

ELASTICITY

**CHENVIX**

*Skin Touch*

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# INTRODUCTION

## CHENVIX SKINTOUCH

### MATERIAL



#### **Chenvix SkinTouch Material Overview**

Premium soft-touch thermoplastic elastomer with a long-lasting silky feel.



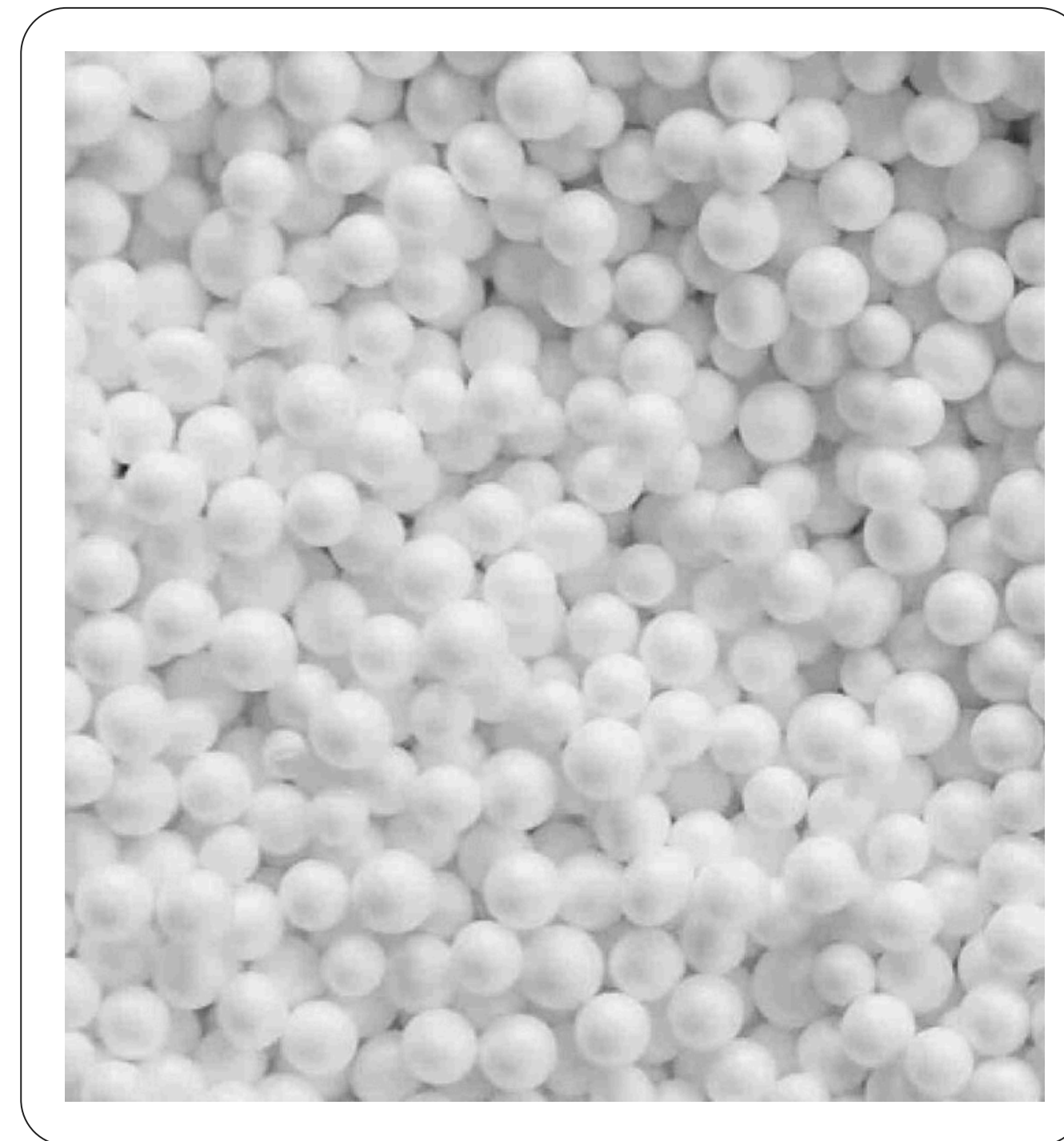
#### **Manufactured by Injection Molding**

Chenvix SkinTouch is designed for precision injection molding, enabling complex geometries, consistent quality, and excellent production efficiency.

# WHAT IS CHENVIX SKINTOUCH

A Revolutionary Elastomer Engineered by  
Combining Silicone and TPU Technologies.

Through proprietary compatibility and dynamic vulcanization technologies, fully cured silicone rubber is finely dispersed as 1–3  $\mu\text{m}$  particles within a TPU matrix, forming a unique sea-island structure. This breakthrough technology eliminates the traditional compatibility challenges between silicone and TPU, creating a next-generation elastomer, that combines the comfort of silicone with the processing efficiency and durability of thermoplastics.

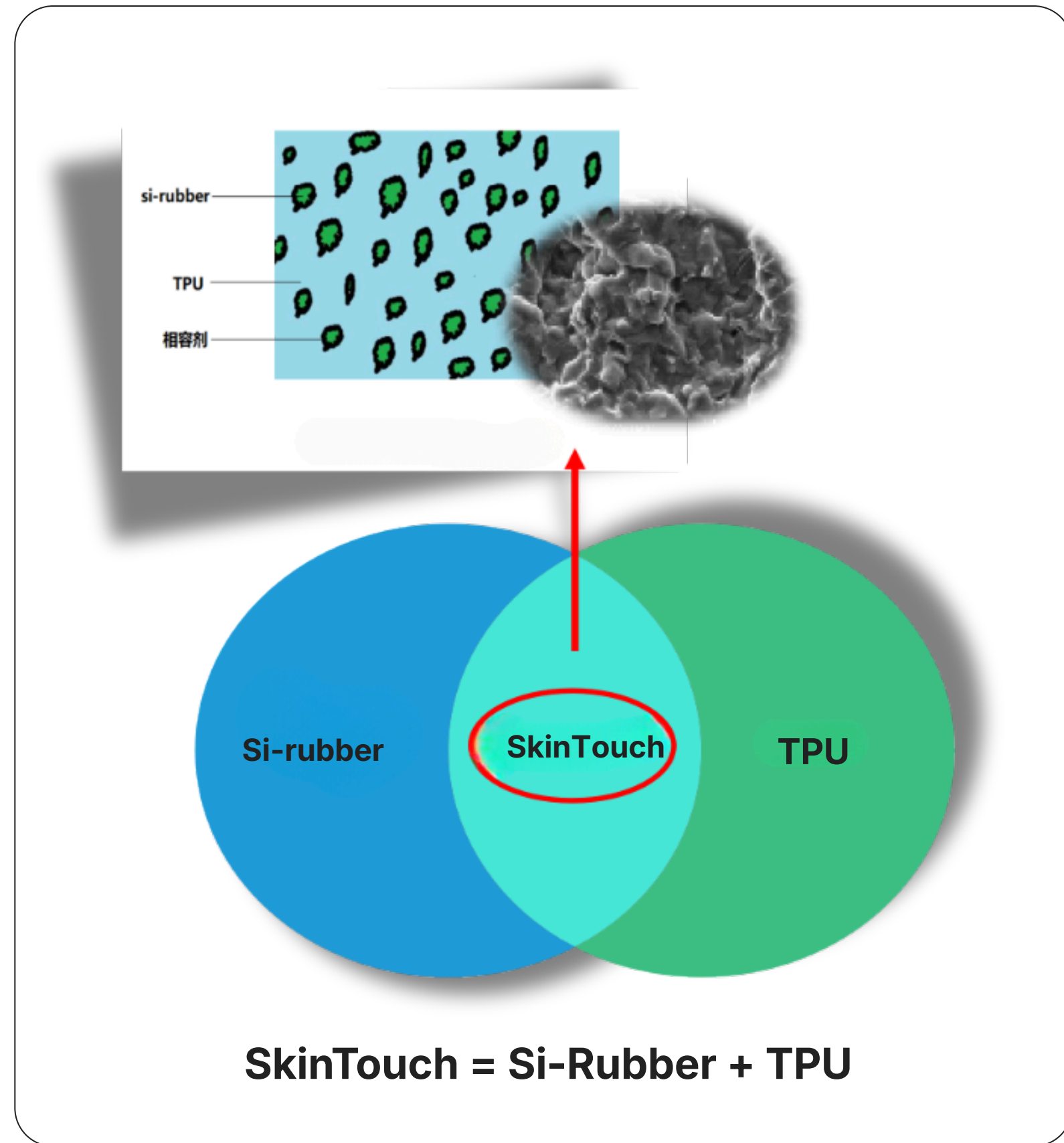


# KEY FEATURES

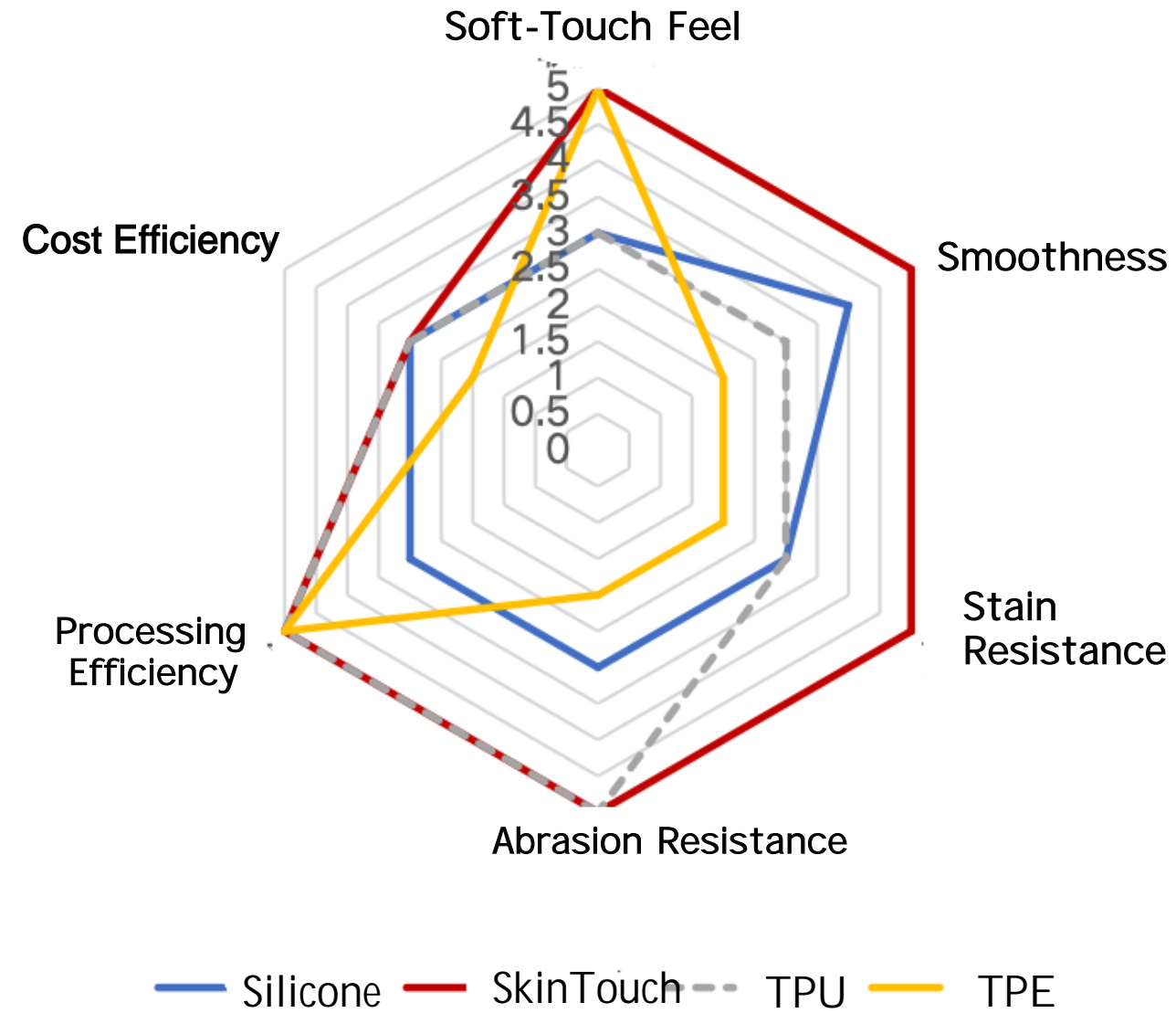
- » Hardness range: Shore 55A–90A with high resilience
- » Silky-smooth, premium soft-touch feel
- » Plasticizer-free and oil-free formulation with no migration or blooming
- » Excellent stain resistance and low dust attraction
- » Outstanding overmolding and bonding performance
- » Compatible with laser engraving, silk-screen printing, pad printing, spray coating, and other secondary processing methods

# PERFORMANCE HIGHLIGHTS

- ✓ Heat Resistant
- ✓ Weather Resistant
- ✓ Biocompatible
- ✓ Hydrophobic
- ✓ High Strength
- ✓ Injection Moldable
- ✓ Reprocessable
- ✓ Recyclable



# CHENVIX SKINTOUCH MATERIAL SERIES



牌 号	密度 g/cm <sup>3</sup>	硬度 Shore A	熔融指 数 (190℃, 10kg) g/10min	拉伸 强度 Mpa	断裂 伸长率 %	100% 定伸 应力 Mpa	撕裂 强度 kN/m	压缩 形变 (23℃) %
3100-55A	1.19	53	58	4.56	571	1.8	41	23
3100-65A	1.17	63	47	10.2	757	2.6	39	34
3100-75A	1.18	78	18	9.4	395	4.7	30	28
3100-80A	1.18	83	27	11.0	398	5.3	47	32
3420-90A	1.21	88	7.6	24	485	8.4	103	32
3520-70A	1.18	71	48	18	821	3.5	55	29
2150-55A	1.02 <sup>abc</sup>	53	13	7.15	590	1.3	35.4	20

# ADVANTAGES OF CHENVIX SKINTOUCH MATERIAL

Chenvix SkinTouch combines the best properties of silicone rubber and TPU in a single material. It offers the low hardness, excellent high- and low-temperature resistance, chemical resistance, and high resilience of silicone rubber, together with the outstanding mechanical strength and biocompatibility of TPU.

The material delivers a silky-smooth skin feel and excellent overmolding performance. It also provides superior resistance to dirt, yellowing, abrasion, and scratches, making it an ideal choice for products that require long-lasting aesthetics, durability, and premium tactile comfort.

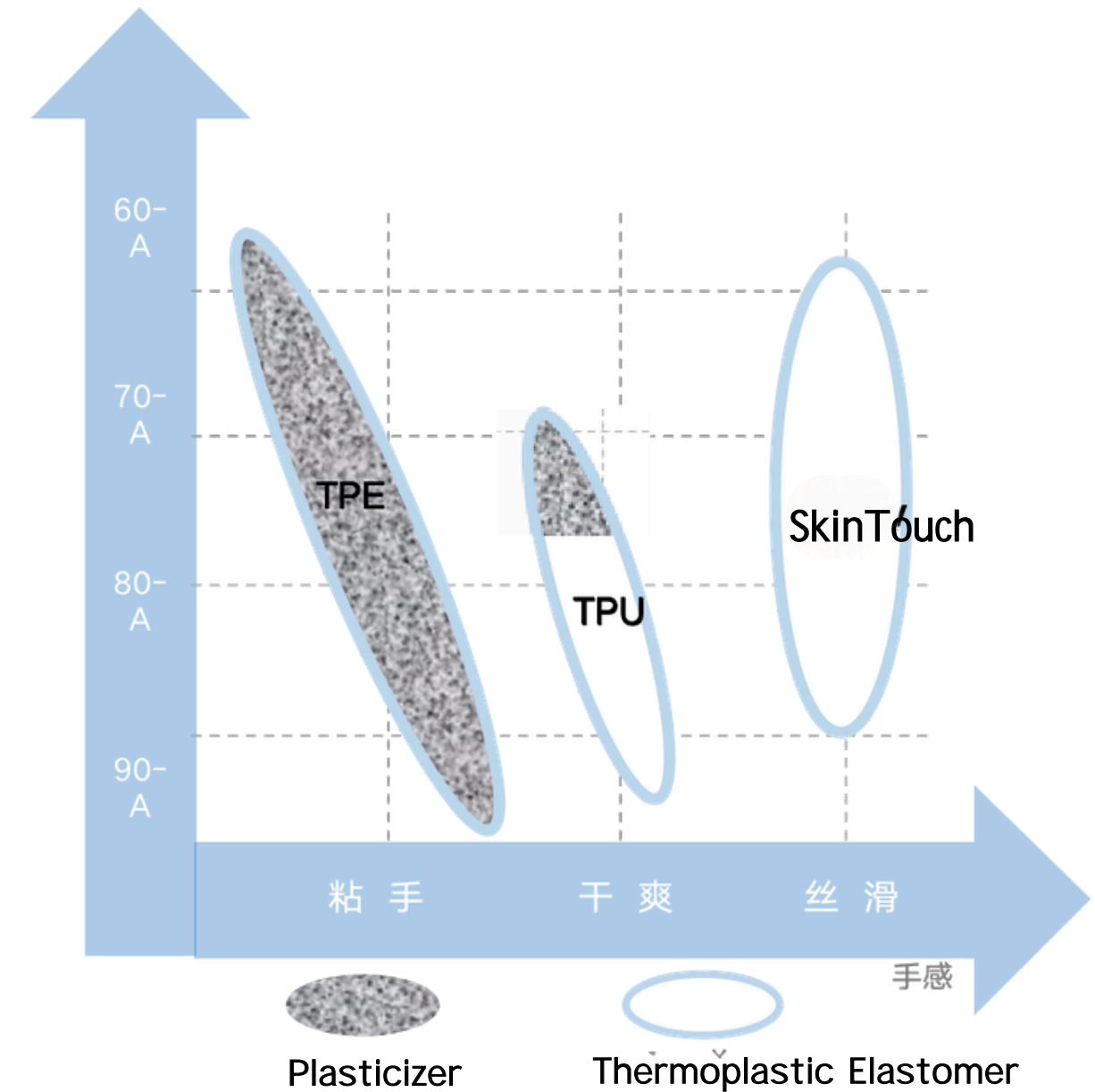
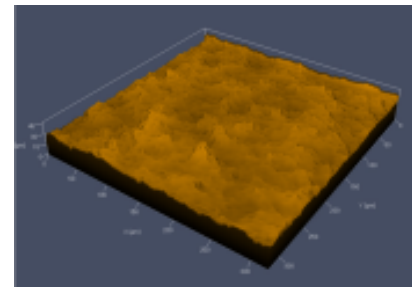


# EXCEPTIONAL SILKY-SMOOTH SKIN-FRIENDLY TOUCH

Many everyday products come into direct contact with the skin, making touch and comfort key factors in consumer preference.

Chenvix SkinTouch delivers a long-lasting silky-smooth feel, exceptional softness without plasticizers, and excellent surface conformity for superior comfort and a premium user experience.

- Vulcanized silicone rubber microparticles dispersed throughout the material create microscopic surface protrusions that contribute to a unique tactile experience.
- The continuous phase provides structural support and mechanical strength.
- Through advanced interfacial compatibility technology, the silicone rubber microparticles are distributed more uniformly and stably within the continuous phase, combining the advantages of both silicone rubber and TPU to deliver a distinctive silky-smooth, skin-friendly touch.



注：如果想达到丝滑的触感，也可以通过涂覆的方式

# OUTSTANDING STAIN RESISTANCE

BEFORE

25°/10 MIN

25°/30 MIN



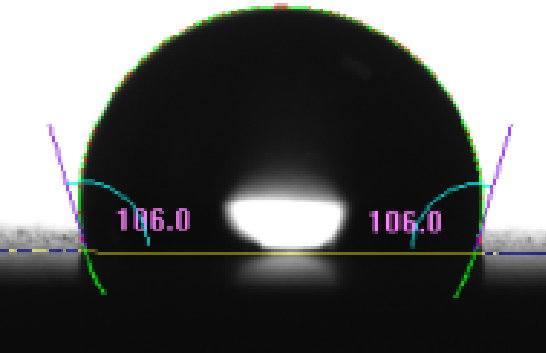
## Marker Ink Resistance Test

Permanent Marker Resistance Test (25°C)

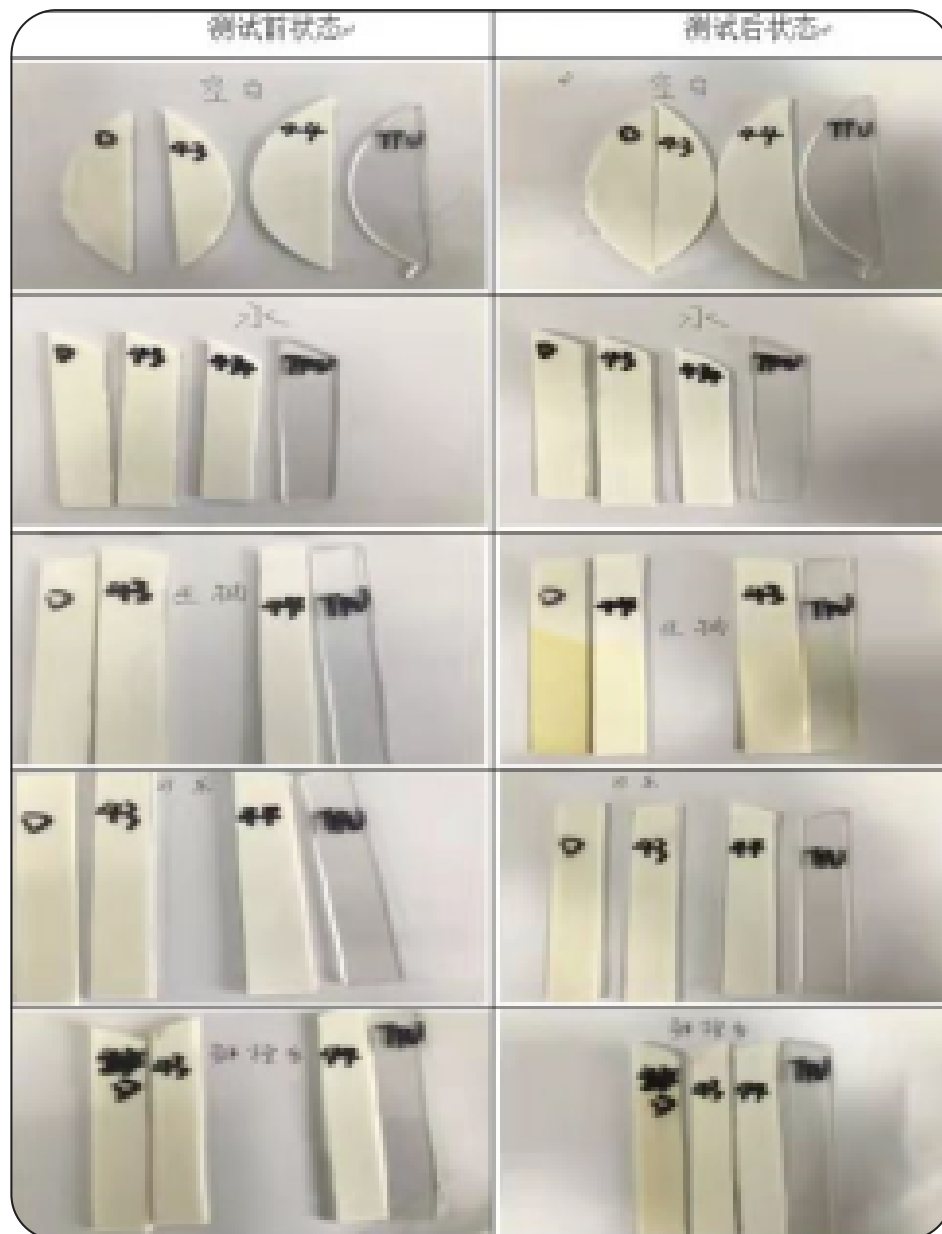
- 10 min exposure: Residue remained on the competitor's part; Chenvix SkinTouch was completely clean.
- 30 min exposure: Residue remained on the competitor's part; Chenvix SkinTouch was completely clean.

Chenvix SkinTouch offers superior resistance to permanent marker ink.

SkinTouch features a high water contact angle and excellent hydrophobicity, resulting in outstanding stain and dirt resistance.



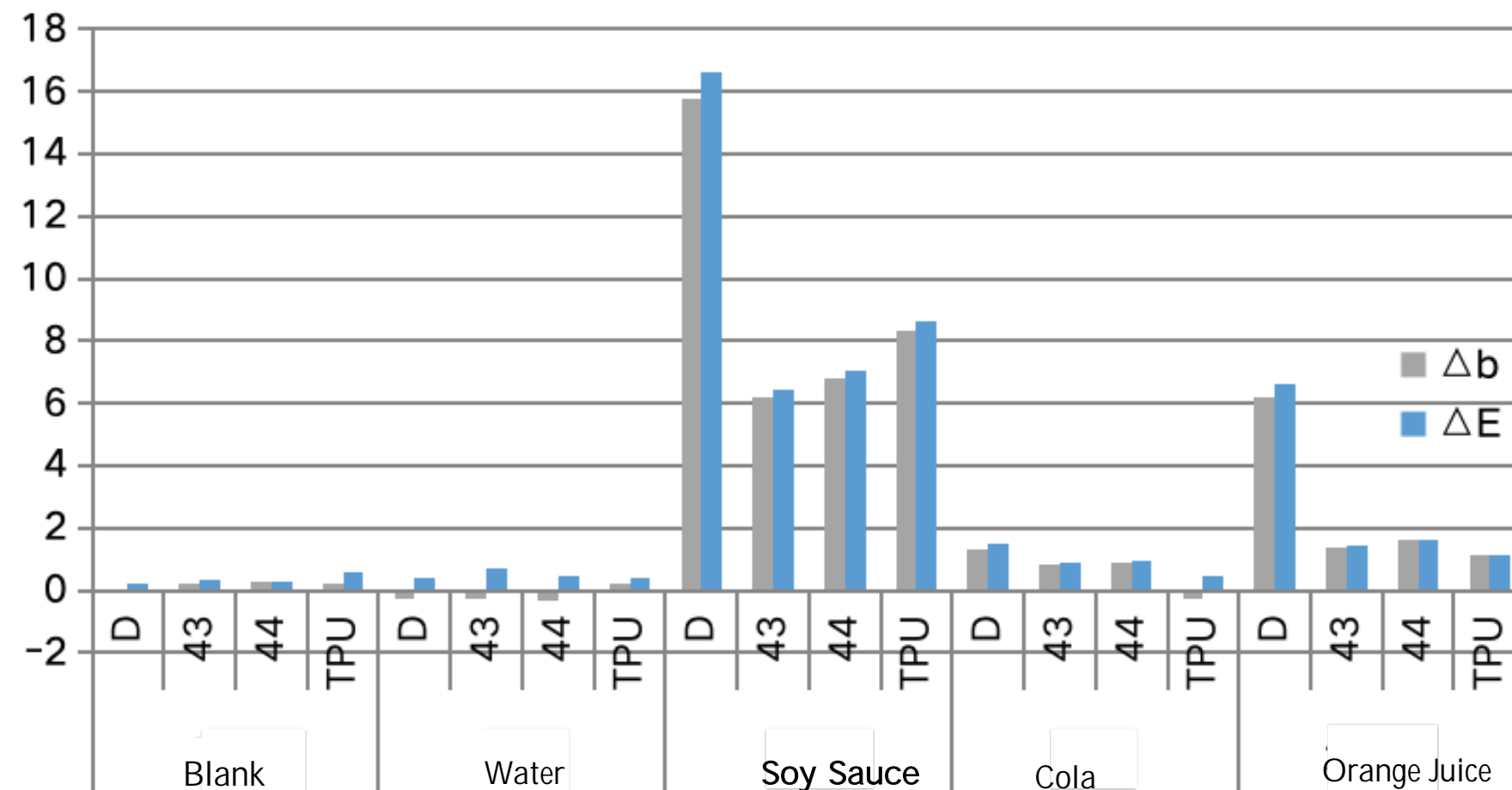
# STAIN RESISTANCE TEST WITH DIFFERENT STAINING AGENTS



The surface of Chenvix SkinTouch is enriched with silicone rubber microparticles, which are inherently hydrophobic and help prevent water and contaminants from penetrating the material. As a result, stains remain on the surface and can be easily wiped away. This unique structure, combined with the intrinsic properties of silicone rubber, gives Chenvix SkinTouch outstanding stain and dirt resistance.

Note: Sample D is a 65A competitor material from an overseas supplier. Samples 43 and 44 are Chenvix SkinTouch 3100-65A.

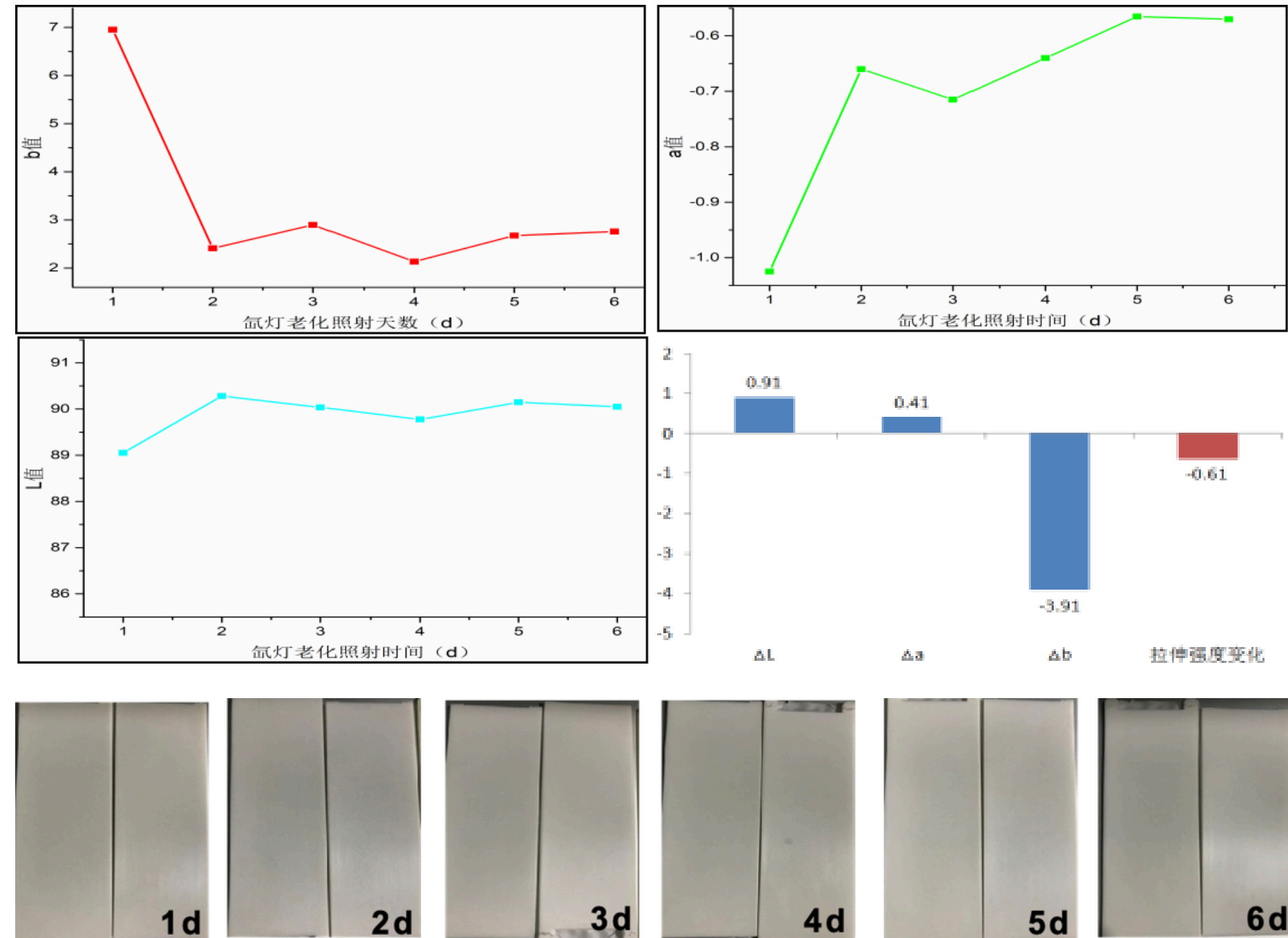
Test Method: Samples were immersed in the test medium and stored in a constant temperature and humidity chamber for 24 hours. After rinsing with clean water, color changes were evaluated.



# XENON ARC WEATHERING TEST ISO 4892-2 STANDARD

The unique structure of silicone rubber gives it excellent resistance to UV radiation. The surface of Si-TPV contains a large number of protruding silicone rubber microparticles, which help protect the material from UV-induced degradation.

As shown in the figure on the right, the b-value of SkinTouch initially decreases with prolonged xenon lamp exposure and then remains stable, indicating no yellowing. Meanwhile, the material also maintains good mechanical properties throughout the test period.



# EXCELLENT SCRATCH RESISTANCE

## Cross-Hatch Scratch Test

The material surface contains a large number of protruding silicone rubber microparticles, which significantly reduce the surface friction coefficient. When in contact with external objects, the low applied force helps prevent surface damage. In addition, the material itself has excellent elasticity, allowing it to quickly recover from deformation.

As shown, the product exhibits a very small  $\Delta E$  after scratching, and the surface maintains excellent integrity, demonstrating outstanding scratch resistance.

PV3952 (1 mm, 15 N), K8A leather texture finish



Data before and after scratching:

Sample	L1	a	b	L	a	b	$\Delta L$	$\Delta a$	$\Delta b$	$\Delta E$
Blue	77.68	-27.8	-13.16	77.62	-27.76	-13.18	-0.05	0.05	-0.02	0.07
Green	67.12	-34.06	-11.1	67.33	34.17	11.21	0.21	-0.11	-0.1	0.26
Pink	82.31	25.09	7.21	82.27	25.02	7.12	-0.04	-0.08	-0.09	0.13

# ABRASION RESISTANCE

Silicone rubber has very low surface energy, which reduces friction at the contact interface and results in excellent abrasion resistance. This ensures long-term durability of the product, minimizes wear, and extends service life.

3100-65A	标胶	1.9829	1.8863	96.6	193.2	1.18	55.44	57.41
	试样	1.5731	1.5415	31.6	63.2			
	标胶	1.5119	1.4217	90.2	180.4		59.38	
	试样	1.5925	1.5609	31.6	63.2			
3100-60A	标胶	1.6251	1.5322	92.9	185.8	1.16	80.55	83.29
	试样	1.5208	1.4774	43.4	86.8			
	标胶	1.8593	1.7631	96.2	192.4		86.03	
	试样	1.5223	1.4743	48	96			
3420-90A	标胶	1.4024	1.3123	90.1	180.2	1.21	19.09	21.68
	试样	1.1642	1.1556	8.6	17.2			
	标胶	1.1806	1.0891	91.5	183		24.26	
	试样	0.9737	0.9626	11.1	22.2			

# APPLICATION SCENARIOS

## CONSUMER ELECTRONICS



## SPORTS & OUTDOORS



## MOTHER & BABY CARE



The inherent advantages and performance of SkinTouch material enable a wide range of applications. It offers significant benefits in various fields, including phone cases, watch straps, wristbands, earphone cables, luggage handles, overmolding components, and synthetic leather, among others.

# PHONE CASE APPLICATIONS

## OUTSTANDING STAIN RESISTANCE



Outstanding stain resistance. Under the same one-day use conditions, the SkinTouch phone case (left) shows significantly better stain resistance than the silicone rubber phone case (right).

## SUPERIOR STAIN RESISTANCE



Excellent abrasion and scratch resistance. Under the same one-month usage conditions, the SkinTouch phone case (top image) shows significantly better abrasion and scratch resistance than the silicone rubber phone case (bottom image).

## EXCELLENT STAIN RESISTANCE



Long-lasting silky-smooth touch. After prolonged use, the SkinTouch phone case does not exhibit oil bleeding or tackiness, maintaining a consistently dry and silky-smooth tactile feel over time.

# WATCH STRAP



Conventional watch bands and wristbands often come with common issues such as poor tactile feel, inadequate sweat and stain resistance, oil migration, and surface tackiness over time. These drawbacks make it difficult to deliver long-lasting comfort, cleanliness, and safety.

Chenvix SkinTouch for smart watch bands and wristbands offers:

- » A long-lasting silky-smooth touch
- » Biocompatible, hypoallergenic, and environmentally friendly
- » Excellent abrasion and scratch resistance
- » Superior stain resistance and water repellency
- » No oil migration or sticky surface, even after prolonged use
- » Long-lasting comfort and a premium appearance

# MORE APPLICATION SCENARIOS



## Headphones & Audio Devices

- Long-lasting skin-friendly, soft, and dry touch
- Excellent stain resistance
- Excellent abrasion and scratch resistance
- Water and sweat resistant



## Electric Toothbrush

- Long-lasting silky-smooth, skin-friendly touch
- Safe and antibacterial
- Water-repellent and stain-resistant



## Luggage Handle

- Long-lasting skin-friendly, soft, and dry touch
- Excellent abrasion and scratch resistance



## Baby & Nursery Products

- Long-lasting silky-smooth, skin-friendly touch
- Safe and antibacterial
- Water-repellent and stain-resistant
- Excellent abrasion and scratch resistance



## Automotive Interior Leather

- Long-lasting silky-smooth, skin-friendly touch
- Low VOC emissions
- Excellent abrasion and scratch resistance



## Gaming Controllers

- Long-lasting silky-smooth, skin-friendly touch
- Excellent abrasion and scratch resistance
- Water-repellent and stain-resistant

CHENVIX  
**THANK YOU!**

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