

Beyond the Final Whistle: How Si-TPV 3520-70A Is Shaping the Future of Wearables in the FIFA World Cup™ Era



Chengdu, Sichuan Jun 25, 2026 ([Issuewire.com](https://www.issuewire.com)) - As the countdown to the 2026 FIFA World Cup™ in the United States, Canada, and Mexico continues, a broader trend is emerging beyond the stadiums. Millions of consumers are embracing more active lifestyles, relying increasingly on wearable technologies, sports accessories, outdoor equipment, and connected devices to support their daily activities.

From smartwatch bands tracking recreational football matches to underwater electronic accessories designed for adventure sports, today's products are expected to do more than simply function. They must deliver comfort, durability, aesthetic appeal, and increasingly, sustainability.

For manufacturers, this raises an important question:

How can next-generation products maintain premium user experiences while meeting the growing demands of active lifestyles?

The Material Challenge Behind Active Products

Products designed for sports and outdoor environments face demanding conditions every day.

Wearable wristbands are stretched repeatedly during workouts. Sports equipment handles endure constant friction. Outdoor accessories are exposed to sunlight, sweat, dirt, and changing weather conditions. Underwater devices require materials capable of maintaining performance despite prolonged exposure to moisture.

Traditional material choices of ten involve compromises.

Conventional TPU materials may gradually develop sticky surfaces or attract dust after extended use. Liquid silicone rubber can provide desirable softness but may involve more complex processing requirements. Meanwhile, materials containing plasticizers continue to face increasing scrutiny as brands pursue more sustainable product strategies.

As consumers expect products to perform flawlessly throughout every training session, outdoor adventure, and sporting celebration, manufacturers are searching for materials that can balance comfort, durability, and efficient production.

[Si-TPV 3520-70A: Combining Silky Comfort with Durable Performance](#)

Si-TPV 3520-70A is a dynamic vulcanized thermoplastic silicone-based elastomer engineered to combine the advantages of silicone rubber with the processing versatility of thermoplastic materials.

Its unique microstructure features micron-sized silicone rubber domains uniformly dispersed within a TPU matrix, helping create a distinctive combination of tactile comfort and mechanical performance.

Unlike materials that focus solely on softness, Si-TPV 3520-70A is designed to support products that require both long-term wearability and resistance to demanding environments.

Engineered for Long-Lasting Comfort During Active Use

Whether users are following World Cup festivities, participating in community football tournaments, or tracking daily fitness goals, wearable devices often remain in direct contact with the skin for extended periods.

Comfort is no longer optional.

Si-TPV 3520-70A offers a naturally silky-soft surface without requiring additional coatings or secondary processing. At the same time, its **71 Shore A hardness** provides a balanced combination of flexibility and structural support.

More importantly, the material demonstrates an impressive **821% elongation at break**, allowing components such as smartwatch bands and fitness tracker straps to endure repeated stretching and

bending without sacrificing integrity.

For wearable applications, this combination may contribute to enhanced user comfort throughout prolonged use.

Built to Endure the Demands of Sports and Outdoor Activities

Products designed for active lifestyles must withstand far more than occasional handling.

Repeated pulling, twisting, abrasion, and accidental impacts can gradually compromise product performance and appearance.

Si-TPV 3520-70A exhibits a **tensile strength of 18 MPa**, providing the mechanical robustness required for products subjected to frequent use.

Additionally, its **tear strength of 55 kN/m** may help components resist tearing or edge damage under demanding conditions.

These characteristics make the material particularly attractive for applications such as:

Smartwatch and fitness tracker bands

Sports equipment grips and handles

Outdoor electronic accessories

Adventure gear components

Waterproof wearable products

Underwater devices and recreational equipment.

Combined with its inherent scratch resistance and abrasion resistance, Si-TPV 3520-70A may help products maintain both functionality and visual appeal over time.

Designed to Perform Beyond the Stadium

The FIFA World Cup inspires participation not only on the pitch but also across countless outdoor activities.

From hiking and cycling to water sports and recreational fitness programs, equipment is routinely exposed to environmental stresses that challenge conventional materials.

Si-TPV 3520-70A is engineered to provide

UV stability for outdoor environments

Stain-resistant surfaces that support easier cleaning

Superhydrophobic characteristics that may assist in moisture management

Resistance to common environmental factors encountered during everyday use.

These attributes may contribute to extending product service life while enhancing the overall user experience.

Supporting Efficient Manufacturing and Product Innovation

As brands accelerate product development cycles to meet evolving consumer demands, manufacturing efficiency becomes increasingly important.

Si-TPV 3520-70A demonstrates a **melt flow index of 48 g/10 min (190° C/10 kg)**, indicating favorable flow behavior suitable for injection molding processes.

This characteristic may support the production of intricate geometries and thin-wall components frequently required in wearable electronics and consumer products.

The material also exhibits a relatively low **100% tensile stress of 2.9 MPa**, enabling comfortable deformation under everyday use conditions without compromising perceived quality.

Furthermore, Si-TPV 3520-70A demonstrates excellent overmolding compatibility with substrates including **PC, ABS, TPU, PMMA, and PA**, offering manufacturers greater flexibility when developing multi-material product designs.

Maintaining Shape Through Everyday Use

Repeated compression and recovery are common in wearable accessories and handheld equipment.

Materials that permanently deform over time can negatively affect both comfort and appearance.

Si-TPV 3520-70A demonstrates a **compression set value of 29% after 22 hours at 23° C**, suggesting favorable shape retention characteristics during extended use.

For products expected to accompany consumers through daily workouts, outdoor adventures, and active lifestyles, maintaining consistent performance may become a critical differentiator.

Sustainability Is Becoming Part of Product Performance

As the world gathers to celebrate one of the largest sporting events in history, sustainability is increasingly influencing consumer purchasing decisions.

Today's users expect products that not only perform well but also align with broader environmental values.

Si-TPV 3520-70A is formulated as a **plasticizer-free thermoplastic elastomer** and can be recycled through conventional thermoplastic processing systems.

For manufacturers pursuing more sustainable innovation strategies, material selection may play an important role in reducing environmental impact while supporting long-term business objectives.

[Looking Toward the Future of Active Living](#)

The future of wearable technology and sports equipment extends far beyond connectivity and aesthetics.

Consumers increasingly expect products to deliver:

Premium tactile experiences

Long-term durability

Reliable outdoor performance

Manufacturing efficiency

More sustainable material solutions

Si-TPV 3520-70A represents a material platform designed to support these evolving expectations across wearable devices, sports equipment, outdoor accessories, underwater products, and similar applications.

Because in the World Cup era, performance is measured not only by goals scored on the field.

It is also defined by the materials that empower people to move further, train harder, explore more confidently, and stay connected throughout every adventure.

Si-TPV 3520-70A — where silky comfort meets durable performance for the future of active lifestyles.

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