



TECHNICAL BULLETIN

TAYCHEM TAF-2170

Modified Amino-Functional, Silicone Softener Concentrate

Description:

TayChem TAF-2170 is a seventy percent active, concentrated, modified amino silicone that is water-dilutable. It is designed to impart an extremely soft, supple hand without the associated yellowing. TayChem TAF-2170 has good hydrophilicity. This product, made with TayChem TAF-21 Fluid, is the premier silicone emulsion in the Textile Industry.

Applications:

TayChem TAF-2170 is particularly suitable to produce softener micro emulsions by simple dilution of the concentrate. These emulsions can be used for impregnation of fibers and textiles. Dilutions of this product impart a soft and slick hand to woven and knitted fabrics. They also improve wash-and-wear properties, crease recovery angle, sewability, and tear strength and reduce abrasion loss. The effects are fast to washing.

Dilutions of TayChem TAF-2170 have 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:

Dilutions of TayChem TAF-2170 give permanent effects even without the addition of a catalyst. Provided no resins are used, specific curing conditions need not be adhered to.

Dilutions of TayChem TAF-2170 can be applied either by padding or by the exhaust method, but, as with all products containing silicone, the finishing liquors should not be subjected to high shear as this might cause instability.

3-10 g/l of TayChem TAF-2170 diluted to 20% to 30% solids is recommended for the pad method. For the exhaust method, 0.5% to 2%, 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 (15-20) minutes. The pH of the liquor should not exceed a pH of 5. It may need to be adjusted with acetic acid.

Dilutions of TayChem TAF-2170 can be applied both alone or together with resins and other finishing agents. If dilutions of this product are used together with cross-linking agents and other additives, they should be added, in diluted form, after all of the other products. (This applies generally to the processing of all polysiloxanes.)

Higher crease recovery angles and lower abrasion values can be obtained in resin finishing by using dilutions of TayChem TAF-2170. A wide range of hands can be obtained by combining TAF-2170 with conventional softening agents and other additives, such as fillers based on polyacrylate.

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:

Property	Characteristic
Appearance	Clear, High Viscous Liquid
Solid Content, Microwave Oven (%)	Ca. 70
pH Value	Ca. 5
Ionic Character	Nonionic
Note: These figures are intended as a guide and should not be used in preparing specifications.	

Typical Recipe:

Dilution To a 20% Micro Emulsion:

	Raw Material	Percent
1.	TayChem TAF-2170	29.00%
2.	Water	70.90%
3.	Biocide	00.10%

Procedure:

1.	Charge No. 1 and start slow agitation.
2.	Charge No. 2 slowly. Mix well for ten minutes.
3.	Charge No. 3.
4.	Mix well until blended.

It is recommended to use a tank with a sweep agitator and high shear mixer. Temperature should be kept at 15°C to 30°C.

Storage Stability:

TayChem TAF-2170 has a shelf life of at least six (6) months if stored in its original, sealed container at 25°C or 70°F. 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.

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

Safety Instructions:

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

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