



## TECHNICAL BULLETIN

### TAYCHEM TAF-1640

Silicone Softener Emulsion

#### Characteristics:

TayChem TAF-1640 is a nonionic micro emulsion of an amino-functional silicone fluid imparting a very soft, slick hand to fabrics. It is especially designed for garment and denim finishing. TayChem TAF-1640's reactivity onto the fiber's surface provides excellent wash durability.

#### Applications:

TayChem TAF-1640 is particularly suitable as a softener for the impregnation of fibers and textiles. The amine groups and siloxane backbone guarantee a wet, soft, slick hand to woven fabrics and garments. TayChem TAF-1640 improves wash-and-wear properties, crease recovery angle, sewability, and tear strength and reduces abrasion loss. The effects are fast to washing.

TayChem TAF-1640 has little effect on the degree of white when usual application conditions are adhered to. As a rule, no adverse effect on the shade or colorfastness properties of colored goods is observed.

#### Processing:

TayChem TAF-1640 gives permanent effects even without the addition of a catalyst.

TayChem TAF-1640 can be applied either by padding or by the exhaust method.

5 to 40 g/l of TayChem TAF-1640 is recommended for the pad method. For the exhaust method, 1% to 3%, relative to the weight of goods, is adequate and the treatment should be carried out at 40°C to 50°C for fifteen to twenty minutes. The pH of the liquor should not exceed a pH of 5. It may need to be adjusted with acetic acid.

TayChem TAF-1640 can be applied either alone or together with resins or other finishing agents. If TayChem TAF-1640 is used together with cross-linking agents and other additives, it should be added, in diluted form, after all of the other products. (This applies generally to the processing of all polysiloxanes.)

#### Processing:

Higher crease recovery angles and lower abrasion values can be obtained in resin finishing by using TayChem TAF-1640. A wide range of hands can be obtained by combining TayChem TAF-1640 with conventional softening agents and other additives, such as fillers based on polyacrylate.

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Because we cannot foresee or control the varied conditions under which this information and materials may be used, we do not guarantee the applicability or accuracy of this information or the suitability of our materials in any specific situation. Samples are provided and users should make their own tests to determine the suitability of our materials for their specific purposes. This material is provided without warranty, either expressed or implied, of fitness for a specific purpose and nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending license under valid patents.

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**Typical Properties:**

<b>Appearance</b>	Clear To Slightly Hazy Micro Emulsion
<b>Solids Content [Microwave Oven] (%)</b>	Ca. 40
<b>pH Value</b>	Ca. 6.0 To 7.5
<b>Ionic Character</b>	Nonionic
Note: These figures are intended as a guide and should not be used in preparing specifications.	

**Typical Recipes:**

<b>Woven And Knitted Materials From Synthetic Fibers</b>	<b>Single Jersey Or Interlock Cotton Fabrics (Exhaust Method)</b>	<b>Garment Wash</b>
0.5 ml/l Acetic Acid 60%	0.5 ml/l Acetic Acid 60%	10-40 g/l TayChem TAF-1640
10-30 g/l TayChem TAF-1640	2-4 g/l TayChem TAF-1640	0.1 To 0.5 4.5 Buffer
Pad, Liquor Pickup About 50%	10-30 Minutes At 30°C To 40°C	5-20 Minutes, No Rinse
Dry At 120°C To 150°C	Without Rinsing, Extract	Light Extraction
	Dry At 100°C To 150°C	Dry At 170°C To 185°C

**Storage Stability:**

TayChem TAF-1640 has a shelf life of at least ninety (90) days if stored in originally-sealed containers at 25°C or 70°F.

Emulsions showing signs of creaming should be agitated before use to assure uniform consistency.

If emulsion turns white, it is due to pH drift. Adjust pH back to 7.0 to achieve clear product. This will extend shelf life past ninety (90) days.

If the material is kept beyond the recommended shelf life, it is not necessarily unusable, but quality control should be performed on the properties relevant to the application.

**Safety Instructions:**

Comprehensive instructions are given in the corresponding Material Safety Data Sheet. This information is available from TayChem Industries, Ltd.

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