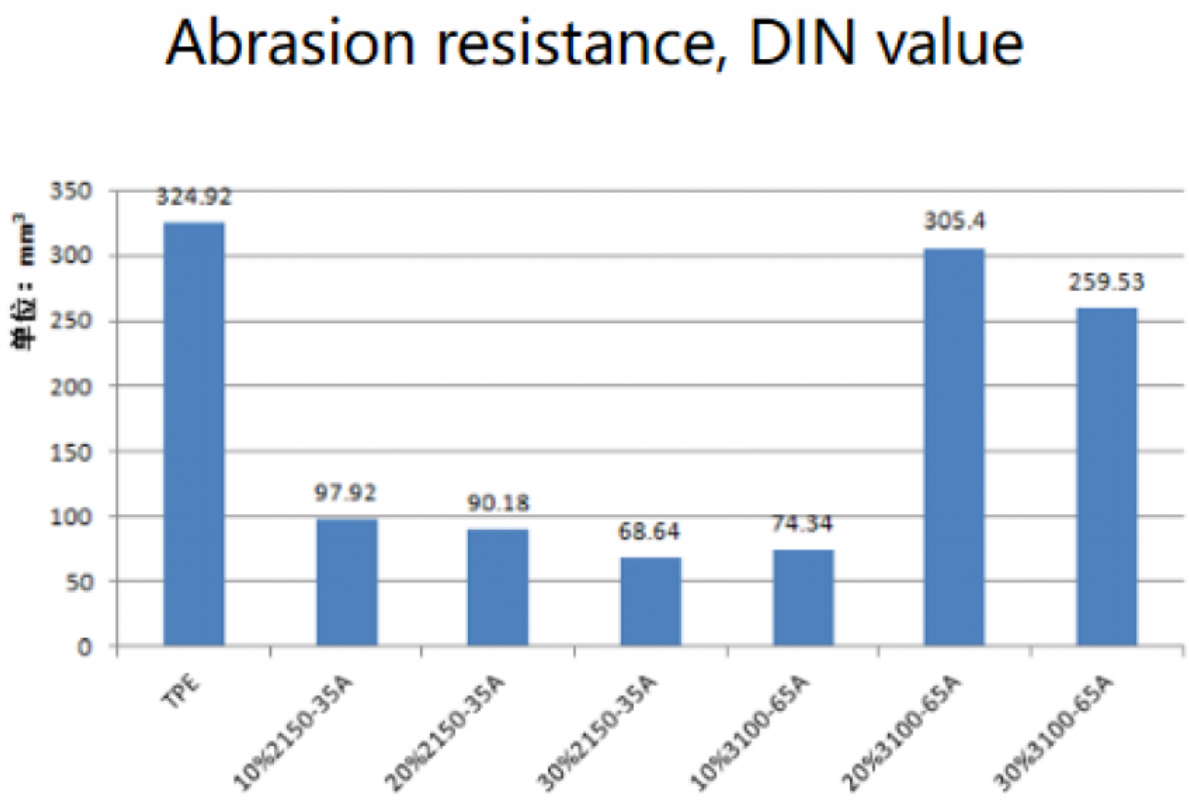
Si-TPV 2150-35A Silicone-Based TPE Modifier for Soft Touch and Non-Tacky Thermoplastic Elastomer Applications



Chengdu, Sichuan Jun 11, 2026 (Issuewire.com) - Evolving Requirements for Thermoplastic Elastomer Surfaces

As thermoplastic elastomer applications continue to expand across wearable devices, consumer electronics, automotive interiors, and wire and cable sectors, expectations around surface feel, durability, and long-term usability are becoming more demanding. In many cases, conventional TPE compounds may show limitations such as surface tackiness, insufficient scratch resistance, or a tendency to attract dust and contaminants. These challenges may lead to the use of coatings or migrating additives, which could introduce variability in processing and long-term performance.

Si-TPV 2150-35A is developed as a silicone based TPE modifier intended to support the development of soft touch TPE materials with reduced stickiness and more stable surface characteristics. By integrating silicone functionality within the polymer system, it is positioned as an alternative to surface-level treatments in thermoplastic elastomer design.

From Material Data to Functional Performance

The value of Si-TPV 2150-35A becomes more evident when its key physical properties are interpreted in the context of real applications.

With a tensile strength of approximately 2.5 MPa and an elongation at break exceeding 500%, the material demonstrates a balance between softness and flexibility. This combination may be suitable for applications requiring repeated deformation, such as flexible grips and soft-touch housings, where comfort and resilience are both relevant.

At the same time, a tear strength around 17 kN/m and stable modulus at 100% elongation suggest that the material can maintain structural integrity under daily use conditions. This may help reduce the risk of tearing or mechanical failure in thin-wall or overmolded designs.

Enhancing Surface Durability in High-Contact Applications

Surface durability is often a critical challenge in TPE applications, particularly in products exposed to continuous friction or handling.

According to abrasion testing (DIN method), the incorporation of Si-TPV 2150-35A may contribute to reduced material loss, indicating improved wear resistance. In practical terms, this could translate into longer-lasting surfaces in applications such as:

Earbud components

Automotive interior touchpoints

Handheld consumer products

Improved abrasion resistance may help maintain surface texture and appearance over time, which is often a key factor in perceived product quality.

Cleaner Surfaces Through Contact Angle Modification

Another important aspect observed in testing is the reduction in water contact angle. While this does not directly imply waterproofing, it reflects a shift in surface energy characteristics.

A lower contact angle may contribute to reduced adhesion of oils, sweat, and dust. In real-world applications, this could result in:

Less visible fingerprint residue

Improved stain resistance

Easier cleaning and maintenance

This behavior is particularly relevant for skin-contact products, where surface cleanliness and hygiene perception are important considerations.

Processing Compatibility for Industrial Applications

From a manufacturing perspective, the melt flow characteristics of Si-TPV 2150-35A suggest controlled processability. This may allow compatibility with common TPE processing methods, including injection molding and overmolding onto substrates such as polypropylene (PP).

For product designers and engineers, this could provide flexibility in integrating soft-touch layers without significantly altering existing production workflows.

Addressing Traditional TPE Surface Challenges

Conventional TPE materials often face challenges such as surface tackiness, dust attraction, or additive migration (blooming), especially over time or under varying environmental conditions.

Si-TPV 2150-35A is typically associated with a dry, silky surface feel and minimal migration behavior. This may help maintain consistent surface quality throughout the product lifecycle.

In applications such as consumer electronics or wearable accessories, this could support:

A more premium tactile experience

Reduced dust accumulation

Improved long-term aesthetic stability

A Balanced Approach to TPE Performance Optimization

One of the more notable aspects observed in the data is that improvements in surface-related properties—such as abrasion resistance and cleanliness—may be achieved without significant compromise to the base mechanical performance of the TPE system.

This balance is often difficult to achieve with conventional additives, where enhancements in one area may lead to trade-offs in another.

Applications in Thermoplastic Elastomer Systems

Si-TPV 2150-35A may be considered for thermoplastic elastomer applications where softness, surface feel, and flexibility are important. As a silicone based TPE modifier, it may be used in TPE formulations to support soft touch TPE materials with reduced stickiness and more stable surface performance.

In wearable and consumer electronic applications, this non tacky thermoplastic elastomer modifier may be more suitable for soft contact components such as protective covers, cushioning parts, earbud accessories, or flexible touch zones, rather than structural parts requiring higher stiffness.

In automotive interior applications, it may be considered for soft-touch areas such as padding zones, contact surfaces, or flexible inserts, where lower hardness and improved tactile comfort are preferred over rigidity.

In wire and cable materials, this thermoplastic elastomer additive may support flexible outer layers with smoother surfaces and reduced stickiness, which may contribute to improved handling performance.

In tools and household products, it may be used in soft grip areas, cushioning zones, or secondary contact surfaces, where a skin friendly TPE material with lower hardness may improve comfort during repeated use.

FAQ

What is TPE additive Si-TPV 2150-35A used for in thermoplastic elastomers?
Si-TPV 2150-35A is a silicone-based TPE modifier intended to support soft-touch thermoplastic elastomer formulations, particularly where reduced tackiness and improved surface stability may be required.

Does thermoplastic elastomer modifier Si-TPV 2150-35A migrate or bloom over time?

Compared with traditional silicone oil additives, Si-TPV 2150-35A is designed to be structurally integrated into the polymer system, which may reduce migration or surface blooming effects.

How does Si-TPV 2150-35A differ from conventional silicone additives?
Unlike conventional silicone oils that may migrate, this modifier is designed to integrate into the TPE matrix, potentially offering more stable long-term surface performance.

Can thermoplastic elastomer modifier Si-TPV 2150-35A improve scratch resistance?
Si-TPV 2150-35A may function as an anti-scratch TPE additive, helping improve resistance to abrasion and surface wear under repeated handling or use conditions.

Si-TPV 2150-35A is positioned as a silicone-based TPE modifier designed to support thermoplastic elastomer systems that require improved surface quality, reduced tackiness, and enhanced durability. By integrating silicone functionality into the polymer structure, it may help address common limitations of conventional TPE materials such as surface stickiness, dust attraction, and migration issues. With compatibility across standard processing methods like injection molding and extrusion, it offers a formulation option for applications where stable soft-touch performance and long-term surface consistency are important, including wearable devices, consumer electronics, automotive interiors, and flexible wire and cable components.

For more information, technical data sheets, or application support regarding Si-TPV 2150-35A, please contact:

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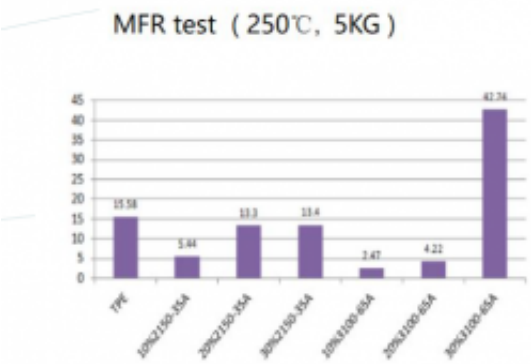

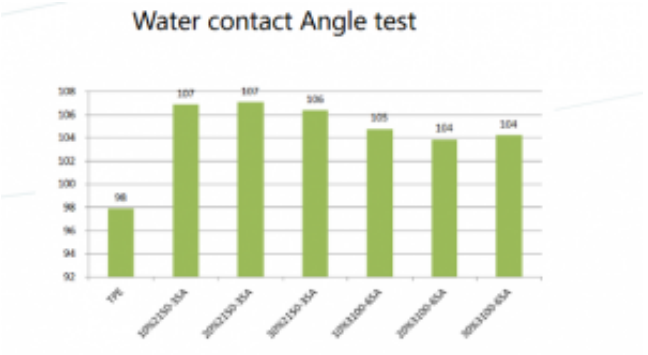

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