

# StarSoft™ UKS

## Cationic softener base concentrate

### Product Description

StarSoft™ UKS is a cationic softener base concentrate suitable at both the co-manufacturer and mill levels. This cationic softener concentrate is best described as an imidazolinium quaternary base that is supplied in flake form. Because this product is supplied in flake form, it is easily handled and is readily dispersible in warm to hot water.

### Typical Physical Properties\*

Appearance.....flakes  
Color.....yellow  
Ionicity.....cationic  
pH (1% solution).....3.0–5.0  
Odor.....odorless  
Solubility.....dispersible in water

*\* These items are provided as general information only. They are approximate values and are not considered part of the product specifications.*

### Dilution Procedure

#### Hot Temperature Method

1. Pre-test in laboratory on small scale.
2. Into a vessel equipped with agitation, charge first half of water balance. Water should be obtained from a source with relatively low water hardness; e.g., <50 ppm Ca<sub>2+</sub>. Soften water if necessary.

3. Heat water to 194–208°F (90–98°C) and under slow, gentle agitation add StarSoft™ UKS in such a way that air is not “whipped” into the emulsion during addition.

*Note: It is best to calculate a finished product containing 10% StarSoft™ UKS since higher concentrations tend to thicken into a less fluid final product.*

4. Maintain temperature at 194–208°F (90–98°C) with gentle agitation until all flakes are totally dispersed.
5. When all material is totally dispersed, add glacial acetic acid—the weight of glacial acetic acid is based on 10% of the weight of StarSoft™ UKS; i.e., 1% for a 10% StarSoft™ UKS dispersion.
6. Add second half of the water charge—the water should be ambient temperature.
7. Stir slowly until temperature is cooled to less than 104°F (40°C).
8. Check final product for emulsion dispersability and absence of particles.
9. If product is to be stored for indefinite periods, it is advisable to incorporate 0.1% of an antimicrobial based on the total weight of the StarSoft™ UKS/water emulsion.

### ***Mild Temperature Method***

1. Pre-test in laboratory on small scale. Into a vessel equipped with agitation, charge entire water balance. Water temperature should be maintained at 122–140°F (50–60°C) and should be obtained from a source with relatively low water hardness; e.g., <50 ppm Ca<sub>2+</sub>. Soften water if necessary.
2. Add StarSoft™ UKS in such a way that air is not “whipped” into the emulsion during addition.  
*Note: It is best to calculate a finished product containing 10% StarSoft™ UKS since higher concentrations tend to thicken into a less fluid final product.*
3. Maintain temperature between 122–140°F (50–60°C) with gentle agitation until all flakes are totally dispersed. This dilution can take several hours.
4. The addition of glacial acetic acid may aid in the fluidity when preparing the emulsion. If glacial acetic acid is to be used, its weight is calculated based on 10% of the weight of StarSoft™ UKS.
5. Stir slowly until temperature is cooled to less than (95°F) 35°C.
6. Check final product for emulsion dispersability and absence of particles.

10–40 g/l StarSoft™ UKS (10% dispersion) at pH = 6.0–7.0 adjusted with acetic acid at 68–77°F (20–25°C).

### ***Stripping***

Use 1 g/l StarTex™ UFN. Increase temperature to 122–194°F (50–90°C) over 45-min period. Then rinse warm followed by cold rinse.

### ***Storage***

StarSoft™ UKS should be stored in a dry place, away from excessive heat and in original or similar waterproof containers. Reseal containers immediately after use.

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### **Application**

#### ***Exhaust***

1–4% StarSoft™ UKS (10% dispersion) owg at pH = 5.0–6.0 adjusted with acetic acid for 20 min at 104–113°F (40–45°C).

#### ***Padding***