - breathable |
| Temperature range |  | -30 to $70^{\circ} \mathrm{C}$ <br> -22 to $158^{\circ} \mathrm{F}$ | A higher temperature is possible for short periods. |
| Chemical resistance |  |  | A separate chemical resistance data sheet is available. |

${ }^{1}$ Tests carried out in accordance with relevant standards $\left.\right|^{2}$ The measurement is performed on a density-dependent basis with differing test parameters.
REC
D05 g -sole REC D05


Skin friendly

| Material properties | Test procedure ${ }^{1}$ | Value | Comment |
| :---: | :---: | :---: | :---: |
| Medium density | ASTM D3574 Test A | $\begin{gathered} 18 \mathrm{lb} / \mathrm{ft}^{3} \\ 285 \mathrm{~kg} / \mathrm{m}^{3} \end{gathered}$ |  |
| Compression set ${ }^{2}$ | ASTM D3574 Test D | <4\% | At $50 \%$ compression, $23{ }^{\circ} \mathrm{C}\left(73.4{ }^{\circ} \mathrm{F}\right)$, 72 h |
| Compression hardness ${ }^{2}$ | ASTM D3574 Test C | 17 psi 116 kPa | At 25\% compression |
| Min. rupture stress under tension | ASTM D3574 Test E | $\begin{array}{r} 55 \mathrm{psi} \\ 381 \mathrm{kPa} \end{array}$ |  |
| Min. elongation at rupture under tension | ASTM D3574 Test E | 151\% |  |
| Min. tear resistance | ASTM D624 Test C | $7.4 \mathrm{lbf} /$ in $1.3 \mathrm{kN} / \mathrm{m}$ |  |
| Mechanical loss factor | DIN 53513 | 0.17 |  |
| Rebound resilience | ISO 8307 | 55\% |  |
| Water absorption | ASTM D1056 | 269\% |  |
| Temperature range |  | $\begin{aligned} & -30 \text { to } 70^{\circ} \mathrm{C} \\ & -22 \text { to } 158^{\circ} \mathrm{F} \end{aligned}$ | A higher temperature is possible for short periods |
| Chemical resistance |  |  | A separate chemical resistance data sheet is available. |

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## g-sole Performance



Skin friendly

Breathable

| Material properties | Test procedure ${ }^{1}$ | Value | Comment |
| :---: | :---: | :---: | :---: |
| Medium density | ASTM D3574 Test A | $\begin{gathered} 15 \mathrm{lb} / \mathrm{ft}^{3} \\ 245 \mathrm{~kg} / \mathrm{m}^{3} \end{gathered}$ |  |
| Compression set ${ }^{2}$ | ASTM D3574 Test D | <4\% | At $50 \%$ compression, $23{ }^{\circ} \mathrm{C}\left(73.4{ }^{\circ} \mathrm{F}\right)$, 72 h |
| Compression hardness ${ }^{2}$ | ASTM D3574 Test C | $\begin{gathered} 8 \mathrm{psi} \\ 55 \mathrm{kPa} \end{gathered}$ | At $25 \%$ compression |
| Min. rupture stress under tension | ASTM D3574 Test E | $\begin{gathered} 59 \mathrm{psi} \\ 407 \mathrm{kPa} \end{gathered}$ |  |
| Min. elongation at rupture under tension | ASTM D3574 Test E | 164\% |  |
| Min. tear resistance | ASTM D624 Test C | $11.4 \mathrm{lbf} / \mathrm{in}$ $2.0 \mathrm{kN} / \mathrm{m}$ |  |
| Mechanical loss factor | DIN 53513 | 0.19 |  |
| Rebound resilience | ISO 8307 | 55\% |  |
| Water absorption | ASTM D1056 | 312\% |  |
| Air permeability | Densitometer |  | Open-cell - breathable |
| Temperature range |  | $\begin{aligned} & -30 \text { to } 70^{\circ} \mathrm{C} \\ & -22 \text { to } 158^{\circ} \mathrm{F} \end{aligned}$ | A higher temperature is possible for short periods. |
| Chemical resistance |  |  | A separate chemical resistance data sheet is available. |

${ }^{1}$ Tests carried out in accordance with relevant standards $\left.\right|^{2}$ The measurement is performed on a density-dependent basis with differing test parameters.
PER
${ }_{\text {D40 }} \mathrm{g}$-sole PER D40



Cell structure


Skin friendly

| Material properties | Test procedure ${ }^{1}$ | Value | Comment |
| :---: | :---: | :---: | :---: |
| Medium density | ASTM D3574 Test A | $\begin{gathered} 21 \mathrm{lb} / \mathrm{ft}^{3} \\ 340 \mathrm{~kg} / \mathrm{m}^{3} \end{gathered}$ |  |
| Compression set ${ }^{2}$ | ASTM D3574 Test D | <4\% | At $50 \%$ compression, $23{ }^{\circ} \mathrm{C}\left(73.4{ }^{\circ} \mathrm{F}\right)$, 72 h |
| Compression hardness ${ }^{2}$ | ASTM D3574 Test C | $\begin{gathered} 18 \mathrm{psi} \\ 121 \mathrm{kPa} \end{gathered}$ | At $25 \%$ compression |
| Min. rupture stress under tension | ASTM D3574 Test E | $\begin{gathered} 94 \mathrm{psi} \\ 650 \mathrm{kPa} \end{gathered}$ |  |
| Min. elongation at rupture under tension | ASTM D3574 Test E | 185\% |  |
| Min. tear resistance | ASTM D624 Test C | $10.8 \mathrm{lbf} / \mathrm{in}$ $1.9 \mathrm{kN} / \mathrm{m}$ |  |
| Mechanical loss factor | DIN 53513 | 0.07 |  |
| Rebound resilience | ISO 8307 | $70 \%$ |  |
| Water absorption | ASTM D1056 | 13\% |  |
| Temperature range |  | $\begin{aligned} & -30 \text { to } 70^{\circ} \mathrm{C} \\ & -22 \text { to } 158^{\circ} \mathrm{F} \end{aligned}$ | A higher temperature is possible for short periods. |
| Chemical resistance |  |  | A separate chemical resistance data sheet is available. |

${ }^{1}$ Tests carried out in accordance with relevant standards $\left.\right|^{2}$ The measurement is performed on a density-dependent basis with differing test parameters.
All information and data are based on our current knowledge. The data can be used in calculations and for reference purposes, but is subject to typical application-specific manufacturing tolerances and does not constitute warranted properties. Material properties and their tolerances vary depending on the type of application and load and are available from Getzner on request. For further general information, see VDI Directive 2062 and glossary. Further characteristic values available on request. We reserve the right to adjust the data.


## About Getzner

When it comes to comfort, elasticity is key. Getzner Werkstoffe has over 50 years of experience in developing elastomers and offers sustainable solutions to challenges stemming from vibrations and impacts in both high-precision industrial applications and in the rail and construction sectors. Our materials have proven their worth over many years and undergone rigorous performance testing. They are manufactured in Europe at our headquarters in Bürs, Austria.

We are part of the well-established family business Getzner, Mutter \& Cie. and we benefit from over 200 years of company history. We care deeply about the environment and the well-being of future generations. Our vision of a peaceful and worthwhile future embodies a commitment to preserving the world in which we all live. As a result, our production and distribution processes are designed to conserve resources; we generate electricity using natural energy sources and emit no harmful emissions into the environment.

## g-sole by Getzner

- Unique product properties that span the shoe's lifetime
- Short delivery routes and reliable product availability
- Excellent product and customer service

MADEIN AUSTRIA

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