

# KEFENG SILICONE

*Innovative Technology-Softener for Textile*



# Kefeng Silicone-Your quality partner

**Kefeng Silicone is a leader in innovative technologies in the textile market, and today it continues to provide more efficient, durable and high-quality textile chemicals to the market.**

**Kefeng Silicone is with the purpose of “Quality achieve the future”, focus to be a unique and influential supplier of Silicone in Asia-Pacific region, providing our customers with a variety of high-quality specialty fine silicone.**

[Kefeng corporate video](#)





# Kefeng Silicone-Introduction

## WHERE WE ARE?

Own three manufacturing bases in Zhejiang & one export office in Shanghai, China.



Haining manufacturing base  
East of Hangzhou City, 30,000 m<sup>2</sup>



Deqing manufacturing base  
North of Hangzhou City, 35,000 m<sup>2</sup>



Quzhou manufacturing base  
Southwest of Hangzhou city, 35,000 m<sup>2</sup>

# Kefeng Silicone-Organization

R & D department 

 Financial department

Purchase department 

 B2B2C Marketing services

Quality control department 

 Administration department

Production department 

 Sales department



# Kefeng Silicone-Global Network



## WHAT WE DO?

**Kefeng silicone works together with brand owners and the entire textile value production chain to innovate to achieve excellence products to reap higher added value in the sales market.**

**Annual production capacity of silicone oil is 100,000 tons per year.**

**Currently, Kefeng silicone is one of the largest new ternary block silicone manufacturer in china.**

**7 series of textile auxiliaries products have been launched, Linesoft & Hydrosoft & Coolsoft series silicone softener finishing agent, Kingfast series fastness enhancer, Kingproof series waterproof agent, Kingfinish series functional auxiliary agent, etc...**



# Kefeng Silicone-Key Technologies Series



*Linesoft series*

New ternary block silicone product to overcome the poor stability of traditional amino silicone, series products developed for different fabric touch styles.



*Hydrosoft series*

Hydrophilic Silicone; Perfect balance of hand feel and hydrophilicity for different fabrics; good stability and compatibility



*Coolsoft series*

Amino modified Silicone; No yellowing special amino silicone oil, suitable for white or sensitive fabrics with high yellowing requirements



*Kingfast series*

high concentration raw material level products, according to different needs, different fabrics, provide solutions for color fastness system



*Kingproof series*

Nano synthesis technology to achieve the best waterproof effect with the minimum amount, while taking into account the water resistance, prevent slippage and enhance the adhesion



*Kingfinish series*

Special functional finishing auxiliaries with cost performance advantages are specially developed for garments and fabrics



*Kingfine series*

Pre-treatment dyeing series additives, product quality is stable, environmental protection and high efficiency





QMS CERTIFICATE OF REGISTRATION



EMS CERTIFICATE OF REGISTRATION



DOMESTIC HONORS



ECO PASSPORT BY OEKO-TEX 100

"Top 20 Enterprises with Comprehensive Strength in China's Textile Printing & Dyeing Auxiliaries Industry"  
National High-Tech Enterprise



# Kefeng Silicone-Enterprise Show



Deqing manufacturing base



Administration



Production



R & D depart



Warehouse



Systems control



# Kefeng Silicone-Overseas Trade Activities





**What is New ternary block silicone?**

# Silicone Softeners Evolution

**1<sup>st</sup> Gen**

**Silicones**  
(PDMS, Silanol)

**2<sup>nd</sup> Gen**

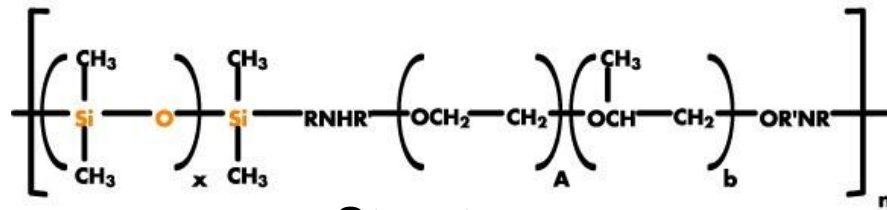
**Amino/Epoxy-  
Silicones**

**3<sup>rd</sup> Gen**

**Amino/polyether  
Silicone**

**4<sup>th</sup> Gen**

**Multi units  
Copolymer**



**Structure**

(AB)<sub>n</sub> Linear Block terpolymer  
silicone, also named New  
ternary block silicone



# Three Major Textile Softeners Currently Used

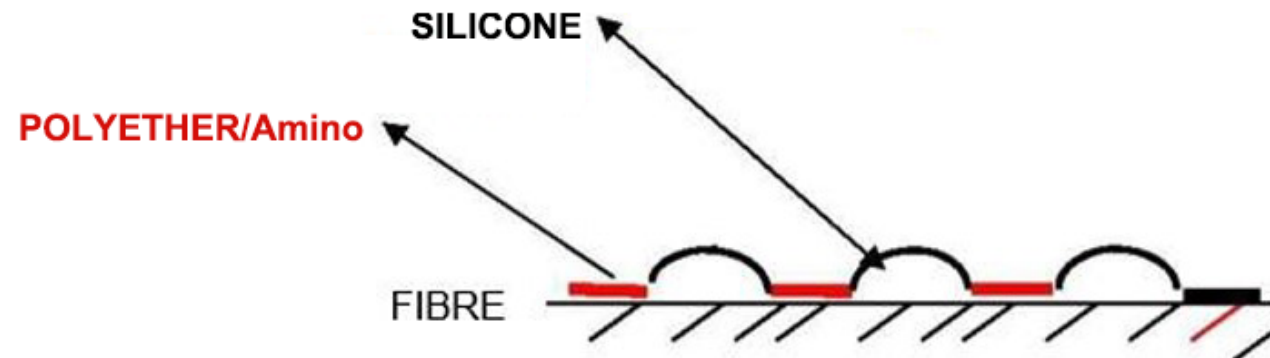
1): Fatty Acid Based  
Softener flakes



2): Amino silicone oil



3): (AB)<sub>n</sub> linear Copolymer;  
also named new ternary block silicone



# Fabric Morphology

## Cotton fabric



treated with  
amino silicone softener in a market

**Gather on the surface**

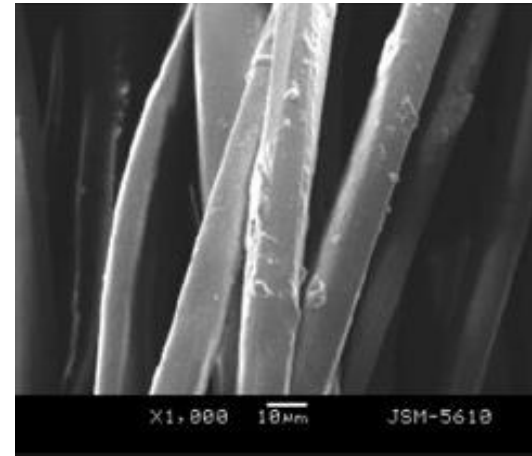


treated with  
new ternary block silicone softener

**Infiltrate the fibers**

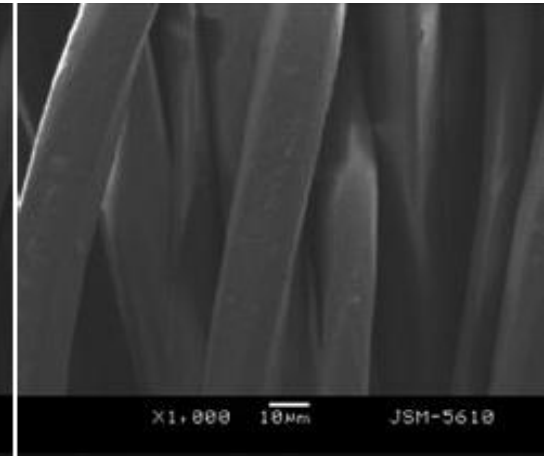
Microscope scan  $\times 500$

## Polyester fabric



treated with  
amino silicone softener in a market

**Uneven distribution  
on the surface**



treated with  
new ternary block silicone softener

**Smooth and even surface  
Infiltrate the fibers**

Microscope scan  $\times 1000$



# Inherent Defects/problems incurred from Traditional Amino silicones

- Hydrophobic
- Yellowing & color deviation
- Unstable & sticky mangle & oil-spots
- At high pH ( $>7$ );
- At hard water;
- At high temperature ( $>60^{\circ}\text{C}$ );
- At high shearing;
- Incompatible with dyestuff & other finishing agents
- Limiting production modifications/improvements
- Stripping off, can not be re-dyed;

# Benefits of New ternary block silicone

- Excellent silky hand feel;
- Full & bulky feel;
- Soft hand feel;
- Less consumption and cost savings
- Enhance reboundy/stretch recovery & tearing strength;
- Impart hydrophilic or hydrophobic;
- More washing durable;
- Safe & friendly to environmental.

# Comparison with amino silicone

## Stability

	New ternary block silicone	Traditional amino silicone
Emulsifier	No need	Necessary
Stability of emulsion	Good, no silicone stain	Bad, has silicone stain
pH stable range	3-10	4-6
Salts/Electrolytes (MgCl <sub>2</sub> 20g/L, 60°C×15min)	Stable	Oil-floating
Thermal Stability (100°C×15min)	Stable	Oil-floating
Shearing stability (3000rpm×30min)	Stable	Oil-floating
Yellowing	lower	High
Re-dye	Yes	No
Hydrophilicity	Hydrophilic/hydrophobic	Hydrophobic

**Better stability**

**Good hand feel**

## Performance

	10% Linesoft WSN-W30	15% Amino micro emulsion	
	10g/L	10g/L	Untreated
Polyester Woven	4.3	2.8	2.5
Cotton Knit	4.3	4.2	2.5
Polyester Fleece	4.7	3.3	2
Polyester / Viscose	4.4	3.7	3
Polyester / Cotton	4.2	3.8	3

Note: Test results. Actual results may vary.

**5 - Best softness; 1- Worst softness  
6 Panelists; 5 Fabrics**



**Quality achieve the future  
Consumer Benefits**

# Thanks

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