



TECHNICAL BULLETIN

TayChem Fluid 15

Elastomeric Amino-Functional Silicone Softener Fluid

Description:

TayChem Fluid 15 is an elastomeric, aminoethylaminopropyl functional fluid that has little effect on the degree of white in a softener formulation. It has an excellent hand with elastomeric properties.

Applications:

TayChem Fluid 15 is particularly suitable as an active substance in formulations for elastomeric impregnation of fibers and textiles. It imparts a very elastic, drapeable, and soft handle to woven and knitted fabrics. TayChem Fluid 15 is considered to be the best softening agent for woven cotton/P.E.S. blends. This product improves wash-and-wear properties, crease recovery angle, sewability, and tear strength, and reduces abrasion loss. The effects are fast to washing and dry cleaning.

TayChem Fluid 15 has very little effect on the degree of white in a softener formulation when usual application conditions are adhered to. As a rule, no adverse effect on the shade or colorfastness properties of colored goods is observed.

As part of formulations used as fill fiber finish, TayChem Fluid 15 imparts excellent slickness and resilience to the fiber.

Processing:

TayChem Fluid 15 can be applied neat, from solution, or emulsion. Suitable solvents are aliphatic and aromatic hydrocarbons, chlorinated hydrocarbons, esters, higher alcohols, and ketones.

Most textile processes are water-based. Hence, TayChem Fluid 15 is mainly applied from emulsion. It is especially suitable for the formulation of macro emulsions.

Emulsions made with TayChem Fluid 15 are diluted to the optimum concentration for the specific fabric. Application can be done by padding or exhaustion. This product can be utilized as the active substance in softener emulsions or in combination with other components, e.g., paraffin waxes, organic softeners, etc. Compatibility of the components has to be checked in each individual case.

Typical Properties:

| Property | Characteristic |
|---|----------------|
| Appearance | Clear Liquid |
| Viscosity (mPas) | 10,000 |
| Amine Number/Amine Value | 0.148 |
| Note: These figures are intended as a guide and should not be used in preparing specifications. | |

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Typical Recipe:

Macro Emulsion:

| | Raw Material | Percent |
|----|-----------------------|----------------|
| 1. | TayChem Fluid 15 | 14.00% |
| 2. | Tridecyl Alcohol 6 EO | 04.60% |
| 3. | Tridecyl Alcohol 9 EO | 02.40% |
| 4. | Acetic Acid | 00.40% |
| 5. | Water 1 | 02.00% |
| 6. | Water 2 | 15.00% |
| 7. | Water 3 | 57.50% |
| 8. | Biocide | 00.10% |
| 9. | Water 4 | 05.00% |

Procedure:

| | |
|----|--|
| 1. | Charge No. 1 and start sweep. |
| 2. | Charge Nos. 2, 3, and 4. Mix well for 10 minutes. |
| 3. | Start high shear mixer and slowly charge No. 5. Emulsion should go to a gel phase at this point. Mix 10 minutes. |
| 4. | Charge No. 6 slowly. Emulsion should come out of the gel phase. Mix 10 minutes. |
| 5. | Charge No. 7 and stop high shear mixer. |
| 6. | Charge Nos. 8 and 9. Mix until well blended. |

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

Storage Stability:

TayChem Fluid 15 has a shelf life of at least 180 days 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.

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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