

## Shin-Etsu Silicone

### TEXTILE SOFTENER BASES

KF877 KF8704 KF880 KF888

Durable softness  
Slickness  
Low yellowing  
Wrinkle recovery  
Lubricity

### 1. Description

Shin-Etsu Chemical silicone textile softener bases, KF-877, KF-8704, KF-880 and KF-888, are silicone fluids having reactive amino group in its structure.  
KF-877 is especially improved on yellowish-problem for the textile treatment and also on the softness.  
KF-8704 is designed for economy type softener base.  
KF-888 is designed for hydrophilic textile softener base. The treated cloth shows excellent water absorption.  
KF-877, KF-8704, KF-880 and KF-888 can be easily emulsified by mixer or homomixer with water and appropriate emulsifier.

## 2. Typical properties of softener bases

	KF-877	KF-880	KF-888	KF-8704
Appearance	cloudiness	transparent	transparent	transparent
Viscosity at 25°C (cSt)	5,000	650	300	600
Amine-equivalent (g/mol)	5,000	1,900	3,000	4,000
Volatility at 105°C/3h(%)	12	12	2	12

(These values are not intended to prepare specification)

## 3. How to emulsify

Shin-Etsu Chemical textile softener bases are easily emulsified by mixer or homomixer with appropriate emulsifier.

### (1) Selection guide for emulsifier

$RO(C_2H_4O)_nH$  (average HLB : 10-14)

Trade name	R	n	HLB	Manufacturer
Emulgen 106	C <sub>12</sub>	6	10.5	Kao Corporation
Emulgen 108	C <sub>12</sub>	8	12.1	Kao Corporation
Nikkol BL-4.2	C <sub>12</sub>	4.2	11.5	Nikko Chemicals
Nikkol BC5.5	C <sub>16</sub>	5.5	10.5	Nikko Chemicals
Nikkol BC-7	C <sub>16</sub>	7	11.5	Nikko Chemicals
Newcol 1105	C <sub>12</sub>	5	10.8	Nippon Nyukazai
Newcol 1305	C <sub>13</sub>	5	10.5	Nippon Nyukazai
Newcol 1310	C <sub>13</sub>	10	13.7	Nippon Nyukazai
Nonion T-208.5	C <sub>13</sub>	8.5	12.0	Nippon Oil & Fats
Nonion NS-206	nonylphenyl	6	10.9	Nippon Oil & Fats

### (2) Typical formulation

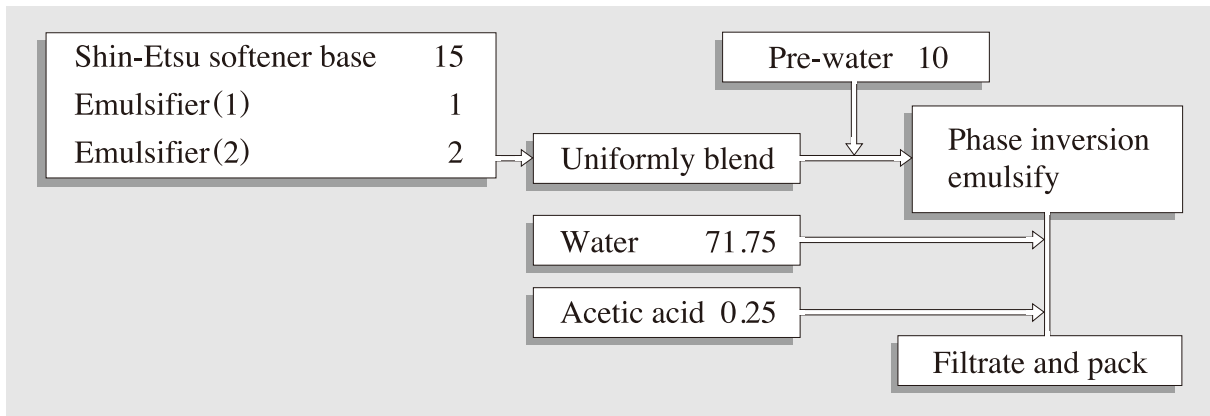
Shin-Etsu softener base	15.0
Emulsifier(1)	1.0
Emulsifier(2)	2.0
Pre-water	10.0
Water	71.75
Acetic acid	0.25

( Emulsifier(1) : Emulgen 106, Emulsifier(2) : Emulgen 108 )

### (3) Procedure

1. Add Shin-Etsu softener base and emulsifier into a tank and agitate at high speed for 10 minutes.
2. Add pre-water and agitate at high speed for 10 minutes.
3. Add slowly 71.75 parts of dilution water and agitate at low speed for 20 minutes.
4. Add acetic acid and agitate at low speed till get homogeneous emulsion.
5. Filtrate and pack.

#### (4) Scheme of emulsification



#### 4. Properties of treated cloth

	KF-877	KF-880	KF-888	KF-8704	control
Softness	++	+++	+	++	-
Water absorption(second)	50	150	0	150	0
Yellowing150°C/2min.	-7.5	-7.5	-7.7	-7.5	-7.5
Yellowing150°C/2min.	-6.7	-6.0	-6.8	-6.2	-6.5

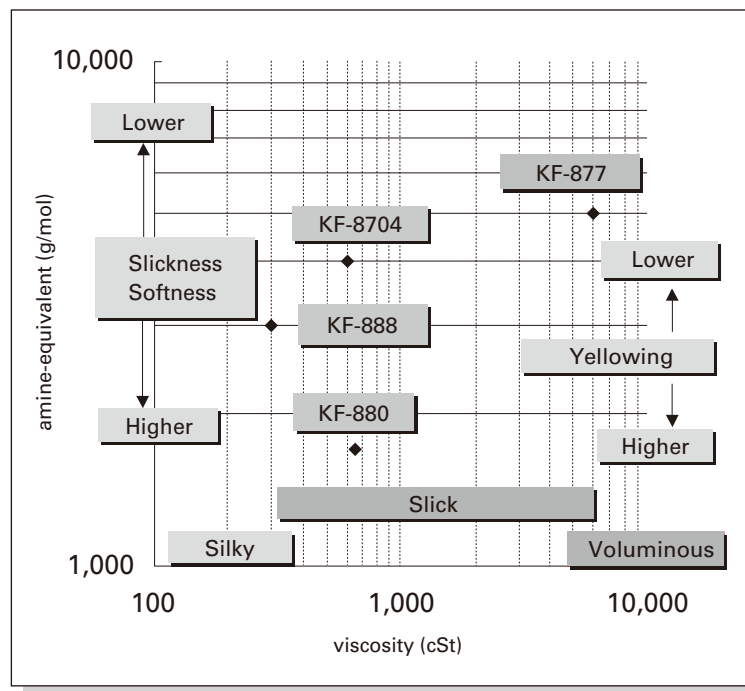
Condition of treatment

0.3%, 1dip — 1nip — 100°C/2min. — 150°C/2 min.

Substance : cotton cloth

Yellowing : based on blue (-) to yellow(+)

#### 5. General properties of amino-modified silicone softener



## 6. Packing : 18kg(can), 200kg(drum)

## 7. Cautions

- (1) Dyeing of finished products (cloths), etc. may dissolve into the emulsion treatment bath and thereby affect stability of the finishing agents. Take extra care on this point.
- (2) The textile finishing agents may deteriorate when in contact with heat, light, acid, alkaline etc.. Prevent contamination to the agents, seal and store them in a dark place.
- (3) Avoid contact with eyes and skin. In case of eye contact, wash immediately with large amounts of water for at least 15 minutes. In case of skin contact, remove the textile finishing agents from skin with a dry cloth or towel and then wash exposed area with soap.
- (4) The product containing any solvents should be handled in well ventilated area. Avoid inhalation of solvent vapor.



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