

Streamlining Orthopedic Footwear Manufacturing: Evaluating TPU, EVA, and Gel Materials for Bulk Procurement

DONGGUAN, GUANGDONG, CHINA,
November 21, 2025 /

EINPresswire.com/ -- In the global orthopedic footwear and footcare industry, material selection plays a defining role in product quality, durability, and wearer comfort. As manufacturers, distributors, and brand owners evaluate options for [orthopedic shoe material bulk purchase](#), understanding the performance differences between commonly used components—TPU, EVA, and gel materials—has become increasingly important. Against this backdrop, Dongguan Suscong Healthcare Co., Ltd., established in 2011 in Dongguan City, represents one of several manufacturers contributing to the sector's technical development through long-term research on insole and orthopedic material production.



A Growing Global Market for Orthopedic Footwear Materials

Demand for orthopedic and comfort-focused footwear has expanded rapidly in recent years, driven by demographic changes and rising consumer health awareness. Aging populations, increased interest in posture correction, and a broader adoption of preventive healthcare solutions have accelerated market growth. Industry reports estimate that the global orthopedic footwear market will surpass USD 8 billion by 2030, with the Asia-Pacific region expected to be one of the fastest-growing markets due to urbanization and rising disposable income.

Within this environment, material consistency and functional performance are becoming core considerations for product developers. Dongguan Suscong Healthcare, originating from its

founder Jeff Zhang's earlier venture BDAC Company in Beijing (established in 2005), operates in this expanding market by producing components for footcare applications including insoles, heel supports, cushions, and orthopedic structures. The company maintains R&D and quality-control departments as part of its manufacturing system and provides OEM/ODM services to accommodate varying design requirements across regions.

Certification and Quality Frameworks Supporting Global Distribution

For materials used in medical and orthopedic products, certification is essential for ensuring compliance with environmental, safety, and manufacturing standards. Dongguan Susong Healthcare holds a collection of international certifications that reflect adherence to these frameworks, including:

FDA: Compliance with U.S. safety standards for materials used in healthcare-related products.

ISO 13485: Quality system certification for medical device manufacturing, emphasizing traceability and risk management.

ISO 9001: Assurance of consistent management practices across production and operations.

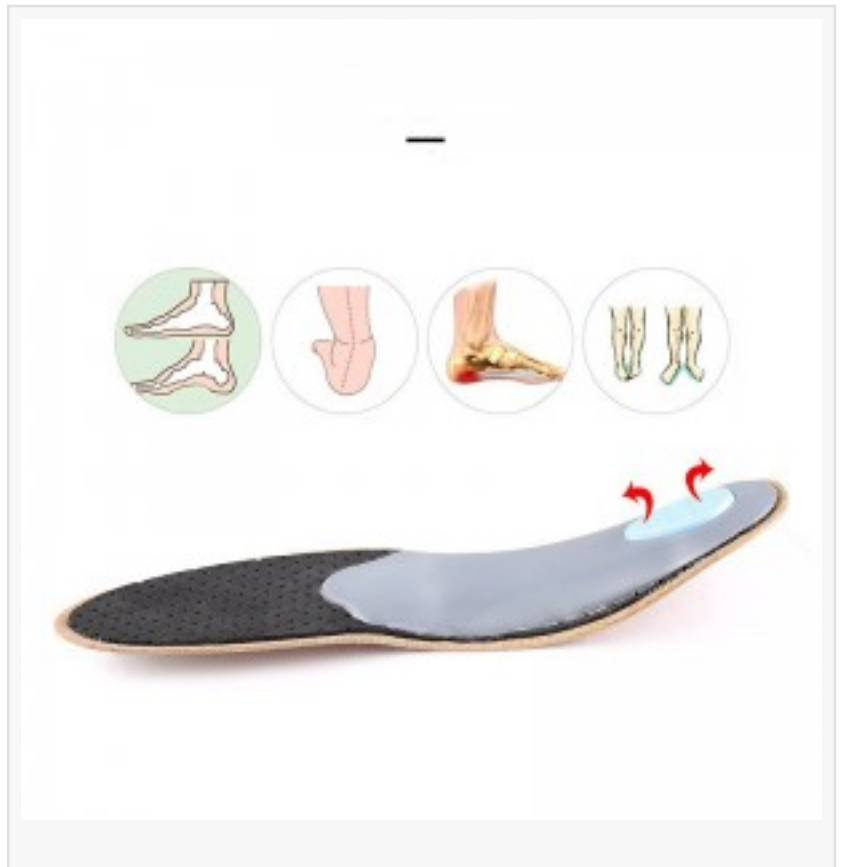
BSCI & SMETA Pillar 4: Social compliance audits focused on workplace conditions and ethical practices.

WCA (Workplace Conditions Assessment): Verification of safety and labor standards within production facilities.

DUNS Registered: Global business verification for trade transparency.

ENViSA & CE: Conformity with European health, environmental, and safety requirements.

GRS (Global Recycled Standard) and FSC: Certifications reflecting the use of environmentally responsible material sourcing.



Additional national certifications such as MHRA (UK), KFDA (Korea), and SFDA (China).

These certifications collectively demonstrate the company's alignment with common industry requirements for orthopedic-grade materials and international supply chain reliability.

Material Assessment: TPU, EVA, and Gel Components

Manufacturers selecting materials for orthopedic footwear often evaluate three primary components—TPU, EVA, and gel materials—each offering unique advantages depending on the intended application.

1. TPU (Thermoplastic Polyurethane): Structure and Stability

TPU is widely recognized in the footwear industry for its combination of strength, elasticity, and abrasion resistance. It is used in applications requiring structural integrity or repeated mechanical stress.

Key Characteristics:

High resistance to tearing, deformation, and long-term compression.

Chemical and oil resistance suitable for intensive-use footwear.

Compatibility with precision molding, allowing for complex orthopedic designs.

Strong energy-return performance, beneficial for sports and corrective footwear.

Considerations:

TPU tends to be heavier and more expensive than EVA, which may affect product positioning and cost planning.

Common Applications:

Performance insoles, corrective components, and high-impact support structures.

2. EVA (Ethylene Vinyl Acetate): Lightweight Cushioning

EVA is one of the most common materials used in insoles and midsole applications. It offers versatile processing options and remains popular due to its balanced cost and comfort characteristics.

Key Characteristics:

Lightweight, soft, and comfortable for extended wear.

Low density improves overall shoe flexibility.

Easy customization in hardness, thickness, and color.

Heat-moldable, suitable for orthotic shaping.

Considerations:

EVA compresses over time, which may reduce long-term durability for high-load users.

Common Applications:

Casual shoes, children's footwear, primary orthopedic inserts, and cushioning layers.

3. Gel Materials: Pressure Relief and Medical Support

Gel components are valued for their ability to provide targeted pressure distribution and enhanced cushioning, making them suitable for sensitive-foot applications.

Key Characteristics:

Exceptional shock absorption, helping reduce joint strain.

Adaptive support for areas needing focused pressure relief.

Recommended for conditions such as diabetes, post-surgery recovery, or chronic foot sensitivity.

Considerations:

Gel materials generally add weight and cost to the final product.

Common Applications:

Medical-grade orthotics, rehabilitation footwear, and therapeutic insoles.

Hybrid Material Combinations

Many modern orthopedic products combine these materials—for example:

TPU + EVA for structural stability with lightweight cushioning.

Gel + EVA for enhanced pressure relief without compromising flexibility.

These combinations enable manufacturers to optimize performance for specific use cases, from sports to clinical applications.

Manufacturing Capabilities and Industry Position

Dongguan Suscong Healthcare maintains production lines for insole and footcare materials, offering engineering support and material-first design consultation for clients seeking tailored solutions. The company's supply chain integrates raw material sourcing, molding, lamination, assembly, and packaging, providing flexibility for diverse project requirements. With over 500 product types supplied to customers in more than 70 countries, the company participates in ongoing material development across multiple market segments.

Conclusion: Evolving Standards in Orthopedic Footwear Materials

As the global orthopedic footwear industry continues to expand, material selection remains a central factor in product differentiation and user comfort. TPU, EVA, and gel components each offer distinct performance benefits, and understanding their properties allows manufacturers to create targeted solutions for medical, athletic, and everyday wear.

Companies such as Dongguan Suscong Healthcare contribute to this evolving landscape through ongoing development of footcare components and compliance with international quality standards. As material science, ergonomics, and sustainability continue to shape next-generation orthopedic products, reliable and well-tested component sourcing will remain essential for global manufacturers and brands.

For more information, visit: <https://www.suscong.com>

Dongguan Suscong Healthcare Co., Ltd.

Dongguan Suscong Healthcare Co., Ltd.

+86 135 0923 5363

ssc@bdac.com

Visit us on social media:

[Facebook](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/868800082>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.